## Contents

**Letter from the Director**  ........................................................................................................................................3  
**Letter from the Editor**  ........................................................................................................................................4  
**Faculty Interview**  ........................................................................................................................................5  
**Student's Current Perspective**  ..............................................................................................................6  

### Nursing Research

**Synthesis Projects**  ........................................................................................................................................7

- **Post-Cardiac Surgery Delirium Management**  
  (Cherry Xue Hong Chen & Mark Bell) ........................................................................................................8

- **Education Tool Development to Support Cardiac Electronic Implantable Device Practice**  
  (Meghan Barnhart) .......................................................................................................................................9

- **Impact of Losing a Tobacco Cessation Counselor for Inpatient Cardiac Units**  
  (Jae-Young Kwon, Clarissa Mak, & Stephanie Yoon) ..................................................................................10

- **Knowledge to Action Translation Framework. Screening for Delirium in Inpatient Psychiatry Populations**  
  (Aruba Nurullah & Julia Ott) ......................................................................................................................11

- **Patient and Family Education Pathways for the Inpatient Eating Disorders Program at BC Children's Hospital**  
  (Anne Marie Hansen, Jessica Jobin, Eilleen Li, & Caroline Philippson) ......................................................12

- **LEAN Education Modules: Teaching LEAN to Frontline Nurses**  
  (Jay Estoque) ...........................................................................................................................................13

- **Surveying Client Experiences: Burnaby Healthy Heart Program**  
  (Melissa Lee & Nicola Fichett) .....................................................................................................................14

- **Mass Casualty Incidents Over Three Decades**  
  (Kate Maki, Melissa Erasmus, Alana Miles, & Chris Dearing) .................................................................15

- **Pain Assessment for Palliative Care Patients**  
  (Tenny Bache, Aja Egglestone, Neda Khoshnood, & Kelly Soros) ...........................................................17

- **Immunization Resources for BC Midwives**  
  (Dawn Waters, Jennifer Funo, & Adrienne Johnson) ................................................................................19
Letter from the Director

I am honoured to have the opportunity to be included in the first ever issue of the University of British Columbia’s Nursing Student Journal – UBC-NSJ! First, I would like to congratulate our student leaders who have initiated and developed this important innovation. When I ask nurse leaders in our community what the UBC School of Nursing is “about”, they always reply that it is research and scholarship that define our school. When I ask what we could do better, they always want more engagement. The UBC-NSJ exemplifies both, our extant research and scholarship and our increasing engagement in practice. The NSJ originated from the Synthesis Project – a final project in which groups of students are paired with leading nurses in practice and a faculty member to engage in a project of importance to practice that requires scholarly focus. Students conduct the project, which often includes literature synthesis, learning about the particular setting, and meeting with key stakeholders. The students generally create a report or plan or some other product meaningful to the practice setting, and present in a final poster presentation to the practice and academic community. In taking this extra step of turning these projects into papers published in this new NSJ, the students exemplify all that UBC Nursing graduates should be – scholarly, collaborative and innovative!

- Colleen Varcoe, RN, PhD
  Professor and Director, Pro tem
  University of British Columbia School of Nursing
We are proud and excited to present the inaugural edition of the UBC Nursing Student Journal (UBC-NSJ). This idea started because we wanted to encourage and acknowledge the work of our nursing students in a non-intimidating way and to share with our community what kinds of nursing research we do. The highlight of our journal is the synthesis projects in the N344 course where nursing students were involved in practice-based projects in diverse healthcare settings guided by practice partners and faculty facilitators. We sincerely believe that this journal will serve as a medium to explore and analyze our nursing practice in order to address diverse challenges of our healthcare system.

This journal could not have started without the support from the faculty, nursing students, and staff. Finally, we would like to acknowledge nursing students and practice leaders who participated in research projects in collaboration with the UBC School of Nursing. We welcome your feedback on Volume 1 of UBC-NSJ and encourage you to consider publishing with us in our next edition.

Sincerely,

Jae-Young Kwon, UBC-NSJ Coordinator

UBC-NSJ Editorial Board

Faculty Advisors: Colleen Varcoe, Vicki Smye, John Oliffe, Bernie Garrett, Pam Ratner, Maura MacPhee, Jennifer Baumbusch

Editorial Board: Jae-Young Kwon, Samantha Thompson, Stella Yeung, Melissa Godinho, Emily Hsiung, Darlene Tam, Natalie Tabakman

Special Thanks to Merrilee Hughes, Paul Zimeras, Lee Ann Bryant, Julia Thompson, and Hilde Colenbrander for their support and encouragement
What is your nursing background?
I spent just on 20 years in acute care nursing the vast majority as a clinical nurse specialist in the emergency room. I began teaching clinically and decided to do an MEd to better understand how people learn. I later became interested in research – so I did a PhD to develop a skill set for doing that independently.

How did you become interested in nursing research?
I always liked people, and thought nursing would afford me an opportunity to help people who were genuinely in need. My research is similarly driven by the lofty goal of wanting to make a difference to people’s well-being and leaving a legacy that others can continue.

What is your current research project?
I am involved in 6 projects as the principal investigator. These include men’s depression, extending the role of prostate cancer support groups in health promotion and the development of an on-line smoking cessation resource for dads who smoke. While my research program is in men’s health I have focused on including the men’s partners, family and friends to better understand men’s health issues and how we might effectively intervene to advance their well-being.

Any advice for undergraduate nursing students interested in research?
You are in a very successful school in terms of our research success and capacity to mentor. There is a wide array of topics researched by the faculty (http://www.nursing.ubc.ca/researchindex.aspx) and we are always looking for help with our projects. Indeed there are lots of job opportunities and internships available – and I strongly encourage students to connect with faculty to explore the possibilities round developing research skills with the guidance of our highly talented researchers.
The College of Registered Nurses of B.C. and nine other Canadian nursing regulators have advised that there will be a new entry-to-practice examination coming into effect in January 2015. Although the new exam format will not affect our class, I was quite intrigued to hear about a computer-adaptive test replacing the Canadian Registered Nurse Exam (CRNE) currently available from the Canadian Nurses Association (CNA).

The new exam will be developed by the National Council of State Boards of Nursing, which develops and administers the NCLEX or entry-to-practice examination for nurses in the United States. There has been a lot of outcry from the CNA as well as the Canadian Nursing Students’ Association (CNSA) around the decision to go with a US-based exam developer, but what I did not realize is that the CNA profits to the tune of around eight million dollars a year from the CRNE. Every student that wants to become a registered nurse in Canada must write the exam at a cost of about $600 whereas the new exam will cost at least 50% less than that. I would love to see the cost go down – did you know the US developer is a not-for-profit organization? Did you know that the new exam is designed to adapt to a specific exam candidate’s knowledge-base so that if you are doing well, the computer will ask harder questions and end the exam earlier? This will result in a more precise estimate of a candidate’s knowledge and should reduce false positive and false negative classification errors associated with the determination of pass/fail.

Currently, the CRNE is only offered three times a year on a single day, so if you fail the exam you must wait until the next sitting or if an illness or situational problem occurred, again, you would have to wait until the next available exam writing date. Because the new exam is a computer-adaptive test, there will be many more opportunities to take the exam.

There is one aspect that troubles me, and that is that it is too bad that a Canadian company was not able to meet the requirements of the nursing regulatory bodies. But that one disappointment will not cause me to be against the change. The ability for nurses in other countries to take the exam and come to Canada to work may also help reduce nursing shortages. As well, the option to practice in the US will be increased because instead of having to study and write two separate exams, they will be the same. I look forward to this historical change and the positive effects it will bring to the nursing profession in Canada.

–Jodi Meacher, nursing student
During the final semester of the undergraduate nursing program, students participate in project work with practice-based nurse leaders. Nurse faculty are available for project support as needed. Every summer, UBC SON sends out invitations to the practice community to sponsor an 18-week (Sept-Feb) student project. Students' interests are matched to available projects, and whenever possible, students work in teams of 3-6 on diverse projects that include everything from the development of teaching materials, website resources and new policies and protocols to participation in funded clinical research programs and systems-wide quality assurance initiatives.

The model of the synthesis project course (N344) is practice-academic collaboratives (PAC). The PAC philosophy is: By working together on practice-based projects, students, faculty and practice partners will build stronger, more meaningful relationships. Through project work and enhanced relationships, capacity will grow to mobilize knowledge and ensure better, evidence-informed practice.

Synthesis projects have been an eye-opening experience for students—showing them what nurses are capable of doing—how nurses can make significant differences with respect to safer, quality healthcare delivery. Students have learned the importance of effective leadership and teamwork; the necessity of building and maintaining respectful relationships; and the promise of critical inquiry—translating evidence into practice that matters. Practice partners and SON faculty have been impressed and proud of students' synthesis of knowledge gained—recognizing that these students are our future nursing generation.

-Maura MacPhee, RN, PhD
Associate Professor & N344 Course Leader
Comparing Current Post-Cardiac Surgery Delirium Management Practices to the National Institute for Health and Clinical Excellence (NICE) 2010 Clinical Guideline on Delirium: Diagnosis, Prevention, and Management

Jocelyn Reimer-Kent, RN, MN1,2; Derek Gunning, MD2; Dianne Obal, RN, BSN3; Cherry Xue Hong Chen, SN1; Mark Bell, SN1; Carol Jillings, RN, PhD1

1University of British Columbia, 2 Fraser Health Authority

Background
- Between 3 to 47% of cardiac surgery patients develop postoperative delirium.
- Delirium, an acute, multifactorial, confusional state causes a temporary global deficit in cognition and is deemed a major complication as it is known to increase mortality and mortality as well as increase length of stay, decrease quality of life (patient family) and caregiver burden, and postpone the need for a new admission to long-term care.
- Recommendations on delirium risk factors, evaluation tools and treatment options were released by the National Institute for Health and Clinical Excellence (NICE) in 2010.
- The post-cardiac surgery delirium rate in 2010/2011 at the Royal Columbian Hospital (RCH) was 2.5% (CMNS).
- Prevention of the multiple contributors to delirium are addressed in Reimer-Kent’s Postoperative Wellness Model (Developed in 1996 by Jocelyn Reimer-Kent: RN, MN: Cardiac Surgery; Clinical Nurse Specialist).
- This model supports rapid surgical recovery and has been foundational to the cardiac surgery program at RCH since 1996.

Purpose
- Examine how closely the current delirium practices in the RCH Cardiac Surgery Program adhere to the NICE recommendations for the diagnosis, prevention, and management of delirium.
- Reviewed the NICE Clinical Guideline on Delirium.
- Developed a data collection tool based on the NICE Clinical Guideline on Delirium.
- Conducted chart audits on 21 cardiac surgery patients who had documented delirium in 2010/2011.
- Compared the RCH Cardiac Surgery Program delirium practices to the recommendation in the NICE Clinical Guideline on Delirium.
- Recommended changes to practice.

Risk Factors for Postoperative Delirium
- 71.4% Male; 28.6% Female.
- 40.1% had a history of cognitive impairment.
- Non-smokers and non-alcohol consumers required higher surgery status and acquired postoperative delirium.

Delirium Interventions

<table>
<thead>
<tr>
<th>Pharmacological</th>
<th>Pharmaceutical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking NSAID</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>50%</td>
<td>6 (50%)</td>
</tr>
<tr>
<td>NSAID Protocol</td>
<td>Yes 50% (100%)</td>
</tr>
<tr>
<td>No 50% (00%)</td>
<td></td>
</tr>
<tr>
<td>26 (100%)</td>
<td></td>
</tr>
<tr>
<td>10 (40.7%)</td>
<td></td>
</tr>
<tr>
<td>18 (65.7%)</td>
<td></td>
</tr>
<tr>
<td>10 (47.6%)</td>
<td></td>
</tr>
<tr>
<td>9 (49.5%)</td>
<td></td>
</tr>
<tr>
<td>6 (37.5%)</td>
<td></td>
</tr>
<tr>
<td>1 (6.2%)</td>
<td></td>
</tr>
<tr>
<td>1 (6.2%)</td>
<td></td>
</tr>
<tr>
<td>4 (12.5%)</td>
<td></td>
</tr>
<tr>
<td>1 (6.2%)</td>
<td></td>
</tr>
<tr>
<td>4 (12.5%)</td>
<td></td>
</tr>
<tr>
<td>1 (6.2%)</td>
<td></td>
</tr>
</tbody>
</table>

Co-existing Postoperative Complications

<table>
<thead>
<tr>
<th>Complications</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleural Effusion</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Lower Respiratory Infection</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Infection</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Upper Respiratory Infection</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Deep Wound</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Cardiac TIA</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Stroke/TIA</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Pneumothorax</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Renal Failure</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>Non-pharmacological</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Postoperative Progress

<table>
<thead>
<tr>
<th>Activities</th>
<th>Expected POD</th>
<th>Average POD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility**</td>
<td>1</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Off Oxygen**</td>
<td>2</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Initial Deleration</td>
<td>3</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Early Catheter Removal</td>
<td>3</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Early Feed</td>
<td>1</td>
<td>1</td>
<td>21</td>
</tr>
</tbody>
</table>

*74.4% continued physical activities during the delirium episode.
**On average, sedation was done in less than one day.

Length of Postoperative Stay (Days)

<table>
<thead>
<tr>
<th>Length (Days)</th>
<th>Range</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disch</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>ICU Stay</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Postoperative Stay</td>
<td>12.5</td>
<td>12.5</td>
<td>12.5</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Recommended Risk Factor Assessment and Management
- NICE Clinical Guideline on Delirium recommends that patients at risk of delirium (e.g., age >45, pre-existing cognitive impairment, and/or severe frailty) be assessed for delirium risk by the nurses and physicians using a validated screening tool.
- For patients determined to be at risk of delirium, they are to receive delirium screening and this medication is embedded in pre-printed orders so nurses can start treatment at the first signs of delirium.
- There was evidence that the CAMI assessment results were poorly documented (only in 1 chart).
- Recommendation – improve documentation of CAMI use/results.

Pharmacological Intervention
Postoperative Delirium Management – Haloperidol
- NICE Clinical Guideline on Delirium recommends the administration of Haloperidol to treat delirium.
- According to the RCH cardiac surgery delirium management plan, if a patient meets the criteria for delirium diagnosis, they are to receive Haloperidol and this medication is embedded in pre-printed orders so nurses can start treatment at the first signs of delirium.
- There was evidence that identifying delirium did not lead to treatment.
- Recommendation – determine the rationale for withholding Haloperidol and explore what strategies are needed to ensure its immediate use once delirium is identified.

Postoperative Pain Management – Non-opioids and Opioids
- NICE Clinical Guideline on Delirium states that opioids such as morphine are not contraindicated (moderate quality evidence to show no significant effect of morphine of the incidence of delirium) and should not be withheld in delirium patients with acute pain, as ineffective postoperative pain relief is also a contributory factor to delirium as opposed to a low dose opioid.
- According to the RCH cardiac surgery pain management plan patients are to receive around-the-clock non- opioids (acetaminophen +/- a non-steroidal anti-inflammatory drug (NSAID) and an immediate release opioid (morphine 1 to 4 mg IV or 5 to 10 mg PO) for pain that is more than mild. If it also stipulates that the outlined pain management should be continued during episodes of delirium.
- There was evidence that only 43.9% of patients continued to receive an opioid during an episode of delirium.
- Recommendation – determine the rationale for withholding opioids and explore what strategies are needed to ensure its appropriate use once delirium is identified.
- Recommendation – determine the rationale for withholding NSAIDs and explore what strategies are needed to ensure its appropriate use both as a potential preventive measure for delirium and for ongoing pain prevention once delirium is identified.
- There was evidence that 72% of patients with delirium received acetaminophen.
- Recommendation – determine the rationale for withholding acetaminophen and explore what strategies are needed to ensure its appropriate use both as a potential preventive measure for delirium and for ongoing pain prevention once delirium is identified.

Correspondence: Jocelyn Reimer-Kent, RN, MN Fraser Health, British Columbia, Canada
Email: Jocelyn.Reimer-Kent@fraserhealth.ca
Nursing and patient education initiative to support cardiac electronic implantable device practice

Meghan Barnhart
University of British Columbia, School of Nursing

Introduction
The project was developed to address a need for education resources regarding cardiac implantable electronic devices (CIEDs) for both patients and nurses at The Heart Centre at St. Paul’s Hospital. Two resources were developed, a guide for nurses and a teaching tool for patient education.

The nurses working on 5 A/B at St. Paul’s were introduced to the tools during pocket rounds, in-services and through the educator. After three months of the tools being released on the ward, nurses were surveyed to assess the tools.

The initiative and survey results were presented during the scientific meeting of the Canadian Council of Cardiovascular Nurses (CCCN) in October, 2011. The tools were reviewed and accepted as a suitable resource for use on the ward as educational tools.

Procedure observation days were arranged to facilitate knowledge development regarding patient experiences with CIED implantation.

Brochures have been developed to reflect Heart Centre policies and procedures, as well as replace discontinued industry patient information brochures.

CIED Resources
The resources developed outline the preparation for device implantation procedures as well as important information for the patient’s return home after implantation.

The patient guide was available to be used by nurses in their education of patients as teaching point prompts, and the additional resource specifically for nurses offered additional background information, an example of the shock plan, video resources and frequently asked questions.

The resources are available on 5 A/B as well as in the CCU.

Survey Results
A survey conducted with nurses on St. Paul’s Hospital 5 A/B at The Heart Centre concluded the resources were a beneficial resource for patient education. Improvement could be made upon nurse education regarding the devices and patient care at home could be expanded. As well, discharge guidelines were needed. Further, nurses concluded patients require information booklets to take home.

CCCN Presentation
Challenges in patient education, the patient resources, and the survey results were presented at the Canadian Cardiovascular Nurses annual congress.

Figure 1. Image of the teaching guide resource available to nurses regarding the information in the patient teaching guide.

Figure 2. The program for CCCN with the description of the CCO Care session held by Sandra Lauck and Meghan Barnhart. With Contribution by Jerome Pudliczbow.

The session was presented to a full room of nurses engaged in cardiovascular nursing across Canada. The question period brought forward engaging questions and knowledge sharing of patient education experiences, techniques and resources, all of which have helped to shape the next steps of the initiative.

Figure 3. Page 1 of standardized device discharge guidelines.

Image 1. Meghan Barnhart presenting to the CCCN at the Canadian Cardiovascular Congress.

Image 2. Dressed and ready to observe device implantations. The procedures took place in the Heart and Lung Centre.

Observations
To further enhance patient experience understanding, Meghan Barnhart observed device implantation following the patient through the process of being admitted, going through the procedure, and later entering into post surgical care. The experience was utilized in the development of discharge planning and patient education booklets.

Discharge Guidelines And Patient Education Booklets
Discharge guidelines and patient information booklets have been a highly requested resource for nursing staff and patients. As discharge planning and education is vital for quality of life and positive outcomes for patients with new devices, an element of the initiative was to develop discharge guidelines. The guidelines offer a checklist for nurses to ensure their education and information is inclusive of all the patient’s need to know educational needs.

The patient information booklets are currently in development. The foundational information regarding pre-surgical and post surgical care, living with the device and follow-up appointments.

Future Direction
The initiative will continue to grow and develop. The world-based education tools will be re-evaluated by a committee and become official documents of The Heart Centre.

The discharge guidelines will be reviewed by a committee to determine the applicability of the guidelines in practice.

The patient education booklets will be completed and further developed by the patient education team, as well as being reviewed by patients who have undergone procedures. The booklets are intended to replace the industry booklets that will no longer be produced due to the development of online information resources.

A device education session will be held for nurses working in The Heart Centre as well as in the Critical Care Unit. The session addresses the desire for an insurance regarding devices brought forward in the survey. The insurance will involve how devices function, the indications for device implantation and the electrophysiology behind the devices. A nurse from the device clinic will be leading the discussion.

Acknowledgments
I would like to thank Sandra Lauck for her time, advice and guidance throughout this project. Not only has she positively impacted the quality of nursing care at the Heart Centre, but she has reinforced in me what it means to be a nurse. I would also like to thank Marie McCrory for her support and energy in promoting this initiative.

For further information
Please contact https://heartcentre.ubc.ca, or visit The Heart Centre website http://www.heartcentre.ca/

a place of mind
Impact of Losing a Tobacco Cessation Counselor for Inpatient Cardiac Units

Martha Mackay¹ 2 3, Jae-Young Kwon¹, Clarissa Mak¹, Stephanie Yoon¹
¹University of British Columbia School of Nursing; ²St. Paul’s Hospital Heart Centre, ³Centre for Health Evaluation and Outcome Sciences

Background
• Tobacco use as a major modifiable risk factor for heart disease
• 2007: implementation of “Ottawa Model for Smoking Cessation” on inpatient cardiac units in large teaching hospital, comprising all elements of best smoking cessation practice:
  - Assessment of smoking status of all patients (bedside nurses)
  - Face-to-face intervention with all smokers (tobacco cessation counselor, TCC)
  - 3 months’ telephone follow-up using interactive voice response (IVR) technology/TCC as needed
• 2011: TCC position deleted after ~ 4 yrs due to budget constraints
• Responsibility for smoking cessation assessment & intervention shifted to bedside nurses
• Concerns re: nurses’ counselling skills, knowledge of cessation practices, workload

Method
• Random audits of screening and referral rates during tenure of TCC
• 6-month retrospective chart review after deletion of TCC
• Data collected: smoking status; rates of assessment of smoking status, delivery of brief intervention, referral to outpatient program made
• Differences in above tested with χ² statistic

Results
• Rates of screening and referral, by group

Discussion
• Assessment of smoking status appears to be entrenched in nursing practice in this setting
• Abundant evidence exists supporting improvement in smoking cessation when patients receive ongoing cessation support after discharge (minimum 3 months)
• Referral to cessation support after discharge not consistently achieved, despite periodic education of staff re: smoking cessation assessment and interventions strategies
• Potential barriers include nursing workload, knowledge of best practice for smoking cessation, lack of confidence in counselling techniques, failure of bedside nurses to embrace this role after having TCC carry out these functions for > 4 yrs

Conclusions
Many smokers today are highly addicted.
Successful cessation is possible, even in highly addicted smokers, with adequate and effective in-hospital and outpatient cessation support.
Adequate clinical resources to support effective brief counselling and referral to outpatient support are essential.
Further research, to explore barriers encountered by nurses in the inpatient setting, is needed.
Knowledge to Action Translation Framework: Screening for Delirium in Inpatient Psychiatry Populations

Aruba Nurullah, Julia Ott, School of Nursing, University of British Columbia
Practice Partner: Peggy Simpson, St Paul’s Hospital

Background

Evidence-based practice is an important element of quality care in all domains of nursing by optimizing outcomes for patients, improving clinical practice and achieving cost-effective nursing care with accountability and transparency in decision-making (CNA, 2008). Despite a growth in nursing research findings have consistently shown ineffective uptake of such theory into new nursing practices. 50-60% of patients in the United States and the Netherlands are not receiving care based on sound evidence (Graham et al., 2006). With a lack of research findings being taken up in practice settings, many patients are missing out on the best possible care. This problem is known as the knowledge translation gap, and has led to inefficient use of already limited health care resources. Knowledge to action process links research knowledge synthesis and implementation for best clinical practice and improved outcomes (Graham et al. 2006). Peggy Simpson, Clinical Nurse Specialist Consultation Liaison Psychiatry at St Paul’s Hospital has been using the Knowledge to Action Process as a framework for implementing the revised Nursing Care Standards Protocol for Delirium (NCS6323, 2011) in Inpatient Psychiatry units.

Purpose

To use the Knowledge to Action framework to implement and monitor the uptake of the Delirium Nursing Practice Standard by nurses working in inpatient psychiatry.

To evaluate changes in Conceptual use (changes in levels of knowledge, understanding or attitude) and Instrumental use (changes in behavior or practice) to determine extent of research knowledge uptake with staff nurses (potential-adopter group) and whether the interventions were adequate to bring about the desired change.

Knowledge to Action Process

1. Identify Problem: 15% incidence rate of Delirium in psychiatric inpatients, 35% for Bipolar patients, only 48% of delirious patients actually recognized (Ritchie et al., 1996).
2. Select Knowledge to Local Context: Nursing Care Standards Protocol for Delirium revised to include assessment and intervention strategies to improve patient outcomes (NCS6323, 2011).
3. Assess Barriers to Knowledge Use: Peggy Simpson surveyed staff nurses knowledge about assessing and managing Delirium. She held knowledge sharing education sessions attended by Nurse Leaders, Nurse Educators and UBC Nursing Students to determine the interventions required to facilitate changes to clinical practice.
4. Select, Tailor and Implement Interventions: Staff education sessions held on applying the NCS6323-Delirium Algorithm, Nurses fill out new Delirium Screening and Care Plan Flow sheet with risk factors, CAM screening and PRISME interventions.
5. Monitor Knowledge Use: UBC Nursing students conducted chart audits to determine number of patients pre-screened for Delirium who are at risk; Connected with individual nurses to understand their knowledge. Engaged in group Participatory Action Applicative Inquiry Sessions with Peggy and staff nurses to create a forum for discussion about Delirium in psychiatry and any barriers/suggestions to implementing the new practice standards.

Table 1: Chart Audit results.

<table>
<thead>
<tr>
<th>Category</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with 3+ Delirium risk factors</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>Patients with completed Delirium Screening and Care Plan flow sheet</td>
<td>2 (17%)</td>
</tr>
<tr>
<td>Patients experiencing Delirium</td>
<td>2 (17%)</td>
</tr>
</tbody>
</table>

7. Evaluate Outcomes:

Staff nurses utilize Delirium Screening and Care Plan flow sheet for patients experiencing Delirium but not for pre-emergent screening. Identified barriers:

- Insufficient time to attend education sessions on Delirium
- Lack of access to Delirium Screening and Care Plan flow sheet
- Distinguishing Delirium versus Psychosis
- Patient case load and level of acuity of patients on units
- Unit culture or belief of Delirium not common on psychiatry units
- Lack of support by physicians

8. Sustain Knowledge Use:

- Further education sessions to permeate knowledge of NCS6323-Delirium algorithm among staff
- Nurse mentor on each unit to start culture of Delirium screening
- Reassess staff nurses to determine whether the lack of change is related to resistance to change or other barriers beyond their control
- Tailor interventions to these barriers, monitor ongoing knowledge use, and evaluate the impact of Delirium in Psychiatry knowledge translation to Delirium algorithm usage in clinical practice.

References

Patient and Family Education Pathways and Resources for the Inpatient Eating Disorders Program at BC Children's Hospital
Anne Marie Hansen, Jessica Jobin, Eileen Li & Caroline Philippson
Practice Partner: Tom Bauslaugh

Introduction
Our project was developed to address identified gaps in the unit’s prehospital educational resources for parents and families. The unit at BCCH faces two principal and overlapping programs for children and families struggling with eating disorders. They have been applying a Family-Based Therapy (FBT) model in their inpatient program. A high current evidence supports the best treatment option for children and adolescents with Anorexia Nervosa (Findlay, Pinson, & Tabb, 2013). The key benefit of the FBT treatment philosophy is that families are given full responsibility to help their child to health (Findlay et al., 2009). While the FBT treatment model was developed specifically for the inpatient setting, its notable success in a treatment model has led to its adoption in the outpatient setting.

Our role as students was to assist our practice partners by benchmarking current family prehospital educational practices and available resources provided by eating disorder treatment centers in Canada, UK, USA and Australia. We selected a variety of treatment centers from around the world and distributed a standard series of questions regarding their use of FBT and other psychiatric educational tools in treatment.

Challenges
Due to the nature of the project, we had limited control over times and resources and participation of family contacts. As a result, we received a limited number of responses which impacted our ability to provide a comprehensive analysis of current family-based therapies and resources.

* Initial images of the project were shared at the managerial level as we received approval from the eating disorder program director to share the BCCH resource package with external facilities.

* Throughout the project there was a general ambiguity/inconsistency about our roles and tasks and those of our practice partners that we only clarified.

Recommendations
In terms of providing well-rounded family resources, the Provincial Specialized Eating Disorder program at BC Children’s Hospital seems to be leading the way in terms of family-oriented resources, content topics and mediums. In terms of Family-Based Therapy, BCCH is a leader in offering this therapy to patients and families; however, they are addressing some gaps by integrating FBT into their inpatient program. As such, the program managers and staff will require innovative methods for implementing FBT into an inpatient setting. There is a great opportunity for catalyzing the evolution of pediatric eating disorder education.

<table>
<thead>
<tr>
<th>Psycho-education offered to the parents/family</th>
<th>Education content &amp; information provided</th>
<th>Available family resources</th>
<th>Program copyrights</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCCH: Delivery of family education has been consolidated into a single form: the Educational Pathway for Informed Caregivers (EPC) - Family workshops, Educational sessions, Workshops, on-site/hospital supported meals with child</td>
<td>Extra resources from the locally-literate Health Resource Centre including a comprehensive new website covering general information, eating disorders, treatment, healthy eating &amp; recovery: <a href="http://https://nurturingsources.bch.ca">https://nurturingsources.bch.ca</a> and a YouTube channel: <a href="http://www.youtube.com/user/BCchildrenshealth">http://www.youtube.com/user/BCchildrenshealth</a></td>
<td>Three scheduled educational sessions focus on supporting caregivers to learn about meal support.</td>
<td>All rights reserved</td>
</tr>
<tr>
<td>Toronto Hospital for Sick Kids: One-day combined inpatient and outpatient family program that provides a manual and series of presentations by different teams members on relevant topics (e.g. dietitian talks about normal eating). The manual has also been translated into French, Spanish and both traditional and standard Chinese.</td>
<td>Parents and the affected adolescents all receive the information. Topics include information on eating disorders (both mental health and medical information), co-morbid psychiatric disorders, normal eating stages of change, and what parents can do to help.</td>
<td>Psycho-education manual</td>
<td>Not currently available</td>
</tr>
<tr>
<td>Children’s Hospital: Therapists separate care to both patients and their families.</td>
<td>Parents are provided with fact sheets and position statements on nutrition, anxiety of eating disorders, program structure, role of family role and如何 within treatment, transition back on the community setting. Information for support groups outside of the family, and a position statement on FBT. In the treatment of eating disorders to be given to the community physicians.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

McMaster Children’s Hospital: Do not provide psycho-ed. However, there are no comprehensive food education, not a direct referral but act as a consultant. Parents make their own choices on what to feed their child. In some cases, the use of a psychologist who works with children to teach them about their nutritional needs.

JANEWAY, NF: An 8-week psycho-educational group, “Bridge to Hope,” offered 3 times/year. The program also includes some of the information in individual sessions.

Auckland: Provided in a number of formats: - a booklet about Eating Disorders (ED) and the program - Basic information about eating disorders and first line treatment (FBT 1) - Therapist & pediacticians provide psycho-ed about eating disorders

Not standardized between therapists and paediatricians


Special Thanks to: Tom Bauslaugh, Kim Wong, Marlee Groening & Maura MacPhie
Lean Education Modules: Teaching Lean to Frontline Nurses

Focus: In healthcare, Lean has been used at the system, procedural, and department level to ensure safe practice and capture workflow efficiencies. The purpose of the project was to develop healthcare relevant teaching tools. Several presentations incorporating scenarios, examples and exercises were created to address the gap in translating Lean concepts to front-line nurses.

Module 1: Introduction to Lean
Goals:
• To assess the current knowledge baseline of Lean
• To familiarize employees with the history of Lean and the definition of Lean
• To explain the idea of “waste” in Lean
Outcomes:
• Individuals attending the module will be able to verbalize Lean thinking
• Individuals will be able to explain the concept of waste in Lean thinking

Exercise to identify the 8 “wastes” of Lean

Module 2: Introduction to A3 Thinking
Goals:
• To continue to build on Lean thinking
• To familiarize employees with A3 thinking by “pulling” from their current base of knowledge
• To explain how A3 thinking is a cornerstone to Lean thinking
Outcomes:
• Individuals will be able to explain the components of an A3 sheet
• Individuals will be able to complete an A3 sheet

Example of completed A3 sheet using SBAR language

Module 3: Introduction to Value Stream Mapping and Spaghetti diagrams
Goals:
• To continue to build on Lean thinking
• To give context to current state/future statements in A3 thinking
• To explain how spaghetti diagrams are used in Value Stream Mapping
Outcomes:
• Individuals will be able to explain how a spaghetti diagram is used in process improvement
• Individuals will be able to produce current state and future state maps on an A3 chart
Summary

Nicola and Melissa conducted a survey at the Burnaby Hospital Healthy Heart Program to measure client satisfaction and to determine strategies for program improvement. We began by speaking with the program’s multidisciplinary team to learn about the services offered by the program and its capacity to meet its clients’ health needs. Once we gained a basic understanding of our client population, we sought advice from the multidisciplinary team regarding how the program’s services could be improved to enhance client satisfaction. We then drafted survey questions, which were reviewed by our manager and the Healthy Heart team. With their assistance and feedback, we developed a three-page comprehensive survey consisting of questions covering topics such as program availability, heart healthy education, and overall client satisfaction. We also developed open-ended questions to allow participants to expand on topics such as managing their own health, benefits they received from the program, and areas for program improvement. We distributed the surveys at six Healthy Heart classes. Thirty-seven surveys were returned to us; the results were compiled and analyzed; and a summary of our findings were submitted to the Team. Overall, clients were very satisfied by the program. However, participants indicated they were “somewhat satisfied” or “not satisfied” with certain aspects of the education component of the program, such as Stress Management, Medication Management, and Emergency Management. Although they were given space to provide comments or feedback about the reasons they were dissatisfied or how the program could be improved, most left this space blank. However, the majority of comments focused on the positive aspects of the Healthy Heart Program, such as “I have better knowledge of exercise and diet, plus my confidence has returned” and “I lost weight and kept it off, and enjoyed the company of fellow suffering souls.” The staff at the Healthy Heart could further their knowledge of client satisfaction by verbally engaging with them about specific areas for improvement, which were indicated on the written surveys.
Abstract

Background. Annually, millions of people around the world attend events such as music festivals, rock concerts, marathons, and parades. These events can be referred to as “mass gatherings” as they have the potential to draw thousands of people into attendance or participation. Large numbers of people – gathered together in small geographical spaces, on unfamiliar terrain, often in the presence of drugs and alcohol – are at a higher risk of injury and illness than the surrounding population. Despite the best intentions of event planners and medical teams, unexpected incidents do occur and can result in injury and death for event attendees and participants. These are termed “mass casualty incidents (MCI).” Currently, it is difficult to plan a medical response and to provide medical support for mass gathering events in relation to MCIs because systematic reviews of existing literature have occurred infrequently.

Purpose. The purpose of this research is to gain an understanding of the types of MCIs occurring at mass gathering events and to identify whether or not trends exist between the type of MCI and the type of mass gathering.

Methodology. We executed a systematic review of mainstream media, grey literature, and the mass gathering medicine literature to identify MCIs at mass gathering events from 1980 to 2011 on an international scale.

Results. One hundred and forty-six MCIs were documented and reviewed for frequency at event type, mechanism(s) of casualty, and precipitating factors. Of the events reviewed, MCIs were most common during sporting events (36.3%), followed by, religious events (15.0%), music concerts/festivals (13.0%), cultural festivals and events (9.6%), nightclubs/dance (9.6%) miscellaneous (6.2%); air shows (5.5%); and non-sporting stadium events (4.8%).

Conclusion. On an international scale, MCIs have occurred most frequently at sporting events between the years 1980 to 2011. The most common cause of injury at these events has been the result of stampedes followed by riots and violence. Although the precipitating factors for MCIs were reviewed, the relationship is complex and requires further research to better inform event planners and medical teams in their management of mass gathering events. Addressing this gap in current health-care literature may assist medical teams, on site and locally, to better prepare for mass gatherings and in planning a response to mass casualty incidents.
Mass Casualty Incidents Over Three Decades

Authors: C., Dearing, BSN, M., Erasmus, BSc, BSN, K., Maki, BSN, A., Miles, BSN

Questions for Research
What types of mass casualty incidents (MCIs) occur at mass gathering events?
What are typical factors associated with MCIs at certain types of events?
What, if any, are common themes between event type, event demographics, and MCI type?

Methods
A systematic review of the mass gathering medicine literature, mainstream media, and grey literature to identify MCIs at mass gathering events on a global scale from 1980 to 2011.

Results
Of the 146 events reviewed, MCIs were most common during sporting events (36.3%), followed by, religious events (15.0%), music concerts/festivals (13.0%), cultural festivals and events (9.6%), nightclubs/dance (9.6%) miscellaneous (6.2%); air shows (5.5%); and non-sporting stadium events (4.8%).


<table>
<thead>
<tr>
<th>Mass Gathering Event</th>
<th>Stampede</th>
<th>Fire</th>
<th>Riot/Violence</th>
<th>Crowd Surge</th>
<th>Failed Infrastructure</th>
<th>Vehicle Crash</th>
<th>Miscellaneous</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sporting Event</td>
<td>27</td>
<td>1</td>
<td>17</td>
<td>1</td>
<td>7</td>
<td>1 (Boat)</td>
<td>0</td>
<td>53</td>
</tr>
<tr>
<td>Religious Event</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Music Concert/Festivals</td>
<td>10</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1 (Car)</td>
<td>1 (Heat exhaustion)</td>
<td>19</td>
</tr>
<tr>
<td>Cultural Festivals and Events</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1 (Electrocution)</td>
<td>5 (Tram)</td>
<td>14</td>
</tr>
<tr>
<td>Nightclubs/dances</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2 (Substance abuse)</td>
<td>14</td>
</tr>
<tr>
<td>Air Shows</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7 (Plane)</td>
<td>1 (Falling debris)</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Non-Sporting Stadium Events</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 (Motorcycle)</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1 (Explosion)</td>
<td>9</td>
</tr>
</tbody>
</table>

| Total                        | 76       | 12   | 19            | 3           | 14                     | 10            | 12            | 146   |
Purpose. The purpose of this project is to provide evidence-based recommendations on specific pain measurement tools and flow sheets that would be appropriate for use in the Acute Palliative Care Unit at Vancouver General Hospital (VGH APCU). Through research and analysis of various pain assessment tools, consideration of peer-reviewed articles, performing a needs assessment of the unit and benchmarking with various health care facilities across BC and Canada, we have identified the effectiveness and usefulness of various pain assessment tools in the acute palliative care setting.

Overview. We have identified and compiled a table of 22 pain measurement and assessment tools. A brief description of each tool is provided as well as the strengths, weaknesses, ease of administration, validity, and validity specific to palliative. Additionally, a needs assessment was conducted in order to address the gaps in the current pain assessment tool used at VGH APCU. This was achieved by performing chart reviews, interviews and questionnaires. Collaborative benchmarking of current palliative pain assessment tools from various health authorities (Fraser Health Authority, Providence Health, Calgary Health Region, Nova Scotia Health and the United Kingdom) is also provided. A table has been included that lists the tools utilized in each health authority along with their respective features, benefits, limitations and remarks. It is our hope that this project will facilitate the discussion around the implementation of new standardized pain measurement tools and documentation at VGH APCU.

Background. Research shows that pain assessment in a clinical setting requires a systematic approach (Weissman, Griffie, Muchka, & Matson, 2000). This will avoid unnecessary complex assessment methods, ensure efficient use of resources, minimize the number of instruments used, create standardization of the tools, improve patient assessment and care, and improve documentation and communication between health care providers (Weissman et al., 2000). However, any systematic assessment tool must be considered in the context of the clients’ current situation, and variances in sources and perceptions of pain need to be addressed. Components of assessment tools which are most relevant for the clinician and the patient may vary along the disease trajectory and between patients (Kaasa et al., 2008). Therefore, selecting a flexible tool (e.g., a tool that can be administered via a combination of self-reports, caregiver reports, and/or behavioural indications) may be the most efficient option particularly for those unable to verbally express pain.

Literature Analysis. Health care professionals, patients, and families can use pain assessment tools to
gather data through patient self-reporting and behavioural observation. If possible, self-reporting should be the primary source of information when completing a pain assessment as it “is still the most reliable indicator of pain” (Jaggar & Holdcroft, 2005, p. 81). The exception to self-reporting is with non-verbal, non-cognisant persons. For these populations, behavioural observations validated by family and caregivers should be the primary source of information for a pain assessment. Observational assessments can also be used routinely in order to reduce the patient burden of routine hourly pain checks.

The pain assessment tools listed are either unidimensional or multidimensional. Unidimensional tools such as the Numerical Rating Scale (NRS), Verbal Rating Scale (VRS), and Verbal Analog Scale (VAS) are highly sensitive in assessing specific features (ie. pain intensity), but rarely address the other components of pain (Katz & Melzack, 1999). Unidimensional tools are quick to administer, easy to understand, and have been widely used and validated. A major criticism of these rating scales is that they “do not actually provide rational-level scaling of pain. Therefore, if a patient’s pain is reduced from 8 to 4 after treatment, it cannot be inferred that she or he has experienced a 50% reduction in pain” (Fillingham, 2005, p. 72).

Multidimensional tools such as the McGill Pain Questionnaire (MPQ), Brief Pain Inventory (BPI), and Memorial Symptom Assessment Scale (MSAS) can be highly sensitive at assessing all of the common components of the pain experience (physical, psychological, social, cultural and spiritual). Many multidimensional tools have also been validated across cultures and languages and demonstrate a high level of consistency (Jagger & Holdcroft, 2005). Furthermore, because pain is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage” (IASP, 2011), a full assessment of pain therefore requires a multidimensional approach for pain evaluation (Jaggar & Holdcroft, 2005). However, multidimensional assessment tools require more time (from the patient and the person performing the assessment) than unidimensional scales and tend be harder to learn to administer and score, limiting their routine use in clinical settings.

**Multidimensional Palliative Pain Assessment Tool.** The Edmonton Symptom Assessment System (ESAS) is a valid and reliable assessment tool to assist in the assessment of nine common symptoms experienced by cancer patients (Watanabe et al., 2011). The original tool was developed by the Regional Palliative Care Program, Capital Health in Edmonton, Alberta, and is one of the key assessment tools used in the Palliative Care Integration Project initiated by Queen's University (2012). The ESAS is designed to assist in the assessment of: pain, tiredness, nausea, depression, anxiety, drowsiness, appetite, well being, and shortness of breath. One blank scale is available for patients to use to assess an “other problem” as needed. The severity at the time of assessment of each symptom is rated from 0 to 10 on a numerical scale; with 0 meaning that the symptom is absent and 10 that it is the worst possible severity.

The ESAS was designed so that the patient, or his/her family caregiver, could self-administer
A Needs Assessment. A needs assessment is a critical component in understanding and addressing concerns expressed by the staff, clinicians, and management surrounding pain assessment at VGH APCU. To analyse the current pain assessment tool in use (a flowsheet used VGH-wide which was developed originally for use in acute medicine); chart reviews, questionnaires, and clinician interviews were conducted to identify possible gaps, effectiveness, accuracy and adherence to using the tool. After careful review of charts and documentation records on the APCU, it was evident the major use for the pain assessment flow sheet was as a medication administration record. Specifically, the scheduled and breakthrough pain medications and doses were recorded on the flow sheet, while subjective pain data was rarely recorded. This type of documentation does not provide a full clinical picture of client circumstances prior to medication administration, raising a number of issues related to documentation practice standards as put forth by the College of Registered Nurses of British Columbia (CRNBC, 2012) such as communication, safe and appropriate nursing care, and professional and legal practice standards.

After a chart review, seventeen questionnaires were administered to staff including registered nurses, licensed practical nurses, medical residents, and physicians. The questions investigated the perspectives of the staff surrounding: (1) the usefulness of the flow sheet in use, (2) information that should be be added or removed, and (3) concerns addressing gaps in the current pain tool and documentation method. The data collected from the interviews and questionnaires were congruent with the information collected from the chart and documentation review. Several reasons suggested by staff members provide a rationale for the method of documentation evident in the chart review. First and foremost, staff nurses and physicians appreciated that the current tool allowed a clear visualization of the trends in medication administration over a period of time. Second, respondents reported that staff were reluctant to use the tool regularly because they felt that due to the patient burden incurred during assessment, clients could possibly be annoyed or disturbed by self-report pain on a frequent basis (eg. every one hour). Recognizing and understanding the patients’ perspective is an important issue to address, because in order to achieve optimal health outcomes, patients need to be active partners in their care. We suggest that further research be carried out to determine patient satisfaction with participating in frequent pain assessments at VGH APCU. Thirdly, all staff members indicated that including a section for respiratory distress medications would be helpful because currently there is no space to write it on the flow sheet, so they were recording these medications on the flow sheet in a section designated for pain intensity, respiration rate, sedation.
score, and side effects. Forthly, respondents felt that the addition of a section indicating the 24 hour medication totals would be beneficial. Overall, the staff members were pleased with the current pain assessment flow sheet and found it useful in monitoring pain control, titrated medications, and medication trends over time. These interviews and questionnaires were crucial to understanding the perspective of the staff, which will help select a relevant and appropriate pain assessment tool and documentation flow sheet, and improve clinician adherence to utilizing the tool and improving pain-related documentation in the future.

**Benchmarking.** Part of this project involved contacting a number of local and national health authorities to determine what kinds of documentation and pain assessment tools are used in other jurisdictions. The following health authorities were contacted: Providence Health Care, Fraser Health Authority, Calgary Health Region, Capital Health (Nova Scotia), and NHS in the United Kingdom. Victoria Hospice was contacted regarding this project however we received no reply. All health authorities’ documentation was reviewed and analysed for features, benefits, limitations and remarks (see the benchmarking table for details). The remark section includes information given from the various health authority contacts regarding the subjective usefulness and features of the documentation. The conclusion from the collaborative benchmarking indicates that while no health authority uses the same pain assessment tool, there are several contributing factors which determine an effective and efficient tool. Such factors include simplicity and efficiency for both health care provider and patient. Additionally, in order to achieve optimal outcomes, a visualization of the trends over time and the various interventions used should be illustrated.

**Recommendations.** Based on our literature analysis, needs assessment and benchmarking, we recommend that (1) a comprehensive, multidimensional tool be administered upon admission to VGH APCU, while (2) continuing to use a unidimensional tool (eg. NRS) for assessing patients’ pain prior to any intervention. (3) A comprehensive multidimensional tool such as the Edmonton Symptom Assessment System should be administered once per shift (or per 24 hours) to assess various factors which may contribute to the pain and discomfort of palliative patients. Finally, as the disease trajectory, goals, and needs of the palliative patient changes, (4) pain assessment tools need to be modified and individualized.

**Future Implications.** We recommend the design of a draft pain assessment tool which is unique to the VGH APCU, and implement it as a trial study and then evaluate its effectiveness among staff and patients on the unit. We also suggest that further research be carried out to determine patient satisfaction with participating in frequent pain assessments.

**References**


Pain Assessment for Acute Palliative Care Patients


University of British Columbia School of Nursing & Vancouver General Hospital

Purpose
To provide evidence-based recommendations on specific pain measurement tools and flow sheets that would be appropriate for use in the Acute Palliative Care Unit at Vancouver General Hospital (VGH APCU).

Overview
A table of 22 pain measurement & assessment tools. A brief description of each tool is provided as well as the strengths, weaknesses, ease of administration, validity and validity specific to palliative care has been outlined.

A needs assessment was conducted to address the gaps in the current pain assessment tool used at VGH APCI.

Collaborative benchmarking of current palliative pain assessment tools from various health authorities in BC, Canada & UK. A table has been included that lists the tools utilized in each health authority along with their respective features, benefits, limitations and remarks.

Background
Pain assessment in a clinical setting requires a systematic approach (Weissman et al., 2000). This will avoid unnecessary complex assessment methods, ensure efficient use of resources, minimize the number of instruments used, create standardization of the tools, improve patient assessment and care, and improve documentation and communication between health care providers (Weissman et al., 2000).

Selecting a flexible tool (ie a tool that can be administered via a combination of self-reports, caregiver reports, and/or behavioral indicators) may be the most efficient option particularly in those unable to verbally express pain.

Literature Review
Self-reporting should be the primary source of information when completing a pain assessment as it is still the most reliable indicator of pain” (Jagger & Holdcroft, 2005, p. 81)

Observational assessments can be used routinely in order to reduce the patient burden of routine hourly pain checks.

Unidimensional Assessment Tools
Examples: Numerical Rating Scale (NRS), Verbal Rating Scale (VRS), and Verbal Analog Scale (VAS)

STRENGTHS:
- Highly sensitive in assessing specific features (ie. pain intensity)
- Quick to administer
- Easy to understand
- Widely used & validated

LIMITATIONS:
- Rarely address the other components of pain (Katz & Melzack, 1999).
- Doesn’t provide rational level scaling of pain.

Needs Assessment
Potential Gaps?

CONCLUSION from Chart Reviews
- Staff had become accustomed to utilizing the pain assessment flow sheet similarly of that of a medication administration record.
- The scheduled and breakthrough pain medications were recorded on this tool, while subjective pain data was rarely recorded.

17 Questionnaires were administered to staff, to investigate their perspectives surrounding the possible gaps.

CONCLUSION from Interviews & Questionnaires

QUESTION 1: What do you find useful about the current pain assessment flow sheet?

ANSWER: Overall, the staff members were pleased with the current pain assessment flow sheet and found it useful in monitoring pain control, titrated medications, and medication trends over time.

QUESTION 2: What would you suggest to be added to the current pain assessment flow sheet?

ANSWER: Respiratory Distress Medications Section & 24-hour Medication Totals Section (To indicate maximum daily dosage).

QUESTION 3: What would you suggest to remove from the current pain assessment flow sheet?

ANSWER: Monitoring parameters Section (ie. Pain intensity, sedation level, respiration rate, side effects).

Multidimensional Assessment Tools
Examples: McGill Pain Questionnaire (MPQ), Brief Pain Inventory (BPI), The Edmonton Symptom Assessment System (ESAS) and Memorial Symptom Assessment Scale (MSAS)

STRENGTHS:
- Highly sensitive at assessing all of the common components of the pain experience
- Validated across cultures & languages & high level of consistency (Jagger & Holdcroft, 2005).

LIMITATIONS:
- Require more time
- More difficult to learn to administer & score

Collaborative Benchmarking
Collaboration with the following health authorities were included:

Providence Health Care, Fraser Health Authority, Calgary Health Region, Capital Health (Nova Scotia) & Liverpool Care Pathway (United Kingdom).

CONCLUSION from Collaborative Benchmarking
- No one health authority used the same pain assessment tool
- Several factors result in an effective & efficient tool. (Such factors include simplicity and efficiency for both health care provider and patient.)
- To achieve optimal outcomes, a visualization of the trends over time and the various interventions used must be illustrated.

Recommendation
1. A comprehensive, multidimensional tool be administered upon admission to VGH APCI & once per shift to assess the various factors which may contribute to the pain and discomfort of palliative patients.
2. To continue using a Unidimensional tool for assessing patients’ pain prior to any intervention.
3. To avoid using the assessment tool as a MAR.
4. As the disease trajectory, goals, and needs of the palliative patient changes, pain assessment tools need to be modified and individualized.

Future Implication
To design a tentative pain assessment tool which is unique to the VGH APCI and implement it as a trial study and then evaluate its effectiveness among staff and patients on the unit.

References
Supplementary document attached to presentation.
**Midwifery Immunization Practice Survey**
Dawn Waters*, Jennifer Funo*, & Adrienne Johnson*

*UBC School of Nursing Program 2012, Vancouver, BC

BC Centre for Disease Control (CDC). Brittany Deeter

**Introduction.** Recent discussions between the British Columbia Center for Disease Control (BCCDC), the Midwifery Association of British Columbia (MABC) and the Midwifery Department of the University of British Columbia (MDUBC) have identified a need for immunization resources designed to meet the specific needs of midwifery clients. A 2010 survey of 39 British Columbia midwives identified that approximately 63% of midwives would be interested in taking a BCCDC online course on immunization to increase their knowledge base and comfort around immunizations (BCCDC, 2011).

Research has shown a number of advantages exist for internet based learning, an increase in knowledge (Casebeer, Kristofco, Strasser, Reilly, Krishnamoorthy, Rabin, Zheng, Karp, et al., 2004; Boren, & Balas, 2004; Langkamp, Darden, Kittredge, Gilbertson, Lancaster & Mauldin, 2004; Sullivan, Gitelman, Shapiro, & Rushakoff, 2010; Stamatikos, Alexis, Ratnapradifa, & Dhitinut, 2001; Carroll, Booth, Papaioannou, Sutton, & Wong, 2009; Cook et al., 2007), flexibility in time and location (Huckstadt & Hayes, 2005; Stamatikos et al., 2011; Cook, 2007; Cook et al., 2007; Harden, 2005; McKimm, Jolie & Cantillon, 2003), easier to maintain and disseminate than paper resources (Langkamp et al., 2004), provides a safe environment that allows participants to learn from their mistakes without risk to patients (Zary et al., 2006), and it is adaptable to a variety of learning approaches (Cook, 2007; Cook, Gelula, Lee, Bauer, Dupras, & Schwartz, 2007; Harden, 2005; McKimm, Jolie, & Cantillon, 2003). Studies by Atack and Rankin (2002) and Francis, Mauriello, Phillips, Englebardt & Grayden (2000) found that learners were satisfied with web learning, and would recommend on-line learning to professional colleagues.

As on-line learning has been shown to be an effective learning tool, the BCCDC, in collaboration with nursing students from the University of British Columbia (UBC), plans to create an online course on immunization for BC midwives. In creating this course, it is important to be cognizant of the attributes of a good on-line learning program. Over 60 articles were approached using the same question for analysis: “What are the attributes of an effective on-line learning program according to learner feedback and program performance outcomes.” Of the 60 articles examined, 20 were included in this review. As the BCCDC learning tool will be module based, of brief duration, and lacking an instructor/facilitator, articles that referred to on-line learning in the context of distance based university education were excluded.

**Findings.** Results were categorized into the following sections: use of active learning techniques, with
a focus on the effectiveness of case-based learning; learner motivation; flexibility and individualization; ease of use and navigation; feedback; relevance to practice; and peer-to-peer learning.

**Use of Active Learning Techniques.** According to Bonwell & Eison (1991), active learning is “anything that involves students in doing things and thinking about the things they are doing” (p.91). It aims to have students control their learning (Bransford, Brown, & Cocking, 2000). Techniques include leading questions, puzzles and games, brainstorming, concept mapping, case studies, simulations, role-playing, and debates (Office of Instructional Consulting, n.d.)

**User feedback.** The use of active learning techniques was well received by on-line module users (Kenny, 2002; Cook et al., 2007; Bryce, Choi, Landstrom, & LoChang, 2008). The use of self-assessment questions, review activities, and the inclusion of photographs, images and hyperlinks to additional online resources was well received by learners of an on-line introductory course on complementary and alternative medicine (Cook et al., 2007). Face-to-face interviews with users of the Department for Work and Pensions’ online learning module, “Sickness Certification Made Easy,” revealed that participants felt such modules need to be interactive (Larsen & Jenkins, 2005).

Several studies specifically addressed the effectiveness of case based learning (Jenkins, Cook, Edwards, Draycott, & Cahill, 2001; Cook, Thompson, Thomas, & Pankratz, 2006; Cook et al., 2007; Huckstadt & Hayes, 2005; Larsen & Jenkins, 2005). Case based learning activates prior knowledge and provides a context in which to situate the learning (Bransford, Brown & Cocking, 2000; Brown, Collins & Duguid, 1989), allowing for improved learner performance and knowledge retention. A pilot training program in reproductive medicine created by the Center for Reproductive Medicine in Bristol delivered one case study per month to participants. Overall satisfaction with the program was high (Jenkins et al., 2001). A study exploring the effectiveness of two interactive case-based online modules designed for Nurse Practitioner (NP) students as part of a grant-funded NP learning project found that the evaluation of the online modules and the enthusiasm of the participants support case-based online learning as a successful method of education (Huckstadt & Hayes, 2005). The use of real-life case studies and scenarios in the aforementioned “Sickness Certification Made Easy” module was well received by participants (Larsen & Jenkins, 2005).

**Results of Performance Outcomes.** Active learning techniques were not only well received by participants, but have been found to improve user performance outcomes (Cook et al., 2006; Allison et al., 2005). A recent study by Cook et al. (2006) found that case-based questions significantly improved test scores. A randomized controlled trial testing a multi-component internet continuing medical education (CME) intervention for increasing Chlamydia screening of at-risk women aged 16 to 26 years found that courses based on active learning techniques (participant interaction, decision making, problem-solving) resulted in positive changes in practice patterns as an outcome, as measured by an increase in Chlamydia screening rates of 60% (Allison et al., 2005).
**Learner Motivation.** Many studies found that learners require motivation to learn (Newton, Hase, & Ellis, 2002; Stamatikos & Ratnapradifa, 2011; Langkamp et al., 2004; Jenkins et al., 2001). A case study exploring the effective implementation of online learning in the Queensland mining industry found that factors important for effective online learning implementation included incentives for the learner’s participation, and explicit motivations to learn (Newton, Hase, & Ellis, 2002).

People are most likely to complete online training because it is a requirement (Stamatikos & Ratnapradifa, 2011). Motivation is often provided in the form of continuing education credits (Langkamp et al., 2004) and a certificate of completion (Jenkins et al., 2001). Certificates of completion have been found to increase motivation, and increase module completion rates (Jenkins et al., 2001).

**Flexibility.** Module flexibility was a theme addressed by numerous sources (Billings & Rowles, 2001; Bryce et al., 2008; Larsen & Jenkins, 2005; Kenny 2002; Harden, 2005; Zary, Johnson, Boberg, & Fors, 2006; Canchihuaman, Garcia, Gloyd, & Holmes, 2011). It was felt that module formats should allow learners to enter and exit at any point in the course, and repeat sections as desired (Billings & Rowles, 2001; Bryce et al., 2008; Larsen & Jenkins, 2005).

Harden (2005) found that modules should incorporate “just in time learning,” wherein learning resources are available to participants when they are required. This means having module content available at all hours of the day from a variety of locations. Home is the more frequent and preferred site for internet use (Cobb, 2004), and so the module needs to be available on home internet, not just on clinical intranet. Learners would also like to have the site available at their practice locations for reference (Huckstadt & Hayes, 2005). In light of this, modules should be designed for the lowest technological denominator so that they are compatible with all systems in all locations (Casebeer et al., 2003).

**Individualization.** Individualization, or “just for you learning” (Harden, 2005), allows learners to have some influence over what is learned and how it is learned, and adapt the program to their needs (Harden & Laidlaw, 1992). A qualitative study exploring physicians’ perceptions of and experiences in participating in interactive on-line CME found that participants liked to be able to skip parts they felt versed in and go to parts they needed more education in (Sargeant, Curran, Jarvis-Selinger, Ferrier, Allen, Kirby, & Ho, 2004).

Part of individualization is having the ability to self-pace one’s learning. Self-pacing allows learners to progress at their own rate, select content on a needs basis, and allows more experienced learners to skip content to finish the module more rapidly, and was seen to be a positive attribute of a learning module (Sargeant et al., 2004; Newton, Hase, & Ellis, 2002).

**Ease of Use and Navigation.** Modules should be easy to navigate (Phillips, 2005; Casebeer et al., 2003) and easy to use (Casebeer et al., 2003, Newton, Hase, & Ellis, 2002). Lessons need to be in a logical sequence (Billings & Rowles, 2001), and each module should have a clear purpose and objective and
defined beginning and end (Phillips, 2005). Instructions should be understandable, and easy to follow (Phillips, 2005). Vancouver Coastal Health created an online module consisting of basic infection control content, video clips, and information on antibiotic resistant organisms. 280 participants completed the module, and found it easy to begin, exit, re-enter, and move through the course, and felt that the content was clearly and logically presented (Bryce et al., 2008). Structured learning was highlighted as an attribute in several studies (Sargeant et al., 2004; Huckstadt & Hayes, 2005).

As a lack of technical skill was noted as a barrier to effective online learning in studies by Sargeant et al. (2004) and Cobb (2004), modules should be simple and appeal to those with limited computer competency.

**Feedback.** Another attribute of an effective on-line learning program is the provision of feedback on knowledge, comprehension, and performance (Sargeant et al., 2004; Billings & Rowles, 2001; Canchihuaman et al., 2011; Harden, 2005; Zary et al., 2006; Bryce et al., 2008; Larsen & Jenkins, 2005). Feedback on performance can support metacognition, as students evaluate their performance against an expert, a case author, or through analyzing expert reasoning on differential diagnoses or tests performed (Zary et al., 2006).

According to Billings & Rowles (2001), each module should have its own assessment and evaluation segment. Participants in the “Sickness Certification Made Easy” module enjoyed being tested on what they had learned, and found quizzes to be an effective teaching method (Larsen & Jenkins, 2005). In addition to being tested, participants want to be provided with answers to case scenarios, regardless of whether answers were right or wrong (Canchihuaman et al., 2011). A lack of feedback when questions were answered incorrectly in the post-test was seen as a negative attribute of the Vancouver Coastal Health online immunization module (Bryce et al., 2008).

**Relevance to Practice.** In order to be effective, the module should contain content that is directly relevant to practice (Harden & Laidlaw, 1992; Newton, Hase, & Ellis, 2002; Larsen & Jenkins, 2005). In the online learning module “Sickness Certification Made Easy,” information applicable to the health professionals’ jobs was well received. Information should also be quickly and continuously updated as content or standards change (Newton, Hase, & Ellis, 2002).

**Peer-to-Peer Learning.** One of the main barriers to effective online learning is the lack of an online community (Sargeant et al., 2004). An effective online module would create a community of learners, and allow for interaction with peers and facilitators (Harden, 2005; Newton, Hase, & Ellis, 2002; Stamatakis & Ratnapradifa, 2011). Learners would like to be able to share experiences with other learners (Sargeant et al., 2004), and feel a sense of belonging when engaged in discussions or other forms of peer-group interactions (Carroll et al., 2009).

**Limitations of Findings.** While it is clear that there is a growing body of literature to support the effectiveness of online learning and the attributes of effective online learning modules, further
research is required. Many of the studies have small sample sizes, and only a few were controlled trials. Only one study (Canchihuaman et al., 2011) addressed continuing education courses that were specifically aimed at midwives. The remainder of the studies focused either on other health professions (physicians, nurses, pharmacists, dentists) or other professions outside of health care. Specific research is needed to address the learning needs particular to midwives as a unique professional group. However, these studies do provide information and learner feedback on effective attributes of online learning that will prove useful in the development of an online learning module for midwives.

**Conclusions and Recommendations.** A review of the literature highlights that an effective online module should incorporate a number of attributes. It should make use of active learning techniques, with an emphasis on the use of case studies. The BCCDC module should use case studies specific to midwives’ professional learning needs. An effective module should also motivate learners to participate, either by awarding continuing education credit or by providing a certificate upon completion. As midwives in British Columbia are not awarded continuing education credits (MABC, 2011), incentives for the BCCDC module would most likely be in the form of a certificate.

The module should be flexible, have exit- and entry points, and allow users to return to and repeat sections as desired. It should be available at any time of day and at any location, and should be created at a low technological denominator to ensure compatibility with all user systems. Individualization of content should be optimized by allowing users to self-pace their learning, and move past sections containing content in which they feel well-versed. Placing the module on the MABC website would allow participants to access the module from both work and home.

In addition, modules should be easy to use and navigate. Lessons should be in a logical sequence, and each module should have a clear purpose. Instructions should be understandable and easy to follow. The module should be simple, and appeal to those with limited computer competency.

Learners want feedback on their progress, knowledge, and competence. This can be provided in the form of quizzes and evaluations at the end of each module or section of a module. All evaluations should provide the correct answers upon test completion so that learners can compare their performance to that of the expert.

All module content should be directly relevant and applicable to professional practice, and content should be continuously updated to remain current with changes in knowledge and practice standards. The BCCDC and the MABC would be responsible for ensuring that content is constantly updated, and that, not only is the data up to date, but the technology is current and the format remains appealing to the audience. Lastly, modules should facilitate the creation of learner communities and peer-to-peer learning. As the BCCDC module will not have a facilitator or on-line moderator, the most likely form of learner interaction would be an online discussion forum attached to the module. The effectiveness of online discussion forums as they relate to module learning was
not addressed in the reviewed literature, and this is another area that needs to be further researched.

Just as the modules in the literature reviewed were assessed for user satisfaction and performance outcomes, the same needs to be done with the BCCDC module upon completion. The BCCDC plans to test a pilot module using a focus group of midwives, and make necessary changes based on participant feedback before the release of the module on the MABC website.

References


Midwifery Immunization Practice Survey Summary of Findings

Dawn Waters*, Jennifer Funo*, & Adrienne Johnson*
*UBC School of Nursing Program 2012, Vancouver, BC
BC Centre for Disease Control (CDC): Brittany Deeter

Background. The British Columbia Center for Disease Control (BCCDC), in collaboration with the Midwifery Association of BC (MABC), recently surveyed 39 BC midwives about their immunization practices. Since many midwives only follow their clients for 6 weeks postpartum, they are not involved in the administration of infant immunizations; though they do administer vaccines to ante- and post-partum women and Hepatitis B vaccines to infants when required. Many midwives report that they are often asked in depth questions about immunization and what their professional perspective is on the immunization program, and that they would like additional information on both the vaccines that they are administering, and those involved in the infant immunization series. The survey has identified a need for immunization resources designed to meet the needs of midwives.

Participant Profile. Of the 39 midwives who participated in this survey, 67% graduated within the last 10 years. According to the survey, 64% of midwives graduated from programs outside of BC, and of those programs, 50% were completed overseas. Midwifery is not standardized internationally, and within Canada, each province determines laws and standards. The range in year of graduation and the variety of program locations may contribute to the lack of consistency in knowledge and practice surrounding maternal and infant immunizations. The results of the survey show that 71.8% of midwives have a group practice, 23.1% practice solo, and only 5% are involved in inter-professional practice with other health care professionals. The midwives surveyed practice in both rural and urban areas.

Providing Information and Resources to Clients. Midwives reported that they have, on average, 100 contacts a month with their clients. These contacts include speaking to their clients about immunizations; although, the degree, timing, and regularity to which these discussions occur varies amongst midwives. Nearly 90% of midwives reported that they provide information about the infant immunization series and about 70% provide immunization information about the pregnant/post-partum women. Of the midwives surveyed, 53% reported discussing immunizations at least once in their relationship with the client, with 31% having this discussion during the final post-partum visit with the client. Others will only discuss immunizations at the request of the client. None of the midwives surveyed refused to discuss the topic of immunizations with their clients, nor did any discuss immunizations at every visit.

When answering immunization questions, midwives are obtaining information from many different sources, including BC Health Files, Public Health Nurses (PHNs), the BCCDC immunization
manual, and other midwifery colleagues. Half of the midwives reported using the College of Midwifery of BC’s position statement on vaccination as a resource when answering questions.

When midwives guide their clients to additional resources regarding immunizations, 83% refer them to the local public health nurse. Other referral resources include family doctors, BC Health Files, and on–line and print material from various sources.

The 5 most common questions midwives are asked by clients are ranked as follows:

1. Adverse events after immunization
2. Benefits of immunization
3. Timing of immunizations
4. Common side effects
5. Effects of immunization on the fetus

Midwives reported the following questions to be some of the most difficult to answer:

1. Vaccine components
2. Adverse events after immunization
3. Effects of immunization on the fetus
4. Immunization while breastfeeding
5. Risks of not immunizing
6. Multiple Injections

**Administration of Immunizations.** Providing immunizations to both mothers and infants is part of the midwifery scope of practice; however, only 23% of midwives provide immunizations to women, and 11% to infants. 69% of midwives do not provide immunizations and refer their clients to the PHNs at the local health unit. Over 80% of midwives did not administer the H1N1 vaccine to pregnant women in the 2009–2010 influenza season.

In a home birth situation, some midwives provide the HBig and Hepatitis B vaccine following the delivery of an infant from a mother who is a Hepatitis B carrier. However, some midwives refer the vaccination to the Public Health Nurse, while others indicate that this situation never or rarely occurs.

**Barriers to Providing Immunizations.** Midwives reported many barriers to providing immunizations. Two predominant reasons were that infants are no longer under the care of the midwife at the appropriate time for the immunizations and that the service is already well administered by PHNs. Other barriers include: a lack of access to vaccines in their practice; a lack of facilities to store vaccines; and a lack of time in their practice to give vaccinations. Overall, midwives seemed most
interested in providing required ante- and post-partum immunizations for women and Hepatitis B/HBig immunizations for infants, as they felt other immunization services were adequately provided elsewhere.

**Interest in Immunization Information and Resources.** Over 82% of midwives would like to receive more information on immunization guidelines. In particular, nearly 80% of midwives would like teaching resources for clients and 76% would like information on immunization guidelines, such as schedules and how to give vaccines. Over 37% would like to receive immunization information from one central website, and 35% would like to receive the information through their professional association. Approximately 63% of midwives would be interested in taking a BCCDC online course on immunization. Some particular topics of interest raised included, how to handle client prejudice against immunization and distrust of official information; the need for high-quality evidence based information; access to and administration of Hepatitis B vaccinations; and information regarding delaying and spacing immunizations.

**Recommendations.** As evidenced by the survey, midwives act as an important resource for clients regarding immunizations. It is therefore imperative that immunization resources be designed to meet the practice needs of BC midwives.

Midwives indicated that they would like a central location for immunization information, such as on-line resources, or resources within their professional association. Due to the varying backgrounds and needs of midwives, it will be important to provide standardized information that is regularly updated and accessible to midwives across the province.

We recommend that educational resources be added to the MABC website. These resources would not only address topics of interest in the midwifery community, but also the most commonly asked questions and the most difficult questions asked by clients. Midwives desire information about the immunizations that they are providing to women (influenza, H1N1, HPV) and to infants (Hepatitis B and HBig), in addition to information about the infant immunization series that will be provided after the clients are discharged from their care. Midwives did not explicitly express a desire to provide additional infant immunizations, and several mentioned that this service is already well established within the scope of the PHNs.

Given the interest in on-line learning, resources could be delivered in modules that would cover single topics in a short period of time. Educational tools may include videos, webinars, and interactive quizzes. Further investigation will be required to determine which will be the most appropriate tools for on-line learning. It is our hope that providing accessible information on topics of interest to this community would drive higher uptake in all of the resources provided; therefore, increasing the general knowledge and ability to inform clients about immunizations.

Midwives also expressed a need for current, evidence based information on maternal and
infant immunizations. As clients may have a distrust of official information, sources must be reputable and unbiased. Midwives therefore need access to this information, as well as resources on how to find high quality evidence, and how to recognize false or misleading information.

**UBC Synthesis Project**. The UBC Synthesis project deadline is Feb 2012. It is not within the scope of our project to address all of the information needs highlighted in this survey. It is our intention to focus specifically on the creation of an on-line, centralized resource to be made available on the MABC website. As a test pilot, we will develop a learning tool that consists of current evidence-based information on aspects of the infant immunization series that were of most interest to midwives. We then plan to survey or meet with a focus group of midwives to evaluate the on-line learning tool.

Future resources will need to be created to address the issue of immunizations and the ante and post-partum woman, in addition to administration of Hepatitis B and HBig vaccines and issues surrounding the storage, transportation, and acquisition of vaccines for midwifery practice.
LEARNING OBJECTIVES

- Explain the importance of risk perception for immunization decision-making.
- Respond appropriately following an assessment of client knowledge, attitudes, and beliefs regarding immunization.
- Deliver clear, concise messages about the risks of vaccine-preventable diseases and the benefits/risks of vaccines.
- Provide guidance to clients so they can correctly identify credible sources of information on immunization and vaccines.

How We Communicate

Recommendations by health care providers are a significant factor in making decisions to immunize.

As trusted information sources, you have a vital role in the continued success of immunization programs.
COMMUNICATION

Communication is not just **what** we say but how we say it.

Communication is broken down as follows:
- Non-verbal (our body language) = 55%
- Content (the word we use) = 7%
- Tone (how we say it) = 38%

BODY LANGUAGE

Body language includes the most subtle of movements.
Many people are not aware of the messages that they are conveying with their body language.

WHAT ARE YOU CONVEYING?

Pair the following body language with their associated emotion:

- Wrist exposed: Anticipation
- Chin on hand: Doubt, disbelief
- Rubbing the eye: Boredom
- Pinching bridge of nose: Trusting, open
- Rubbing hands together: Evaluating
**HOW DID YOU DO?**

- Wrists exposed = Trusting, open
- Chin on hand = Boredom
- Rubbing the eyes = Doubt, disbelief
- Pinching bridge of nose = Evaluating
- Rubbing hands = Anticipation

**EFFECTIVE COMMUNICATION**

There are several principles of effective communication as it relates to immunizations:

- Communicate current knowledge, taking into account what an individual already knows and the level of detail requested.
- Provide a variety of information formats (visual, audio, printed material, websites).
- Respect differences of opinion.
- Assess strength of beliefs and underlying reasons for beliefs and actions.
- Represent the benefits and risks fairly and openly.
- Adopt a client-centered approach. Effective decision making is best done in a partnership between the health care provider and the client.
- Make the most of each visit/interaction.
- Encourage questions and discussions.

**THE ASK APPROACH**

The ASK approach uses the principles of effective communication and provides a framework for talking with clients about immunizations.

The remainder of this module explores the ASK approach in detail.
**Assess**
the audience

**Acknowledge**
their concerns

**Steer**
the conversation

**Know**
your stuff

---

When we assess our audience, we need to understand how they perceive risk.

An individual’s perception of immunization risks is influenced by a number of factors.

- Experience with immunizations
- Personal beliefs and beliefs of family and friends
- Mass media
- Information overload
- Difficulty deciphering between true and false information
ASK – ASSESS THE AUDIENCE

Events can be described as less or more risky based upon the following categories:

- Less Risky Event
  - Familiar
  - Involves a natural process
  - Under an individual’s control
  - Voluntary nature
  - Involve a decision to avoid something

- Risky Event
  - Unfamiliar
  - Man-made process
  - Loss of control
  - Mandatory
  - Involve a decision to do something rather than avoid something

ASK – ASSESS THE AUDIENCE

Our perception of risk is not always accurate.

Chance of an earthquake of 7.0 or greater magnitude hitting the Lower Mainland in the next 50 years? (click below for answer)

1 in 4

ASK – ASSESS THE AUDIENCE

Chance of having your car broken into this year in the Greater Vancouver Regional District? (click below for answer)

1 in 31

ASK – ASSESS THE AUDIENCE

Chance of a Canadian dying from poisoning? (click below for answer)

1 in 255
**Ask – Assess the Audience**

**Chance of a Canadian dying in a lawnmower accident?**
(click below for answer)

1 in 226,165

**Chance of a serious allergic reaction to a Hepatitis B vaccine?**
(click below for answer)

1 in 1.1 million

**Ask – Assess the Audience**

**Chance of an infant <12 months contracting Invasive pneumococcal disease (if unvaccinated)?**
(click below for answer)

1 in 2083

**Ask – Assess the Audience**

Many very common daily activities carry a much higher risk of injury/side effects than vaccinations. Yet people perceive them to be safer.

A decision to have a child immunized falls into the “risky event” category for parents because vaccines are:

1) Unfamiliar
2) Man-made
3) Involve a decision to do something rather than avoid something
A higher perceived risk may lead to less commitment to Immunizations.

Careful and timely counselling can help people to weigh the benefits of vaccines and the risks of disease that the vaccine will prevent.

Assess the level of commitment to immunization

BELIEVERS = “I know vaccines are safe and important, and I always get all mine. But I like to be well informed about what the side effects are and about the safety of vaccines.”

RELAXED = “The docs tell me I need a vaccine, I get em. Whatever.”

CAUTIOUS = “How safe are vaccines? Do we need to get them all?”

UNCONVINCED/CONSCIENTIOUS OBJECTORS(CO) = “I’m not getting any vaccines. Why should I when those diseases don’t even exist in our society anymore? Plus its just better to let your body naturally build immunity”
ASK – ASSESS THE AUDIENCE

Commitment to Immunizations

- Believers: Highest Commitment
  - Actively seeks information when needed
  - Provides talking material

- Relaxed: High Commitment
  - Follows full immunization recommendations
  - Latest need for information

- Cautious: Moderate to Low Commitment
  - High level of interest in vaccine benefits

- Unconvinced or Conscientious Objector: No Commitment

ASK – STEER THE CONVERSATION

Steer the conversation based on your assessment of the client:

- Believer
- Relaxed
- Cautious
- Unconvinced/Conscientious Objector

BELIEVER

- Beliefs
  - Vaccines are safe
  - Vaccines are important

- Resources
  - Provides talk material

When they might say:
- Safety
- Side effects

Encouraging Dialogue:
- Stress that benefits outweigh the risks

RELEASED

- Beliefs
  - Vaccines are safe
  - Don’t feel guilt or worry about immunizations

- Resources
  - Contains ready-to-use research information
  - Lets them know about resources

What they might say:
- Safety
- Low level of interest in vaccine benefits
ASK – STEER THE CONVERSATION

CAUTIOUS

Beliefs
- Skeptical
- Wonder if disease protection is necessary

Resources
- Access online information
- Other means reading

Encourage Dialogue
- Needs extra reassurance
- Emphasize benefits of immunizations
- Present a balanced view

What they might ask?
- Need to put all vaccines?

UNCONVINCED

Beliefs
- Unlikely to change mind
- May influence other parents’ decision

Resources
- Ask parents for more information
- Inform if newborn situation or minimize from school

What they might ask
- Questions
- May not ask questions

Unconvinced
- No commitment to immunization

ASK – KNOW YOUR STUFF

Relative Risks of Diseases and Immunizations

Refer to the following link for examples of risks associated with disease and immunizations.

www.bccdc.ca/NR/-/M/0/Section1A_Introduction_November.pdf

Please review pages 8-13 before continuing on with this module.

In addition, the BCCDC has created the “Immunization Communication Tool for Immunizers”

Please review before proceeding, as the information will help you work your way through the case studies to follow.

www.bccdc.ca/NR/rdonlyres/DADA3304.../0/CDC_IC_Tool.pdf
ASK - KNOW YOUR STUFF

Immunization Communication Tool
For Immunizers

In the last 30 years, immunization has saved more lives than any other health intervention.

Case Scenarios

CASE SCENARIOS

Respond to the following case scenarios using the ASK approach.

CASE SCENARIO #1

“A friend of mine told me that she was sure her daughter became autistic because of her shots. 2 weeks after she was vaccinated with her 12 month shots, she started acting strange. She wasn’t interacting normally - she started rocking her head and wasn’t interested in her toys anymore, and just wanted to be alone most of the time. She was convinced that her shots had something to do with it. I haven’t immunized my daughter yet because I’m worried it will do more bad than good.”
CASE SCENARIO #1

A - Acknowledge and Clarify Concerns

“That must have been scary for her. I can see how her situation could make you feel worried. So what you’re telling me is that you’re concerned that childhood shots can cause autism and that makes you unsure about immunizing your daughter?”

CASE SCENARIO #1

S - Steer the conversation

Refute the myth and continue your conversation.

“When something like that happens, it’s natural to look for a reason. Because autistic children usually show signs close to the time when they get their shots, some clients worry that the shots had something to do with it. The fact is that vaccines do not cause autism. Many studies have been done now and it is clear that there is no link between vaccines and autism.”

CASE SCENARIO #1

K - Knowledge: Know the facts well

- Provide further knowledge tailored to your client’s needs
- Nurse to client knowledge transfer: give, listen, and clarify as needed
- To close, reinforce discussion with a benefit statement and ask if client would like more information
- “Vaccines are the safest way to protect your daughter from many serious diseases”
CASE SCENARIO #2

“My baby is so young and so fragile. Her body can’t possibly handle having that many diseases in her body at once. How will she fight them off? I read somewhere that too many shots really overwhelms her immune system. Maybe I could space them out?”

CASE SCENARIO #2

A – Acknowledge and Clarify Concerns

“You are concerned that your daughter’s body will not be able to tolerate multiple Immunizations are one time?”

S – Steer the conversation

Refute the myth and continue your conversation.

“Babies have a large number of antibodies in their system that are ready and waiting to fight diseases. And they are coming in contact with millions of germs every day – and their immune system is able to respond. According to researchers, your daughter’s body could handle up to 10,000 shots at one time.”
CASE SCENARIO #2

K - Knowledge: Know the facts well

- Rabies needs to be protected as soon as possible - protection comes from having their body familiarized to a disease in a form that is not harmful/disease producing. Because of vaccine science, we are given fewer antigens in vaccines than we did 20 years ago. At the two-month visit, there are a total of 34 antigens vs. the 3017 antigens that were present in the 1980 vaccines.

CASE SCENARIO #2

K - Knowledge: Know the facts well

- Parents often feel that their child is being exposed to a higher antigen load because there are more vaccines for individual diseases. The truth is that there are now fewer antigens than in previous years, and children are being protected against more diseases. Parents need to understand very clearly that children are most at risk for vaccine preventable diseases and their effects within the first two years of life.

CASE SCENARIO #2

CDC Data on Incidence of Invasive Pneumococcal Disease

The risk of death and serious morbidity from vaccine preventable diseases is highest below 24 months of age.
CASE SCENARIO #2

“Would you only buckle up your kids in the car half the time? Not getting all of their shots at the same time is like taking a chance by not strapping them in a car seat for the first six months of life.”

- BCCDC Immunization Communication Tool

CASE SCENARIO #3

“Haven’t most vaccine-preventable diseases been eliminated from Canada? If so, then why does my son still need these vaccinations?”

CASE SCENARIO #3

A - Acknowledge and Clarify Concerns

“That is a good question. I can see why you would ask that.”
CASE SCENARIO #3

S - Steer the conversation

Refute the myth and continue your conversation.

“IT is true that vaccinations have significantly reduced vaccine preventable diseases in Canada. However, many of these diseases continue to be prevalent in other parts of the world. Unknowingly, travelers can bring disease into the country. If we are not immunized, these diseases could spread quickly.”

K - Knowledge: Know the facts well!

- Therefore, we should still get vaccinated for two reasons:
  1) to protect ourselves
  2) to protect the people around us.

- For example, there are some people who cannot get vaccinated due to severe allergic reactions to the vaccine. These individuals are better protected if the people around them are immune to vaccine preventable diseases.

- “A successful vaccination program, like a successful society, depends on the cooperation of every individual to ensure the good of all.” – Public Health Agency of Canada

For additional information on the incidence of various diseases in British Columbia, refer to the BCCDC’s

“British Columbia Annual Summary of Reportable Diseases”
http://www.bccdc.ca/util/about/anreport/default.htm

And Health Canada
http://www.hc-sc.gc.ca/index-eng.php

“We would think it irresponsible of a driver to ignore all traffic regulations on the presumption that other drivers will watch out for him. In the same way we shouldn’t rely on people around us to stop the spread of disease without doing what we can as well.”

- Public Health Agency of Canada
THE POWER OF YOUR RECOMMENDATION

Primary care providers are the most common interface for parents with the immunization delivery system and are likely to have the greatest opportunity for exposure and experience with parental vaccine safety concerns.

- Freed et al, 2004

It is our hope that this module has increased your confidence in approaching the topic of vaccinations with parents and families, and provided you with useful tools to enhance dialogue and support discussion.

THE POWER OF YOUR RECOMMENDATION
ADDITIONAL RESOURCES

RESOURCES

- Immunize BC
  [http://immunizebc.ca/](http://immunizebc.ca/)
- Health Canada
- Children’s Hospital of Philadelphia
  [http://www.chop.edu/](http://www.chop.edu/)
- Healthy Canadians – Immunization

Certificate of Participation

Awarded to

Mrs. MMR Adasz

for the successful completion of

BCCDC/MABC Immunization Module # 1 – The ASK Approach

January 27, 2012

BCCDC

MABC