VOLUME 22, NUMBER 2, SUMMER 2011

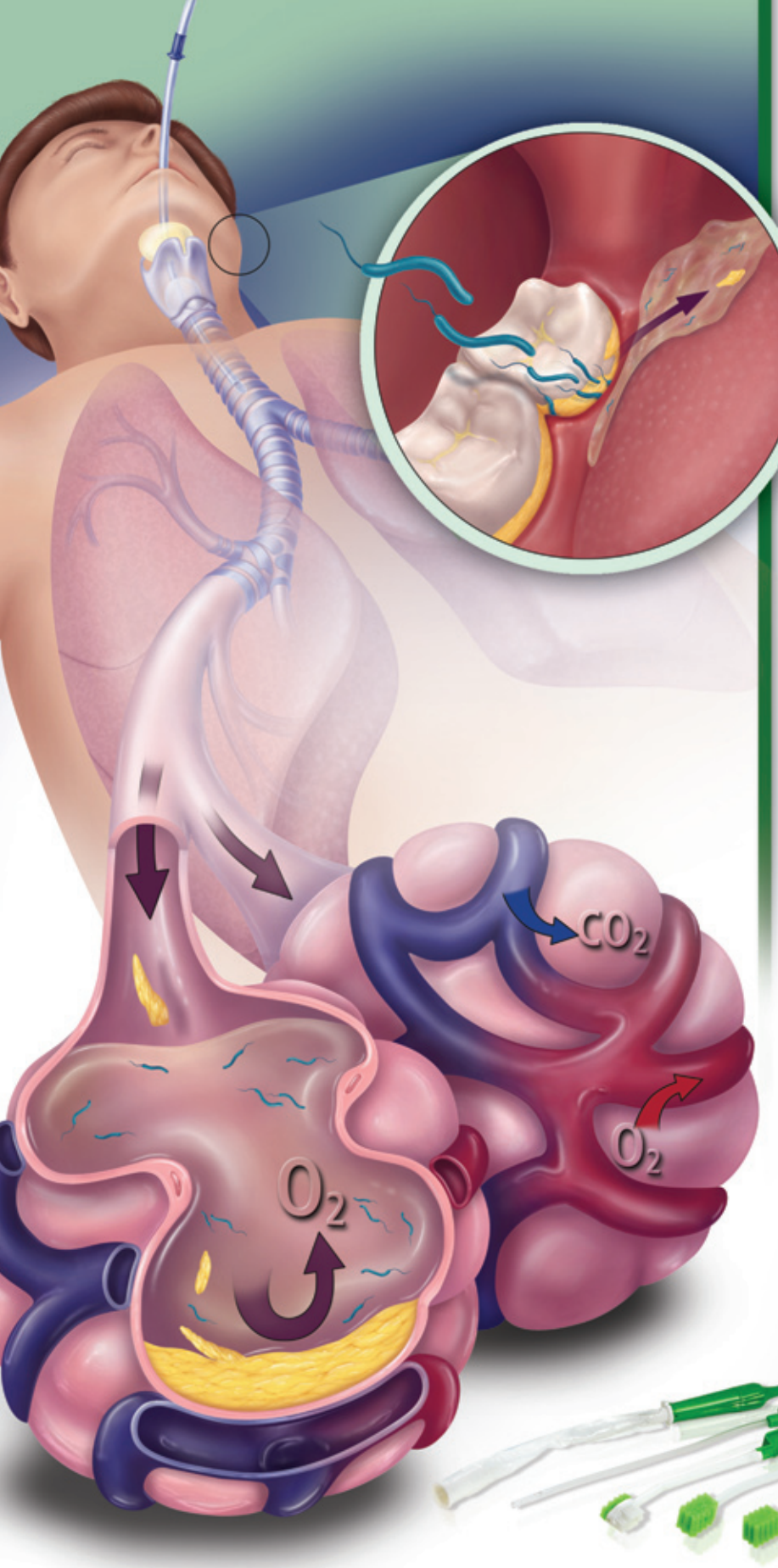
DYNAMICS

IN THIS ISSUE:

Dynamics 2011

Critical Care: Our Kaleidoscope

Journal of the Canadian Association of Critical Care Nurses



ADDRESS DENTAL PLAQUE BIOFILM BEFORE IT GETS INTO YOUR PATIENTS' LUNGS.

Beat dental plaque biofilm, a VAP risk factor, with Toothette® Q•Care® Cleansing and Suctioning Systems. It's the only brand with proven clinical outcomes. With innovative tools, effective cleansing solutions and compliance programs, it's no wonder that Toothette is the U.S. market leader[1] in clinical oral care.

- ***NEW*** *smaller, more maneuverable suction toothbrush makes it easier to reach teeth and move around the ET tube. Contains 3,100 bristles for more effective cleaning and plaque removal.*
- *Suction swab contains perpendicular ridges & Sodium Bicarbonate for enhanced cleaning.*

Start your trial *TODAY!*

*For a **FREE SAMPLE** & **CLINICAL RESULTS**, visit:*

www.sageproducts.ca/biofilm | 1-800-323-2220

New bottom-up packaging improves utilization and protocol compliance.

1. GHX Trend Report (Dollars), 3rd Qtr, 2010 Hosp; Annualized markets based on last 4 quarters data.

Use your smartphone to scan the QR code to learn more about Q•Care Systems.

TOOTHETTE® Oral Care

40 Years of Innovation

SAGE® PRODUCTS INC

Simple Interventions. Extraordinary Outcomes.

DYNAMICS

Journal of the Canadian Association of Critical Care Nurses

Volume 22, Number 2, Summer 2011

DYNAMICS, Journal of the Canadian Association of Critical Care Nurses, is the only peer-reviewed critical care journal in Canada, and is published four times annually by Pappin Communications, Pembroke, Ontario. Printed in Canada. ISSN 1497-3715.

Advertising information: For advertising enquiries, contact Heather Coughlin, Pappin Communications, The Victoria Centre, 84 Isabella St., Pembroke, Ontario, K8A 5S5, telephone 613-735-0952, fax 613-735-7983, email: heather@pappin.com, website: www.pappin.com

Author enquiries: Send manuscript enquiries or submissions to Paula Price, ACCN Program, Faculty of Health and Community Studies, Mount Royal College, 4825 Mount Royal Gate S.W., Calgary, Alberta T3E 6K6, email: pprice@mtroyal.ca

Subscription Rates for 2011: *Dynamics, Journal of the Canadian Association of Critical Care Nurses,* is published four times annually, Spring, Summer, Fall and Winter—Four Issues: $75 / eight issues: $150 (plus GST/HST as applicable). International and institutional subscription rate is four issues: $100 / eight issues: $200 (plus GST/HST, as applicable). To order subscriptions, please contact CACCN National Office, P.O. Box 25322, London, Ontario N6C 6B1 or caccn@caccn.ca

Article reprints: Photocopies of articles appearing in *Dynamics, Journal of the Canadian Association of Critical Care Nurses,* are available from the CACCN National Office, P.O. Box 25322, London, Ontario, N6C 6B1, at a cost of $15 (plus GST/HST, as applicable) per article. Back issues can be purchased for $18 (plus GST/HST, as applicable).

Canadian Association of Critical Care Nurses

Vision statement

The voice for excellence in Canadian Critical Care Nursing

Mission statement

The CACCN is a non-profit, specialty organization dedicated to maintaining and enhancing the quality of patient- and family-centred care by meeting educational needs of critical care nurses.

Engages and empowers nurses through education and networking to advocate for the critical care nurse.

Develops current and evidence-informed standards of critical care nursing practice.

Identifies professional and political issues and provides a strong unified national voice through our partnerships.

Facilitates learning opportunities to achieve Canadian Nurses Association's certification in critical care.

Values and beliefs statement

Our core values and beliefs are:

- Excellence and Leadership
  - Collaboration and partnership
  - Pursuing excellence in education, research, and practice
- Dignity & Humanity
  - Respectful, healing and humane critical care environments
  - Combining compassion and technology to advocate and promote excellence
- Integrity & Honesty
  - Accountability and the courage to speak for our beliefs
  - Promoting open and honest relationships

Philosophy statement

Critical care nursing is a specialty that exists to care for patients who are experiencing life-threatening health crises within a patient/family-centred model of care. Nursing the critically ill patient is continuous and intensive, aided by technology. Critical care nurses require advanced problem solving abilities using specialized knowledge regarding the human response to critical illness.

The critical care nurse works collaboratively within the interprofessional team, and is responsible for coordinating patient care using each member's unique talents and scope of practice to meet patient and family needs. Each patient has the right to receive care based on his/her personal preferences. The critically ill patient must be cared for with an appreciation of his or her wholeness, integrity, and relation to family and environment.

Critical care nurses plan, coordinate and implement care with the health care team to meet the physical, psychosocial, cultural and spiritual needs of the patient and family. The critical care nurse must balance the need for the highly technological environment with the need for safety, privacy, dignity and comfort.

Critical care nurses are at the forefront of critical care science and technology. Lifelong learning and the spirit of enquiry are essential for the critical care nurse to enhance professional competencies and to advance nursing practice. The critical care nurse's ability to make sound clinical nursing judgments is based on a solid foundation of knowledge and experience.

Strategic plan: Five pillars

1. **Leadership:**
   - Lead collaborative teams in critical care interprofessional initiatives
   - Develop, revise and evaluate CACCN Standards of Care and Position Statements
   - Develop a political advocacy plan
2. **Education:**
   - Provision of excellence in education
   - Advocate for critical care certification
3. **Communication & Partnership:**
   - Networking with our critical care colleagues
   - Enhancement and expansion of communication with our members
4. **Research:**
   - Encouraging, supporting, facilitating to advance the field of critical care
5. **Membership:**
   - Strive for a steady and continued increase in CACCN membership

Our voice... It is in our stories...

I just got back from a wonderful evening spent with critical care colleagues whom I once worked with at the IWK Health Centre. We came together as a group to share a meal and to enjoy each other's company, as we reminisced about the years we worked together in the PICU. As the evening progressed, inevitably many of our conversations centred around the patients we cared for that were memorable for us, as a group and as individuals. Shared memories. It would start with, "Do you remember the little guy in Bed 4 with…" and someone would add… "Yes, he was the one who…" and the story would be recounted and the memories of caring for that patient and family would be easily recalled by the group. The stories we retold to one another described many tough shifts where those around the table had worked together to save a child's life, to comfort a frightened family or to care for a child at the end of life. Shared stories. As we relived the events of those shifts when we worked together, we spoke highly of the role each of us had played in that patient and family's experience as we worked together. Mutual respect. Teamwork at its best. In these stories are snapshots of the lived experience of a critical care nurse working alongside expert colleagues inside the intensive care units across our country. We speak to one another easily as we recall these stories, and it is in the telling of these stories we can find our voice. These are the stories that portray the kind of bold courage, risk-taking, skilfulness, knowledge and absolute expertise that are the hallmarks of critical care nurses everywhere. These are the real stories that need to be told. These are the kind of stories that will provide the public with a more accurate view of what the role of the nurse is, instead of TV dramas like *Nurse Jackie* (an RN with a substance abuse problem) or *Grey's Anatomy* (where you seldom even see a nurse caring for a patient).

In recent months there have been some well publicized stories sensationalized by the media about patients at the end of life. Baby Joseph in London, Ontario, is one such case. A very difficult situation played out in the newspapers and television stations, nationally and internationally. In creating a provocative story the media attempted to portray the medical care team negatively, which resulted in threats to the care providers and the organization. Imagine! All the while behind the story, we knew, as critical care nurses, that our colleagues in London in the PICU were quietly, effectively and respectfully providing the support and compassionate expert nursing care this patient and his family needed. Because that is just what we do... every day. The National Board of Directors decided to speak up on what was being said in the media in support of our colleagues specifically, but also to provide a more balanced view of what goes on inside the ICU when such tragic cases present ethical challenges. As president, I wrote a letter to the editors and reporters of the *Globe and Mail* and *The London Free Press* where the stories were in the news daily. I wanted to share with our members what was sent, as, alas, the letters were not printed, no doubt because the true picture was in contrast to what was being portrayed in the papers at the time. Here is what was sent:

Dear Editor,

The Board of Directors of the Canadian Association of Critical Care Nurses (CACCN), with our home office in London, Ontario, has been following the media coverage of the unfortunate case of Baby Joseph. We are the professional interest association representing critical care nurses in Canada and, as such, we are the voice of excellence for critical care nursing practice in Canada. CACCN has developed standards of practice that guide critical care nurses in many aspects of bedside care and, in fact, we have recently updated our position statement on "Providing End-of-Life Care in the Intensive Care Unit" in January 2011. These can be viewed on-line on our website available at ***http://www.caccn.ca/en/publications/index.html*** *along with our Standards of Practice document.*

However, as a pediatric critical care nurse for 29 years, I can speak from experience that the case of Baby Joseph at London Health Sciences Centre is one that, sadly, has placed the family and the health care team in the media spotlight at a time when that would be very distressing to both parties as the organization's team strives to provide compassionate end-of-life care for this child and his family while the family grieves the last days of this child's life. As critical care RNs caring for such patients and families, our practice is guided by the Canadian Nurses Association Code of Ethics and our professional standards of care, which endorses that nurses strive to foster comfort, alleviate suffering, provide adequate pain and symptom relief, and support a dignified and peaceful death. The health care team and family share these goals. The family are experts in their child and the health care team are experts in the medical care of the patient and together they form a partnership to develop a plan for the dying patient that enables all to feel that they have done the best thing for the patient when neither can ultimately change the outcome. Finding the balance to do what is best for the patient while honouring the family's wishes is not well served by becoming a media or political event. The burden for both the family and the health care providers is already great enough without it becoming a social media topic that can place both parties needlessly in conflict at a time when they need to be building a trusting relationship and working closely together to do what is in the best interests of this baby at the end of his life. There are no villains in this story but, indeed, there are a lot of people trying to do what is right for Baby Joseph at this difficult time.

CACCN would encourage the media to find this true aspect of the story, as it is really where the greatest courage is being enacted every day by families and their health care providers in the intensive care units across Canada to do what is right for dying patients.

If you wish to contact me further, I may be reached in Halifax at my cell phone number or through our London office by contacting our Chief Operating Officer, Christine Halfkenny-Zellas (at 1-519-649-5284 or toll free at 1-866-477-9077), who can direct your enquires on this topic or any other critical care story you may have in the future.

Sincerely,
Kate Mahon, RN, BN, MHS,
President, Canadian Association of Critical Care Nurses

In addition to this letter to the editor, the National Board of Directors (BOD) sent a personal message of support to the staff of the PICU at the London Health Sciences Centre to let them know that we were thinking of them and we were proud of the work they were doing under such intense media coverage.

The BOD will continue to proactively speak up using the media as a forum when the opportunity presents itself. Likewise, I encourage each of you to think about when you need to speak up locally to have your voice heard. Within your unit, perhaps there are opportunities to speak united as a team of critical care nurses on issues that affect your practice environment or consider working with your public relations departments to have the patient stories that need to be told, heard. Offer to speak to a high school or nursing class at your university on what the rewards are working with critically ill patients and their families. Let's make what we do visible... as our voice... it is in our stories!

Take care of yourself and each other,

Kate Mahon,

Dynamics 2012 conference planning committee members

The Dynamics of Critical Care Conference 2012 Planning Committee has been selected, as follows:

Chair: Tricia Bray, Calgary, AB
Planning Committee Members:
Cecilia Baylon, Burnaby, BC
Judith Fraser, Surrey, BC
Michelle House-Kokan, Vancouver, BC
Laurel Kathlow, Coquitlam, BC
Karen LeComte, Vancouver, BC
Shawn Mason, Vancouver, BC
Christine Halfkenny-Zellas, CACCN COO

The planning committee looks forward to planning an exciting conference from September 23 to 25, 2012, in Vancouver, B.C. Thank you to all members who showed interest in the Dynamics 2012 Planning Committee.

Notice of Annual General Meeting

The National Board of Directors of the Canadian Association of Critical Care Nurses extends an invitation to the membership to attend the 27th Annual General Meeting. The meeting will be held:

Sunday, October 16, 2011, approx. 1630 hours
London Convention Centre, London, Ontario,
in conjunction with Dynamics 2011.

All CACCN Members and interested parties are invited to attend. **Please note:** Associate and Student Members do not hold voting rights and are ineligible to vote. If you are unable to attend the meeting, you may participate by completing the CACCN Proxy form, found on page 8 of this issue of Dynamics.

Call for participation: 2011 Census and National Household Survey (NHS)

Starting in May 2011, the 2011 Census and the new National Household Survey (NHS) will take place. Statistics Canada is encouraging all residents of Canada to participate in the upcoming census, stating that "Census information is important for all communities and is vital for planning services such as schools, daycares, police services and fire protection. The NHS is needed to plan family services, housing, roads and public transportation, and skills training for employment."

"Since these surveys are an essential source of information about Canada and the people who live here, they must be complete and accurate. It is, therefore, imperative that everyone complete and return their questionnaires."

For more information, contact:
Lily Eisenberg
Census Communications Manager
Telephone: (416) 954-7177
Email: **Lily.Eisenberg@statcan.gc.ca**

Critical care nursing research

Are you interested in critical care nursing research? CACCN is building a national network of critical care nurses with an interest in research. Our long-term goal is to conduct a national nursing study. Please submit your name and contact information to CACCN National Office at **caccn@caccn.ca**.

For enquiries, please contact Tricia Bray, Director, Publications and Research, at **publications@caccn.ca**

CACCN calendar of events

DATES TO REMEMBER!

June 1: Spacelabs Innovative Project Award deadline

June 1: BBraun Sharing Expertise Award deadline

June 1: The Guardian Scholarship—The Baxter Corporation Award for Excellence in Patient Safety deadline

June 1: The Brenda Morgan Leadership Excellence Award deadline

June 1: Cardinal Health Chasing Excellence Award deadline

July 4: Dynamics 2011 online conference registration available

July 5: CACCN National Board of Directors—Nomination deadline. Visit **www.caccn.ca** or contact National Office for nomination packages.

July 31: Chapter Quarterly Reports (April–June 2011) due in National Office

September 1: Smiths Educational Award Application deadline

September 2: Dynamics 2011 Early Bird Conference Registration deadline

October 3: Dynamics 2011 Conference Registration deadline

October 10: CACCN Annual General Meeting Proxy Vote deadline

October 13–14: Board of Directors F2F Meeting, London, ON

October 15: Chapter Connections Day, London, ON

October 16–18: Dynamics of Critical Care 2011, London, ON

October 16: CACCN Annual General Meeting, London, ON

October 31: Chapter Quarterly Reports (July–Sept. 2011) due in National Office

November 13–16: Critical Care Canada Forum

December 31: Chapter Quarterly Reports (Oct.–Dec. 2011) due in National Office

January 31: Smiths Medical Canada Ltd. Education Award

January 31: Call for abstracts, Dynamics 2012 deadline

February 15: CACCN Research Grant deadline

Awards available to CACCN members

Criteria for awards available to members of the Canadian Association of Critical Care Nurses are published on pages 60–65 of this issue of Dynamics.

Annual General Meeting Proxy Vote 2011

Every active member may, by means of proxy, appoint a person (not necessarily a member of the association), as his/her nominee to attend and act at the annual general meeting in the manner and to the extent and with the power conferred by the proxy. The proxy shall be in writing in the hand of the member or his/her attorney, authorized in writing, and shall cease to be valid after the expiration of one (1) year from the date thereof.

Proxy votes must be received in the national office no later than 2359 hours, October 10, 2011. Proxies received after the deadline will be ineligible for voting at the AGM.

The following shall be a sufficient form of proxy:

I, _____, of _____,

an active member of the Canadian Association of Critical Care Nurses, hereby appoint

_____ of _____,

or failing her/him,

_____ of _____,

as my proxy to vote for me and on my behalf at the meeting of members of the association to be held on the 16th day of October, 2011, and at any adjournment thereof.

Dated at _____, this _____ day

of _____, 2011.

Signature of Member: _____

CACCN Membership Number: _____

Chapter:_____

Return completed proxy forms to:
Canadian Association of Critical Care Nurses
P.O. Box 25322, London, ON N6C 6B1
Fax: 519-649-1458
Scanned/emailed to: **caccn@caccn.ca**

CACCN Board of Directors Call for Nominations

The election of directors to the Canadian Association of Critical Care Nurses (CACCN) National Board of Directors will take place at the CACCN annual general meeting on October 16, 2011, for a two-year term commencing April 2012 and running to March 2014.

There are three positions available:

- One in the Western Region: British Columbia, Alberta, Saskatchewan, Manitoba, Northwest Territories and the Yukon
- Two in the Eastern Region: New Brunswick, Nova Scotia, Newfoundland/Labrador and Prince Edward Island

CACCN members interested in letting their names stand for election to the board of directors should contact the national office at (866) 477-9077 or **caccn@caccn.ca** or visit the website at **www.caccn.ca/aboutCACCN** to obtain nomination forms.

Completed forms must be received in the national office no later than 2359 hours on July 5, 2011. Forms may be sent via:

- email at **caccn@caccn.ca**
- facsimile to 519-649-1458 (photo must be sent by mail or .jpg, .gif or .ai attachment), or
- mail to CACCN, PO Box # 25322, London, ON N6C 6C1

Each nominee will be asked to address the membership at the Annual General Meeting

Please note: Associate and Student Members may not hold office at the national level and are ineligible to vote.

Notification of Nominees:
The Association will notify members of nominations to the Board in the following manner:

- In order to receive the nominees' bios and photos into the hands of the members in the most expedient manner, all information will be posted on the CACCN website in the Members' Only area and in the Critical connections Bulletin, after the close of the Call for Nominations.
- If the open position has one nomination at the close of the Call for Nominations, the nominee will be acclaimed to the open position.
- If the open position has two or more nominees at the close of the Call for Nominations, an election by secret ballot at the next Annual General Meeting will take place.
- If no nominations have been received at the close of the Call for Nominations, a call from the floor will occur at the next Annual General Meeting.

find your voice!

Find a member!

CACCN is pleased to announce our membership recruitment program will now run all year long!

Current CACCN members are eligible to receive a **$10 coupon** toward your next CACCN renewal, for each new member you refer to CACCN.

Let's work together and continue to GROW!

Criteria:

1. Current / Active CACCN members may participate.
2. Applicable on NEW member applications only. A new member is one who has not been a CACCN member previously/has not been a CACCN member for a minimum of 12 months.
3. To qualify, your name must be included on the new member's application form or included in the online application submission, as the "sponsor" or "person who recommended joining CACCN". Coupons cannot be awarded if the sponsor / recommending information is not included when the member application is processed.
4. Members may receive a maximum of seven (7) coupons towards their next renewal. Coupons expire on the member's renewal date.

Future sites of Dynamics conferences

Dynamics 2011:
October 16–18, London, ON

Dynamics 2012:
September 23–25, Vancouver, BC

Dynamics 2013:
September 22 –24, Halifax, NS

Dynamics 2014:
September 20–23,
Quebec City, QC

Dynamics 2015:
TBD, Winnipeg, MB

CACCN Board of Directors 2011—2012

Kate Mahon
President

I am pleased to begin my fifth and final year as a member of the national board of the CACCN, and the second year of my term as president. My association with CACCN goes back many years, as I was a founding member of the Nova Scotia Chapter in 1986. I have served the Nova Scotia Chapter in the roles of president, secretary and chair of various committees. I have also been a planning committee member for Dynamics when it was in Halifax in 1992, and will be Chair of Dynamics in Halifax again in 2013. Being a member of CACCN has always been an important part of my nursing career, as a critical care nurse. It has also provided the opportunity to connect with colleagues in critical care across the country to share our practice and experience. And with those connections lasting friendships have formed.

I am a native Nova Scotian, graduating in 1980 from Dalhousie University in Nova Scotia with my nursing degree. I have a post-graduate certificate in critical care nursing and, in 2004, I completed my Master of Health Studies degree from Athabasca University in Alberta. I have worked in pediatrics my entire career, first in beautiful Vancouver, B.C., as a staff nurse at the Vancouver General Hospital, Health Centre for Children, before returning to Nova Scotia in 1982 where I began my critical care career as a staff nurse in PICU in Halifax at the Izaak Walton Killam Hospital for Children (IWK). I immediately knew I had found my niche in critical care and it has remained a part of my career path ever since. Since 1985, I have held a variety of management positions, always with a critical care focus. I have recently left the IWK and I am now embarking on a pre-retirement career in consulting, leadership development, and speaking on topics related to being a nurse.

In 2010, I established my president's theme as "Find Your Voice!" The intent of this phrase is to encourage critical care nurses to speak up and to be heard on issues of local, national or global importance with a goal to raise the profile of critical care nursing with the media so our opinion on issues is sought, and to raise awareness of the public on what we do behind the closed doors of the ICUs across the country.

It has been a wonderful journey serving on the national board and one I would encourage any of our members to seriously consider as an opportunity to use your talents and have your voice shape the future direction of the CACCN. I look forward to my final year as your president working for our members with the National Board of Directors.

Teddie Tanguay
Vice-President (Website)

I am very excited to begin my second term as Vice-President on the National Board of CACCN. As part of my interest and drive for furthering critical care nursing, I became involved in the Canadian Association of Critical Care Nurses. I am a found-

From left to right: Tricia Bray, Director (Publications), Teddie Tanguay, Vice-President (Website), Ruth Trinier, Director (Awards and Corporate Sponsorship), Kate Mahon, President, Céline Pelletier, Secretary (Director at Large), Joanne Baird, Treasurer
Inset right: Karen Dryden-Palmer, Director (w. resp. Dynamics Conferences)
Inset left: Christine Halfkenny-Zellas, CACCN COO

ing member of the Greater Edmonton Chapter and have held many executive positions at the chapter level. Over the years, I have been involved in organizing various Dynamics conferences and was the Dynamics conference chair for Dynamics 2010 in Edmonton, AB.

Being a member of CACCN is extremely rewarding. CACCN membership provides an opportunity to be a voice for critical care nursing to policymakers and other professional organizations, and also provides the opportunity to network with colleagues across the country. The ability to network with critical care nurses from coast to coast has assisted in implementing best practice in my work environment. More importantly I have made many life-long friends through CACCN.

I obtained my nursing diploma from the Royal Alexandra Hospital School of Nursing in 1982. I began my career by working in orthopedics. In 1983, my interest in critical care was born when I accepted a position in general systems ICU. There, I worked in many different capacities including staff nurse, educator and management. In 1993, I graduated from the University of Alberta with a Bachelor of Science in Nursing. In 1994, I helped write the Canadian critical care certification exam and obtained my certification in 1995. Following writing the certification exam I was a member of the examination committee until 2008. Eventually, my passion for critical care and thirst for new knowledge led to a return to the University of Alberta where I obtained a Master's degree in nursing. I then began working as a nurse practitioner in critical care. As a direct caregiver to critically ill adults I see daily the impact critical care nurses have on their patients' and families' lives. The combination of expert knowledge and caring is what makes a difference in our patients' lives.

I look forward to working with the board and our President Kate Mahon to "Find Our Voice" as we increase awareness of critical care nursing in Canada.

Joanne Baird
Treasurer

I am a native Newfoundlander and Labradorean, and graduated from the General Hospital School of Nursing in 1984. Immediately after graduation I started my career as a critical care nurse working in several ICUs within the province. I have worked in Grand Falls-Windsor for the past 23 years, as a direct patient care provider in our nine-bed ICU. I recently accepted the position of Clinical Educator for the ICU and emergency departments. I completed a post-graduate intensive care course in 1986, Bachelor of Nursing in 2005, and certification and re-certification in critical care nursing.

I bring to the board a wide range of experiences including being a member of the Newfoundland and Labrador Nurses' Union provincial board of directors for the past 12 years. I was a member of the 2005 Dynamics NL planning committee, which was enjoyed by all, and had poster presentations at Dynamics Halifax and Ottawa.

Personally, I have been married for 23 years and have two terrific children. I have been involved in my community serving in many organizations including Girl Guides of Canada and Junior Curling. I enjoy all that Newfoundland has to offer with my favorites being fishing, snowmobiling and weekends at our cabin.

This is my last year on the board of directors and it has been a wonderful ride. The experiences and the people I have met have helped me to grow, as a critical care nurse. I have been the treasurer for the past three years and will continue with this portfolio. It has been a challenging position, but I am proud of the work that I have done.

There has been growth in the organization, partly due to the leadership of President Kate Mahon and a very dedicated and motivated board of directors. I look forward to continuing to serve this exceptional organization.

Tricia Bray
Director (Publications)

It is with mixed feelings that I begin my final year on the board of directors: excitement when I look back on what has been, friendships formed, goals accomplished and working with different groups of nurses from across our country. And with some regret that this tremendous opportunity to serve our association has passed so quickly. I will be sorry to see it come to a close. I am continuing in the Publications and Research portfolio and look forward to continuing to work with Paula Price, *Dynamics* Editor, and the Editorial Review Board. I am also excited to be working with a group of nurses enthusiastic about research, as we build the CACCN Research Network together with a goal to advance Canadian nursing research in critical care. As chair for Dynamics 2012 in Vancouver, this promises to be a busy year as the planning committee and I work hard to organize CACCN's annual conference in one of Canada's most beautiful locations.

I have spent most of my nursing career over the past 25 years in critical care and have enjoyed the many opportunities it has provided. I am currently an instructor with the Advanced Studies in Critical Care Nursing program at Mount Royal University in Calgary.

I have lived in Western Canada all my life and, as a member of the board, I have enjoyed the honour and privilege of working with critical care nurses from across Canada. Even though it is a large country, our critical care community is a small one with many common challenges and successes, and it is together that we are strongest. I am proud to be part of *The Voice for Excellence in Canadian Critical Care Nursing* and I am thankful for the opportunity to **Find My Voice** as a member of the board of directors.

Ruth Trinier
Director (Awards and Corporate Sponsorship)

It with great pleasure that I begin my second year serving on the board of directors as one of the directors from the central region. I particularly look forward to continuing with the portfolio for awards and corporate sponsorship, as this position

has provided me with the opportunity to witness and recognize some of the truly amazing work that our members provide on a daily basis. I will also continue as the liaison for the New Brunswick and Nova Scotia Chapters.

I have worked at the Hospital for Sick Children in Toronto since 1984, originally as a clerk in the emergency department. It was my exposure there to nursing that inspired my return to school. While continuing my work at SickKids, I have continued to refine my knowledge in nursing through pursuit of a diploma, followed by a Bachelor of Science and, currently, through the pursuit of a Master's in Nursing.

For the past 12 years I have had the privilege of caring for the children and families who have been admitted to the pediatric intensive care unit as a direct care provider. I can say with all honesty that I love my work. It is here that every day, I witness the impact of the care that a nurse can provide. Nurses just like you.

In addition to patient care, I have had the advantage of being exposed to numerous opportunities for growth in the profession including conference planning, education, preceptorships, research and more. Many of these opportunities have come as a result of my association with CACCN and its members; compassionate, dedicated, incredible nurses from across Canada who provide care to the critically ill.

Céline Pelletier
Secretary (Director at Large)

I have been a critical care nurse for more than 26 years, having first obtained my BScN at the University of Ottawa in 1981. During the first 10 years of my practice I took two certificates in critical care nursing to satisfy my thirst for knowledge in the fast-paced world of critical care.

Through various attempts at different nursing positions, I realized that my strength and passion lie at the bedside providing expert care and compassion to clients immersed in an uncontrolled world of tubes, lines, catheters and noise.

In 1991, I relocated to Yellowknife, NT, where I helped set up and open a four-bed ICU. I now work as a Nurse Practitioner in this ICU, a position that I pioneered.

I am very fortunate to always have been surrounded by professionals who have believed in my abilities and I hope to be able to give back to those who are striving to be bigger and better.

Karen Dryden-Palmer
Director (Dynamics conferences)

I am humbled by the opportunity to take on the challenge and responsibility of membership on the Board of Directors of the Canadian Association of Critical Care Nurses. I will strive to contribute to a professional environment that supports excellence in critical care nursing practice and the advancement of the specialty of critical care nursing in Canada. The role of the critical care nurse is ever evolving. Therefore, I am committed to providing our membership with the tools, information and advocacy that contribute to the development of critical care nursing expertise.

Foundational to my work as Pediatric Consultant and then President of the Toronto Chapter is my desire to heighten the profile of critical care nursing at local, national and international venues. I will seek to lead in initiatives that advance expertise and best practice in all domains of care. Critical care nursing is also the provision of mutually participatory patient- and family-centred practice, the recognition of nurse-sensitive outcomes of critical illness and forwarding the voice of the critical care nurse in the creation of health policy and administration of health care resources.

I have been committed to the specialty of critical care for 20 years. I will continue in every capacity to work towards Canadian Association of Critical Care Nurses' objectives and build a foundation of our shared future.

Christine R. Halfkenny-Zellas
Chief Operating Officer

It has been my pleasure to work for the National Board of Directors and the members of CACCN for the past three years. With more than 25 years of administration, corporate, government and human resources experience behind me, I feel my skills blend well with the goals of the association. The past and current board members have afforded me the opportunity to learn and grow in this position.

I am a graduate of the Canadian Institute of Management, holding the designation of Certified in Management (C.I.M.). Over the past 18 years, I have been employed as a Constituency Assistant for a Cabinet Minister in the Ontario Legislature, a Program Officer for youth sport, recreation and development with the Ontario Ministry of Tourism, Culture and Recreation, and the corporate/human resources administrator for a mid-size international van/flatbed trucking company. I have many years of experience with non-profit associations, having been secretary of our local community growth foundation, a leader for Girl Guides of Canada, Group Committee Chair for Scouts Canada, Secretary for ChildFind Ontario and a canvasser for several organizations in our community.

My roots are in the same community where CACCN began, as I was born and raised for a good part of my life in London, Ontario. As my father was in the military, I was also afforded the good fortune to travel in Canada and abroad during my childhood. This has led to a love of travel, as well a deep appreciation of setting down roots and raising my children in one place. My husband, David, and I have two wonderful teenage children, Chelsea and Hunter, as well as a very pampered golden retriever, named Remington. As a family, we spend most of our time out of doors, enjoying the many activities available to us in Southwestern Ontario.

My time with the CACCN has been extremely enjoyable and I learn something new every day. I have had the pleasure of meeting many of our members, corporate sponsors and conference exhibitors via email, telephone and in person at the past three Dynamics conferences. I look forward to working with our members, the National Board of Directors and the Dynamics Conference Planning Committees for many years to come.

*The CACCN develops position statements to provide summaries of CACCN views on issues pertaining to critical care nurses and their nursing practice. Critical Care Nurses from across the country participate in the creation of all position statements. CACCN position statements are reviewed at a minimum of every five years to ensure applicability to practice. The following position statement was approved by the CACCN National Board of Directors on March 22, 2011. Please visit **www.caccn.ca** to view all CACCN position statements.*

Canadian Association of Critical Care Nurses

POSITION STATEMENT: Structure of Critical Care Units

CACCN Position

Nursing care for critically ill patients and their families requires a unique environment that is structurally different from other clinical units. While it is acknowledged that there are numerous variables contributing to patient outcomes, the appropriate environment enables the process (Rashid, 2006; Schmalenberg & Kramer, 2007).

When planning new or renovated critical care units, the health care facility should incorporate an evidence-based design in which critical care nurses have been provided an opportunity to participate (Gregory, 1993; Runy, 2004; White, 2006). The design should incorporate the needs of the population that it hopes to serve. (Gregory, 1993; Williams &Wilkins, 1995). Enhanced patient and caregiver safety needs to be given prime consideration (Runy, 2004).

For each individual patient care area the health care facility must provide:

- A design that allows for constant visualization while providing privacy for the patient and family (Rashid, 2006; Schmalenberg & Kramer, 2007; Surrey Memorial Hospital, 2006; White, 2006; Williams & Wilkins, 1995).
- Minimized traffic flow past individual patient care areas (White, 2006).
- Adequate spacing to allow for equipment and procedures commonly performed at the bedside (Rashid, 2006; Surrey Memorial Hospital, 2006; Williams & Wilkins, 1995).
- Spacing should accommodate family presence at the bedside in addition to the patient and caregiver zones.
- Equipment, with the capability to provide both advanced monitoring and therapy, that is both functioning and contemporary and will allow for the evolution of technology (Brown & Gallant, 2006; Schmalenberg & Kramer, 2007; Surrey Memorial Hospital, 2006; Williams & Wilkins, 1995). Facilities and specifically skilled staff to maintain, test, update and clean the equipment routinely must also be provided (Rosenberg & Moss, 2004).
- Information technology linking the critical care unit with lab, pharmacy, diagnostic imaging, health records and other departments/services in such a way as to facilitate the input and retrieval of patient information seamlessly (Lapinsky, Holt, Hallett, Abdolell, & Adhikari, 2008; Surrey Memorial Hospital, 2006; White, 2006; Williams & Wilkins, 1995).
- Equipment and supplies organized to ensure patient and caregiver safety and easy access (Gurses & Carayon, 2007; Rashid, 2006; Rosenberg & Moss, 2004; Runy, 2004; Surrey Memorial Hospital, 2006; White, 2006; Williams & Wilkins, 1995).
- Ability to provide for patient isolation including airborne infection isolation (Rashid, 2006; Rosenberg & Moss, 2004; Surrey Memorial Hospital, 2006; White, 2006).
- A method of direct nurse-to-nurse communication from within isolation rooms, in addition to the unit-based call system.
- Private patient rooms to facilitate noise reduction, privacy, sleep quality and lower nosocomial infection rates (Brown & Gallant, 2006; Gurses & Carayon, 2007; Rashid, 2006; Surrey Memorial Hospital, 2006).

- Adequate lighting for caregivers to perform required tasks.
- As much natural light as good functional design allows, using windows where possible, to facilitate feelings of well-being for patients, family members and staff (Rashid, 2006; Surrey Memorial Hospital, 2006; White, 2006).
- Waste disposal systems that minimize staff and patient exposure to contaminants close to the bedside (Rashid, 2006; Surrey Memorial Hospital, 2006).
- When possible, toilets should be provided at each bedside.
- Unrestricted unit access should be provided to sanctioned visitors while protecting the privacy of patients (Rosenberg & Moss, 2004; Surrey Memorial Hospital, 2006; White, 2006; Williams & Wilkins, 1995).

Family

- Unit and family waiting area design that allows the family to remain close to the patient to facilitate active involvement in the plan of care throughout the duration of the patient's admission (Brown & Gallant, 2006; Rashid, 2006; Runy, 2004; Schmalenberg & Kramer, 2007; Surrey Memorial Hospital, 2006; White, 2006).

Medication area

- Narcotics storage that meets Health Canada requirements.
- Appropriate resources to ensure proper storage, preparation and dosing of unit prepared medications—temperature controlled fridges, access to drug monographs, dosing charts, etc.
- Area to prepare necessary medications that has adequate lighting, limited distractions/quiet (Rosenberg & Moss, 2004; Runy, 2004).

Staff

- Equipment to facilitate the preservation of the health and safety of staff providing care, including, but not limited to personal protective equipment, lifting devices and work surfaces at appropriate heights (Rashid, 2006; Surrey Memorial Hospital, 2006).
- Staff lounge to allow for privacy and to assist the physical and mental restoration of the health care staff (Rashid, 2006; Surrey Memorial Hospital, 2006; Williams & Wilkins, 1995). An area with some degree of privacy that allows staff to consult with each other, or with patient families, regarding patient issues, plans of care and education (Rashid, 2006; Rosenberg & Moss, 2004; Surrey Memorial Hospital, 2006; Williams & Wilkins, 1995).

Approved by the CACCN Board of Directors
Date: March 22, 2011

REFERENCES

Brown, K.K., & Gallant, D. (2006). Impacting patient outcomes through design: Acuity adaptable care/universal room design. *Critical Care Nursing Quarterly, 29*, 326–341.

Gregory, M.M. (1993). If they don't ask these questions, give them the answers. *Critical Care Nursing Quarterly, 16*(3), 7–14.

Gurses, A.P., & Carayon, P. (2007). Performance obstacles of intensive care nurses. *Nursing Research, 56*(3), 185–194.

Lapinsky, S.E., Holt, D., Hallett, D., Abdolell, M., & Adhikari, N. (2008). Survey of information technology in intensive care units in Ontario, Canada [Electronic version]. *BMC Medical Informatics and Decision Making, 8*(5).

Rashid, M. (2006). A decade of adult intensive care unit design: A study of the physical design features of the best-practice examples. *Critical Care Nursing Quarterly, 29*, 282–311.

Rosenberg, D.I., & Moss, M. M. (2004). Guidelines and levels of care for pediatric intensive care units. *Pediatrics, 114*, 1114–1125.

Runy, L.A. (2004). Best practices and safety issues in the ICU. *Hospitals & Health Networks/AHA, 78*(4), 45–51.

Schmalenberg, C., & Kramer, M. (2007). Types of intensive care units with the healthiest, most productive work environments. *American Journal of Critical Care, 16*, 458–468.

Surrey Memorial Hospital, Resource Planning Group Inc., Redevelopment Project, Phase 1A. (2006). *Schedule 3: Design and construction specifications intensive care unit, 9.2.2, 3.1-3.30*. Surrey, B.C.: Author.

White, R.D. (2006). Recommended standards for newborn ICU design. *Journal of Perinatology, 26*, S2–S18.

Williams & Wilkins (Eds.). (1995). Guidelines for intensive care unit design [Special article]. *Critical Care Medicine, 23*, 582–588.

Position statement contributors

The CACCN National Board of Directors would like to express appreciation to the following members for their contribution to the CACCN position statement:

Structure of Critical Care Unit

Committee Chair: Tricia Bray, RN, MN, CNCC(C), Calgary, AB
Committee Members: Ruth Trinier, RN, BScN, CNCCP(C), Toronto, ON
Dale Kastanis, RN, CNCC(C), Vancouver, BC

Schmalenberg, C., & Kramer, M. (2007). Types of intensive care units with the healthiest, most productive, work environments. *American Journal of Critical Care Nursing, 16*, 459–469.

Research question or purpose

The purpose of this study was to examine the extent that ICU nurses confirm a healthy work environment and to determine whether differences exist between different types of ICUs. The study aimed to uncover elements of a critical care nurses' work environment that lead to a productive work environment where nurses can also achieve personal satisfaction in their work.

Research design

A cross-sectional descriptive survey design was used.

Setting

This study was conducted in the U.S. and contained participants from 34 critical care units in eight magnet hospitals.

Participants

The participants in this study were 698 critical care staff nurses from medical and coronary care units (labelled MICU), surgical, cardiovascular and trauma ICUs (labelled SICU), as well as neonatal and pediatric units (labelled NICU), and mixed medical-surgical critical care units (labelled MSICU). The sample was drawn from eight regions in the U.S. and included academic and community hospital samples. The majority of the sample had a baccalaureate or higher degree and the mean years of experience ranged from 12 to 14 years among clusters. Among the sample of nurses, 60% held a CCRN certification.

Method

The Elements of Magnetism (EOM) survey was administered to the sample over a six-month period. The EOM is a 37-item instrument that measures eight functional processes essential to a productive work environment. The eight attributes of healthy work environments that the EOM measures are working with clinically competent peers, collegial/collaborative relationships between nurses and physicians, clinical autonomy, nurse manager support, control over nursing practice, perception that staffing is adequate, support for education and a culture in which concern for the patient is paramount (Kramer & Schmalenberg, 2004).

Main findings

The results of this study showed that neonatal and pediatric units scored significantly higher on the healthy work environment attributes than did other types of intensive care units in the sample. Nurses who had more than 20 years' experience scored higher on nurse-physician relationships than did those nurses with three to five years of experience. Nurses from community hospitals scored higher on adequacy of staffing and control over practice.

Conclusions

The mean scores in this study were higher than reported in similar studies and in an earlier National Magnet Hospital Profile (Kramer, Schmalenberg, & Maguire, 2004). More studies are needed to determine the role of critical care certification and level of education and its influence on a healthy work environment. Since NICU nurses in this study scored the highest on overall job satisfaction and MSICU nurses scored among the lowest on most variables, more investigation needs to be done to find out what aspects cause nurses to rate the NICU as the ideal work environment.

Commentary

Unhealthy work environments have been linked to decreased work satisfaction and turnover among nurses (Hayes, O'Brien-Pallas, Duffield, Shamian, & Buchan, 2006). This study extends previous studies of critical care nurse work environments by examining differences in work environments among a variety of ICU practice settings. Magnet hospital accreditation is unique to the U.S. and that specific type of designation does not exist within the Canadian hospital context. However, studies examining the Canadian nurse work environment have demonstrated similar influential work environment aspects such as manager support (Cummings, MacGregor, Davey, Lee, Wong, et al., 2010). CACCN currently has a work group in place that is working toward producing a position statement on the essentials of a healthy work environment for Canadian critical care nurses.

Sandra Goldsworthy, RN, BScN, MSc, CNCC(C), CMSN, Nursing Professor, Durham College/UOIT Collaborative BScN Program, Coordinator, Critical Care e-Learning program

REFERENCES

Cummings, G., MacGregor, T., Davey, M., Lee, H., Wong, C., Lo, E., … Stafford, E. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies, 47*, 363–385.

Hayes, L., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., … Stone, P. (2006). Nurse turnover: A literature review. *International Journal of Nursing Studies, 43*, 237–263.

Kramer, M., & Schmalenberg, C. (2004). Development and evaluation of essentials of magnetism tool. *Journal of Nursing Administration, 38*, 365–378.

Kramer, M., Schmalenberg, C., & Maguire, C. (2004). Essentials of a magnetic environment, Part IV. *Nursing 2004, 34*(9), 44–48.

WHAT'S HAPPENING at www.caccn.ca?

Members-only area

The members-only area contains a wealth of information such as electronic copies of previous Dynamics journals, opportunities to earn Continuing Education Credits, and the members' discussion forum. Whether you are a seasoned discussion board veteran or new to the process, stop by … look around … post an introduction … answer a question …

Members are now able to change their passwords for easy access to the members-only site!

Not a CACCN Member?

What are you waiting for? Join the Association and take advantage of the members-only benefits.

Visit us today at www.caccn.ca!

DYNAMIC CAREER CONNECTIONS on www.caccn.ca

CACCN Dynamic Career Connections is the official job site for the Canadian Association of Critical Care Nurses. Our mission is to connect employers with hard-to-fill positions with the brightest, most qualified Critical Care Nurses in Canada.

Job Seekers: This new job site provides you with the opportunity to post your resume confidentially, view and apply for positions from some of the best employers in Canada, set up job alerts to search and notify you when a job matches your criteria and, best of all, registration for job seekers is always FREE. *You do not need to be a member of CACCN to register with Dynamic Career Connections. Register your resume today!*

Employers: CACCN knows how important it is for you to find new ways to directly reach Critical Care Nurses. CACCN Dynamic Career Connections provides you with the opportunity to extend your reach to a targeted candidate pool, and post your jobs confidentially. Use the advanced pre-screening tools to automatically filter applicants for easy resume management. *Register to post your jobs!*

If you are interested in taking advantage of this new service, please visit www.caccn.ca, click on **CACCN Dynamic Career Connections,** and register to start searching for your new career or team member.

JOB LINKS on www.caccn.ca

JOB LINKS is a simplified web link page on the CACCN website designed to provide immediate links to critical care nursing career opportunities in Canada and around the world. If your facility is interested in taking advantage of this service, please visit www.caccn.ca, click on **JOB LINKS,** and view the PDF contract for more information.

Website banner advertising

CACCN is offering the opportunity to have your logo and website link accessible to our members and the general public 24 hours a day, seven days a week. Why not consider a banner advertisement on the homepage of the CACCN website at www.caccn.ca? If you are interested in taking advantage of this new service, please email CACCN National Office at caccn@caccn.ca for more information.

CRITICAL CARE NURSING ABSTRACTS

Four of the strategic goals of CACCN are: 1) to provide educational opportunities for critical care nurses; 2) to optimize quality of critical care nursing practice; 3) to provide varied opportunities to profile critical care nursing research; and 4) to provide opportunities for nursing colleagues to network.

CACCN's national conference, Dynamics of Critical Care, provides an excellent venue for accomplishing all of these goals. However, only a portion of CACCN members are able to attend a Dynamics conference annually. Cognizant of this, CACCN is pleased to be printing its 11th annual "Special Dynamics of Critical Care Issue", which includes the abstracts from Dynamics of Critical Care 2011.

The following abstracts represent the concurrent session and poster abstracts being presented during Dynamics of Critical Care 2011 being held in London, Ontario, October 16–18, 2011.

It is our hope that CACCN members interested in pursuing a profiled topic will contact our national office at (519) 649-5284 or e-mail caccn@caccn.ca to receive information regarding how to contact the author about the work.

We hope you will carefully consider the critical care nursing topics currently being investigated and discussed in various centres across Canada!

Dynamics 2011
Critical Care: Our Kaleidoscope

ABSTRACTS: ORAL PRESENTATIONS

Critical Care Response Teams and End-of-Life Discussions: Collaboration for Patient-Centred Care

Rhonda Barber, RN BScN, Nathalie Needham-Nethercott, BSc, MD, FRCPC (Critical Care), and Lynn Voelzing, RN, BScN, MBA, CNCC(C), Grand River Hospital, Kitchener, ON

Historically, the role of a Critical Care Response Team is to provide critical care intervention for in-patients, regardless of their location. In keeping with patient-focused care this now includes enabling timely discussions about end of life, integrated by policy and practice into our culture and the care plan of every patient.

Since 2006, the Critical Care Response Team (CCRT) in our hospital has functioned to empower ward staff to call for help at the first signs of patient deterioration. Once called, this multidisciplinary team of critical care experts arrives at the bedside to implement aggressive interventions aimed at stabilizing the patient. Evaluation of our team reveals demonstrated achievement of outcome targets that include: decreased in-patient cardiac arrests, decreased length of stay in the intensive care unit (ICU), decreased number of pre-arrest situations, and decreased ICU readmission rates. However, the team has also noted a large number of patients with no clearly documented end-of-life discussion, potentially contributing to inappropriate admission to the ICU. The purpose of this presentation is to discuss the plan of action taken by the CCRT to address the delicate, but critical issue of the need for end-of-life discussions, supporting the philosophy of patient- and family-centred care.

ABSTRACTS

Dynamics 2011

Critical Care: Our Kaleidoscope

This presentation will begin with a summary of the current literature on end-of-life discussions, comparing the practice at our hospital with that of the medical community at large, and providing the foundation for our study objectives. Next, end-of-life discussions data, collected by retrospective and prospective audit, will be analyzed, revealing interesting findings including patient demographics. Then, the phases of strategy development will be detailed, including: appreciation for the special considerations influencing practice change for all disciplines of caregiver, and the numerous challenges encountered along the way.

The presentation summary will recap several major conclusions that were critical to the success of such a huge paradigm shift. These include: support from the highest levels of administration, collaboration with other project mandates, the leadership demonstrated by the CCRT to educate and mentor, and the corporate commitment to the belief that advanced care planning is associated with enhanced quality at the end-of-life care: patient and family satisfaction; and reduced stress, anxiety and depression in surviving relatives.

Historically, the role of the CCRT has been to provide critical care at the bedside of any in-patient, regardless of their location. In keeping with the goal of all caregivers in our institution, CCRT-enabled patient focused-care translates into consideration for timely discussions about end of life, integrated by policy and practice into the culture and the care plan of each and every patient.

References

Chaitin, E.C., Wood, G.J., & Arnold, R.M. (2010). Communication in the ICU: Holding a family meeting. In D.S. Basow (Ed.), *UpToDate*. Waltham, MA.

Gillick, M.R. (2010). Ethical issues near the end of life. In D.S. Basow (Ed.), *UpToDate*. Waltham, MA.

Goodlin, S.J. (2010). End of life considerations for heart failure patients. In D.S. Basow (Ed.), *UpToDate*. Waltham, MA.

Hodder, R. (Ed.). (2006). *Critical Care Response Team Provider Manual* (pp. 29–33). Ottawa: Canadian Resuscitation Institute.

Holley, J.L. (2010). Palliative care in end-stage renal disease. In D.S. Basow (Ed.), *UpToDate*. Waltham, MA.

Kabcenell, A., & Conway, J.B. (2011, January/February). End of Life Care: 6 leadership actions. *Healthcare Executive*, 74–76.

Kellum, J.A., & Dacey, M.J. (2010). Ethics in the intensive care unit: Informed consent; withholding and withdrawal of life support and requests for futile therapies. In D.S. Basow (Ed.), *UpToDate*. Waltham, MA.

Province of Ontario, Critical Care Secretariat. (2007, March). *Ontario's Critical Care Strategy; Quarterly Report*. Toronto, ON.

Biomarkers In and Of Critical Illness—What Do They Mean and Are They Useful?

Rand Butcher, RN, BA Health Sci(Nursing), IC Nursing Certificate, The Tweed Hospital/School of Nursing, Griffith University, Cudgen, New South Wales

The early identification of disease, facilitating rapid access to appropriate treatment, is often the most important prognostic indicator for the critically ill. Myocardial infarction, heart failure and sepsis are examples of disease processes that rely on rapid identification and timely intervention. Unfortunately, the ability to diagnose these conditions is often impaired by vague, non-specific symptoms. Patients with myocardial infarction, for example, often present with signs of upper gastrointestinal disease making accurate diagnosis more difficult. Likewise, the early signs of sepsis, such as fever and leukocytosis, are non-specific and common amongst hospitalized patients. More specific signs of septic shock, such as lactic acidosis and hypotension, occur late in the course of the disease and are associated with a poor outcome. In order to improve the recognition of critical illness a list of potential markers have gained attention over recent years. Biological markers, or "biomarkers", such as troponin and B-type natriuretic peptide (BNP) have gained acceptance as useful indicators for patients presenting with myocardial infarction and heart failure, respectively. Biomarkers for sepsis, such as serum lactate, lipopolysacharide, c-reactive protein (CRP), procalcitonin (PCT) and interleukin 1, 6 and 8 have also recently emerged as potential biomarkers of sepsis. The sensitivity and specificity of each of these biomarkers is variable and affected by the nature of the patients' critical illness. Many of these biomarkers are available as "point of care" tests, making them particularly applicable to the clinical setting. While such biomarkers may assist in the rapid detection of critical illness, an understanding of the factors that affect them is required to assess their utility in the critically ill. Fortunately, many of these biomarkers have a high degree of specificity and sensitivity, while being relatively inexpensive, and are widely available for use in the critical care environment.

References

Fromm, R.R. (2007). Cardiac troponins in the intensive care unit: common causes of increased levels and interpretation. *Critical Care Medicine, 35*(2), 584–588.

Maisel, A., Krishnaswamy, P., Nowak, R., McCord, J., Hollander, J., Duc, P., ... McCullough, P. (2002). Rapid measurement of B-type natriuretic peptide in the emergency diagnosis of heart failure. *The New England Journal of Medicine, 347*(3), 161–167.

Marshall, J., & Reinhart, K. (2009). Biomarkers of sepsis. *Critical Care Medicine, 37*(7), 2290–298.

Tang, B., Eslick, G., Craig, J., & McLean, A. (2007). Accuracy of procalcitonin for sepsis diagnosis in critically ill patients: Systematic review and meta-analysis. *The Lancet Infectious Diseases, 7*(3), 210–217.

Schuetz, P., Christ-Crain, M., & Müller, B. (2007). Biomarkers to improve diagnostic and prognostic accuracy in systemic infections. *Current Opinion in Critical Care, 13*(5), 578–585.

Uzzan, B., Cohen, R., Nicolas, P., Cucherat, M., & Perret, G. (2006). Procalcitonin as a diagnostic test for sepsis in critically ill adults and after surgery or trauma: A systematic review and meta-analysis. *Critical Care Medicine, 34*(7), 1996–2003.

Management of Acute Severe Asthma—What the Evidence Tells Us and What Really Works!

Rand Butcher, RN, BA Health Sci(Nursing), IC Nursing Certificate, The Tweed Hospital/School of Nursing, Griffith University, Cudgen, New South Wales

One of the most difficult, if not the most difficult patients to ventilate in the emergency department or the intensive care unit are those presenting with acute severe asthma. The high airway resistance coupled with the presence of autoPEEP makes the patient vulnerable to the development of high airway pressures, extra pulmonary air, hemodynamic instability and poor gas exchange. The risk of the patient developing these complications is relatively high with potentially disastrous consequence. One of the main management strategies for this group of patients is too avoid intubation and mechanical ventilation. This may be achieved by a number of pharmaceutical and supportive strategies aimed at reducing airway resistance and work of breathing. If these strategies fail and the patient requires intubation and mechanical ventilation it may be necessary to employ a number of advanced ventilation techniques to effectively manage the patient. Strategies that have been described include the administration of anesthetic agents or heliox through a mechanical ventilator, tracheal gas insufflation, and the judicial use of applied positive end expiratory pressure (PEEP). The evidence relating to strategies used in the management of acute severe asthma will be reviewed.

References

Brenner, B., Corbridge, T., & Kazzi, A. (2009). Intubation and mechanical ventilation of the asthmatic patient in respiratory failure. *The Journal of Emergency Medicine, 37*(2 Suppl.), S23–S34.

Jones, C., Mulleague, L., & Jankowski, S. (2009). The use of neuromuscular blockers to facilitate mechanical ventilation in severe asthma. *British Journal of Hospital Medicine* (London, England: 2005), *70*(1), 57.

Oddo, M., Feihl, F., Schaller, M., & Perret, C. (2006). Management of mechanical ventilation in acute severe asthma: Practical aspects. *Intensive Care Medicine, 32*(4), 501–510.

Without a Cure: Supporting Hope, Creating Memories

Colleen Collier, RN, BScN(c), CNCCP(C), and Neil McBride, RN, CNCCP(C), Children's Hospital, London Health Sciences Centre, London, ON

"Hope is oxygen for the human spirit." Many children suffer from life-threatening conditions and, at times, a cure cannot be found. Beginning with a powerful story of one family's life journey following their son's diagnosis with a life limiting illness to his death, the meaning and constant presence of hope is discussed. Nurses have a meaningful role in supporting families through crisis, change, and death, influencing their coping. Strategies for identifying and supporting hope are outlined. Results from a staff and family hope survey are reviewed, outlining key strategies for creating a milieu of hope. Innovative ideas for creating meaningful memories for children and families are demonstrated, with examples. Participants are encouraged to identify their definition of hope and ideas for inspiring special memories for children and families.

References

Benzein, E.G., & Berg, A.C. (2005). The level of and relation between hope, hopelessness and fatigue in patients and family members in palliative care. *Palliative Medicine, 19*(3), 234–240. doi: 10.1191/0269216305pm1003oa

Davies, B., Sehring, S.A., Partridge, J.C., Cooper, B.A., Hughes, A., Philp, J.C., & Kramer, R.F. (2008). Barriers to palliative care for children: Perceptions of pediatric health care providers. *Pediatrics, 121*(2), 282-288. doi:10.1542/peds.2006-3153

Docherty, S.L., Miles, M.S., & Brandon, D. (2007). "The dying point:" Providers' experiences with palliative care in pediatric acute care. *Pediatric Nursing, 33*(4), 335–341. Retrieved from http://www.medscape.com/viewarticle/563199

Himelstein, B.P. (2006). Palliative care for infants, children, adolescents, and their families. *Journal of Palliative Medicine, 9*(1), 163–181. Retrieved from http://www.liebertonline.com/doi/abs/10.1089/jpm.2006.9.163

Hinds, P.S., Schum, L., Baker, J.N., & Wolfe, J. (2005). Key factors affecting dying children and their families. *Journal of Palliative Medicine, 2*, 70–80. doi:10.1089/jpm.2005.8.s-70

Klein, S.M. (2009). Ethical issues in palliative care. *Journal of Pain and Symptom Management, 38*(1), 157–160. doi:10.1016/j.jpainsymman.2009.04.014

Knapp, C.A. & Contro, N. (2009). Family support services in pediatric palliative care. *American Journal of Hospice Palliative Care, 26*(6), 476–482. doi: 10.1177/1049909109350205

Liaschenko, J., O'Conner-Von, S., & Peden-McAlpine, L. (2009). The "Big Picture" Communicating with families about end-of-life care in intensive care unit. *Dimensions in Critical Care Nursing, 28*(5), 224–231. doi: 10.1097/DCC.0b013e3181ac4c95

ABSTRACTS

Widger, K., Davies, D., Drouin, D.J., Beaune, L., Daoust, L. Farran, P., & Bischop, M. (2007). Pediatric patients receiving palliative care in Canada: Results of a multicenter review. *Archive of Pediatric Adolescent Medicine, 161*(6), 597–602. Retrieved from http://sashabella.com/pdfs/PediatricPatientsReceivingPalliativeCareInCanada-MulticenterReview.pdf

Wright, L.M. (2008). Softening suffering through spiritual care practices: One possibility for healing families. *Journal of Family Nursing, 14*(4). 394-411. doi: 10.1177/1074840708326493

Preceptorship in Critical Care: Facilitating Growth, Empowering Potential

Colleen Collier, RN, BScN(c), CNCCP(C), and Karen Laidlaw, RN, BScN, MN, CNCCP(C), Children's Hospital, London Health Sciences Centre, London, ON

Based on a structured relationship between an experienced nurse and novice nurse, preceptorships develop skills through experiential learning. With an increasing shortage of experienced critical care nurses, preceptorships may become more important in the future. Communication is an essential component of a successful preceptorship. Based on Benner's Model Novice to Expert, this presentation will outline the structured development of a successful preceptorship between an experienced nurse and a fourth-year nursing student, with a focus on the development of a creative preceptorship communication tool. Roles of the clinical educator and clinical advisor will be outlined. Challenges in preceptorship development and management strategies will be discussed with suggestions for future research.

References

Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park, California: Addison-Wesley Publishing.

Billay, D.B., & Yonge, O. (2004). Contributing to the theory development of preceptorship. *Nurse Education Today, 24*(7), 566-574. doi:10.1016/j.nedt.2004.07.010

Canadian Nurses Association. (2004). *Guide to Preceptorship and Mentoring. Achieving Excellence in Professional Practice*. Retrieved from http://www.cnanurses.ca/CNA/documents/pdf/publications/Achieving_Excellence_2004

Carlson, C., Wann-Hansson, I., & Pilhammardoi, E. (2009). Teaching during clinical practice: Strategies and techniques used by preceptors in nursing education. *Nurse Education Today, 29*(5), 522-526. doi: 10.1016/j.nedt.2008.11.012

Carlson, E., Pilhammarb, E., & Wann-Hansson, C. (2010). "This is nursing": Nursing roles as mediated by precepting nurses during clinical practice. *Nurse Education Today, 30*(8), 763–767. doi:10.1016/j.nedt.2010.01.020

Dracup, K., & Bryan-Brown, C.W. (2004). From novice to expert to mentor: Shaping the future. *American Journal of Critical Care, 13*(6), 448-450. Retrieved from http://ajcc.aacnjournals.org/cgi/content/full/13/6/448

Earle, V., Myrick, F., & Yonge, O. (2008). Preceptorship in the intergenerational context: An integrative review of the literature. *Nurse Education Today, 8*(4), 258–266. doi:10.1016/j.nepr.2007.09.005

Registered Nurses Association of Ontario. (n.d.). *Preceptorship: Key to success.* Retrieved from http://www.rnao.org/Page.asp?PageID=122&ContentID=1309&SiteNodeID=405

Model of Care

Lynn Coolen, RN, BScN, CNCCP(C), MBA, Karen LeComte, RN, CNCCP(C), MSN, Anna Hong, RN, BScN, Alison Swallwell Franks, RN, MSN, Olivia O'Hara, RN, Sarb Randhawa, RN, BScN, and Kathy Rasmussen, RN, BScN, British Columbia Children's Hospital, Vancouver, BC

Delivering effective, safe, high-quality health care that is cost efficient and sustainable is undoubtedly on the minds of most health care leaders today. In addition, engaging and improving the patient and family experience while increasing the vitality, satisfaction and retention of frontline staff are other key issues to be considered in planning a care delivery model for the future. With continued growing demands on the health care system, innovation and creativity in health care design are required now to be able to meet service delivery. By examining the structures and processes that underpin the delivery of care, a new Model of Care for a large pediatric intensive care unit has been proposed, developed, studied and recently implemented.

With increasing costs in overtime and increasing numbers of OR cancellations at this facility, a review of the literature revealed some possible solutions to stabilizing the workforce and planning for the future. As noted by the Institute for Health Improvement Transforming Care at the bedside, measures to increase the percentage of time in direct care by the RN not only generated quality improvements, it also satisfied overall care delivery challenges.

The predominate change that was introduced in this pediatric intensive care unit was the integration of non-regulated health care providers into a Model of Care. These care aides, with a defined role, were introduced into an all RN model in the pediatric intensive care unit. To ensure the utilization of a thorough change management strategy, this was first tested by way of a rapid process improvement methodology similar to a Plan-Do-Study-Act cycle. Further, a two-week trial of one to two care aides per 12-hour shift facilitated a deeper understanding of the potential success of this model. Following an extensive data analysis, a plan was set in place to select, hire,

train and integrate care aides into the staffing complement in a tertiary level, university-affiliated pediatric intensive care unit.

Evaluation of the success of this implemented model will come by way of quality and quantitative measures aimed at understanding patient, staff and system outcomes.

References

Allen, D.E., & Vitale-Nolen, R.A. (2005). Patient care delivery model improves nurse job satisfaction. *The Journal of Continuing Education in Nursing, 36*(6), 277–282.

Besner, J., Doran, D., McGillis Hall, L., Giovannetti, P., Girard, F., & Hill, W. (2005). *A systemic approach to maximizing nursing scopes of practice*. Ottawa, ON: Canadian Health Services Research Foundation.

Bloodworth, K. (2009). Productive Ward.1: Implementing the initiative across a large university teaching hospital. *Nursing Times, 105*(24), 22–25.

Buchan, J., & Dal Poz, M.R. (202). Skill mix in the health care workforce: reviewing the evidence. *Bulletin of the World Health Organization, 80*(7), 575–580.

Crossan, F., & Ferguson, D. (2005). Exploring nursing skill mix: A review. *Journal of Nursing Management, 13*(4), 356–62.

Donahue, L., Rader, S., & Triolo, P.K. (2008). Nurturing innovation in the critical care environment: Transforming care at the bedside. *Critical Care Nursing Clinics of North America, 20*(4), 465–469.

Hayman, B., Wilkes, L., & Cioffi, J. (2008). Change process during redesign of a model of nursing Practice in a surgical ward. *Journal of Nursing Management, 16*(3), 257–265.

Institute of Healthcare Improvement. (2008). *Transforming care at the bedside*. Cambridge, MA:IHI Retrieved from http://www.ihi.org/IHI/Topics/MedicalSurgicalCare/MedialsurgicalCareGeneral/ImprovementsTories/TransformingCareattheBedsideinitiativePrototypephase.htm

Kimball, B., Joynt, J., Cherner, D., & O'Neil, E. (2007). The quest for new innovative cared delivery models. *The Journal of Nursing Administration, 37*(9), 392–398.

Sibbald, B., Shen, J., & McBride, A. (2004). Changing the skill-mix of the health care workforce. Journal of Health Services Research and Policy, 9(Suppl. 1), 28–38.

"From the Line to the Lab": Improving Practice in Blood Collection from Vascular Access Devices

Susan Csatari, RN, BD Canada, Mississauga, ON

Best practice in blood collection from vascular access devices will improve laboratory test result accuracy, increase patient safety and decrease time lost to redraws. This presentation addresses the key issues pertaining to specimen quality and

ABSTRACTS

promotes understanding of the factors that contribute to hemolysis, contamination and other common problems.

It is vital to patient outcomes that nurses have this knowledge, to ensure optimal specimen quality. Between 70% and 85% of all clinical decisions are based on laboratory results. Studies have shown that 68% of all specimen errors occur in the pre-analytical phase before the blood is analyzed in the lab. Nurses now routinely collect blood samples, yet little formal training is available to them on how they can deliver the highest quality specimen possible. A specimen that is an accurate reflection of the patient's on vivo status should be the goal every time blood is drawn.

Central vascular access devices have an increasing presence in many practice settings: critical care, acute, sub-acute long-term care, ambulatory clinics, and community and home care. It is essential for best patient outcomes, therefore, to provide nurses with the knowledge that will reduce errors in the pre-analytical phase of specimen collection.

References

Carraro, P., & Plebani, M. (2007). Errors in a stat laboratory: Types and frequencies 10 years later. *Clin Chem, 53*, 1338–1342.

Frey, A.M. (2003). Drawing blood samples from vascular access devices: Evidence-based practice. *J Infus Nurs., 26*(5), 285–293.

Himberger, J.R., & Himberger, L.C. (2001). Accuracy of drawing blood through infusing intravenous lines. *Heart Lung, 30*(1), 66–73.

Infusion Nursing Standards of Practice. (2006). *J Infus Nurs, 29*(1 Suppl.), S72.

McCall, R.E., & Tankersley, C.M. (2003). *Phlebotomy essentials* (3rd ed.). Baltimore, PA: Lippincott Williams, & Wilkins.

The Use of Hybrid Simulation Education Focusing on Organ Donation after Cardio-Circulatory Death

Karen Dryden-Palmer, RN, MSN, Afrothite Kotsakis, MD, FRCPC, The Hospital for Sick Children, and Jennifer Berry, RN, CPTC, Trillium Gift of Life Network, Toronto, ON

Background: Organ donation after cardio-circulatory death (DCD) is a new phenomenon in pediatric critical care. Typically in organ donation after neurological determination of death, death is determined in the critical care unit and withdrawal of therapy occurs in the operating room. In DCD death is declared and the withdrawal of life sustaining therapy is carried out in the operating room (OR). OR nurses who care for these children have had limited exposure to this process. This presentation shares the implementation of a hybrid simulation education session for OR nurses related to enhancing their preparedness to care for DCD organ donors and their families. Critical care nurses are well positioned to provide essential support along the continuum of care in DCD. Findings of pre and post session questionnaires have shown knowledge needs related to understanding the process of DCD, consent, pre withdrawal support of family members and the OR nurse role in the DCD process. The session methodology of high emotional and physical fidelity simulation coupled with group discussion was very powerful for participants.

Purpose: To share the development of an education program for OR nursing staff in preparations for the introduction of DCD.

Methods: Pre and post session questionnaires. Pre session questions focused on exposing informational needs related to DCD. Post questions evaluated the effect the education session had on meeting individual nurses' needs. Participants completed a separate evaluation of the education session after the intervention took place.

Results: Results indicated that the majority of nurses (90%) report the education session contributed positively to their confidence at dealing with DCD. However, a significant number (25%) reported the session to be emotionally unsettling.

Conclusions: Using a hybrid simulation during the DCD education session provided high emotional and physical fidelity that positively engaged the learners.

References

Corley, M., Elswick R., Gorman, M., & Clor, T. (2000). Development and evaluation of a moral distress scale. *Journal of Advanced Nursing, 33*(2), 250–256.

Jürgen A. (2009). Adult learning theories and medical education: A review. *Malta Medical Journal, 21*(01).

Shemie, S., Baker, A., Knoll, G., Wall, W., Rocker, G., Howes, D., Davidson, J., … Dossetor J. (2006).National recommendations for donation after cardiocirculatory death in Canada. *CMAJ-JAMC, 175*(8, Suppl.), S1–S24.

Tannert, C., Elvers, H., & Burkhard J. (2007). The ethics of uncertainty, In the light of possible dangers, research becomes a moral duty. *European Molecular Biology Organization, EMBO reports, 8*(10).

Nurses' Level of Moral Distress and Perception of Futile Care in the Critical Care Environment

Danielle Dunwoody, RN, BSc, BScN, MSc, Toronto General Hospital, Toronto, ON

Almost half of all health care providers in 2003 suffered a high degree of work stress, with nurses, physicians, and laboratory technicians reporting the highest amounts. Chinn and

Kramer's (2008) theoretical framework was used to investigate the occurrence of moral distress in a medical-surgical intensive care unit (MS-ICU). The study was a non-experimental, descriptive study that used the Moral Distress Scale (MDS) to measure moral distress. Statistical analyses revealed a statistically significant relationship between the intensity of moral distress and years in nursing practice for the categories of futile care and institutional factors. Overall, a moderate level of intensity of moral distress and a relatively low frequency of encounters was found. It is not clear if, and to what extent the effects of moral distress continue to affect nurses. What is clear is that moral distress exists within the scope of nursing and affects registered nurses within the critical care setting at a moderate to high intensity. Research on how nurses cope with moral distress in everyday practice or in situations such as a pandemic, needs to be conducted prospectively and longitudinally with a larger cohort than the current study. This type of research would assist in accommodating the fluctuating nature of morally distressing situations and their outcomes for nurses.

References

American Nurses Association [ANA]. (2001). *Code of ethics for nurses with interpretive statements*. Washington, DC: Author.

Badger, J. (2005). Factors that enable or complicate end-of-life transitions in critical care. *American Journal of Critical Care, 14*(6), 513–522.

Bakker, A., Le Blanc, P., & Schaufeli, W. (2005). Burnout contagion among intensive care nurses. *Journal of Advanced Nursing, 51*(3), 276–287.

Beckstrand, R., Clark-Callister, L., & Kirchhoff, K. (2006). Providing a "Good Death": Critical care nurses' suggestions for improving end-of-life care. *American Journal of Critical Care, 15*(1), 38–46.

Beumer, C. (2008). The effect of a workshop on reducing the experience of moral distress in an intensive care unit setting. *Dimensions of Critical Care Nursing, 27*(6), 263–267.

Buhler, K., & Land, T. (2003). Burnout and personality in Intensive Care: An empirical study. *Hospital Topics, 81*(4), 5–12.

Canadian Nurses Association. (2003). *Ethics in practice*. Ottawa, ON: CNA Publications.

Catlin, A., Volat, D., Hadley, M., Bassir, R., Armigo, C., Valle, E., Gong, W., & Anderson, K. (2008). Conscientious objection: A potential neonatal nursing response to care orders that cause suffering at the end of life? Study of a concept. *Neonatal Network, 27*(2), 101–108.

Ceslowitz, S. (1989). Burnout and coping strategies among hospital staff nurses. *Journal of Advanced Nursing, 14*, 553–557.

Chinn, P., & Kramer, M. (2008). *Integrated theory and knowledge development in nursing*. St. Louis, MO: Mosby.

College of Nurses of Ontario. (2009). *Professional standards*. Toronto, ON: CNO Publications.

Cook, D., Rocker, G., Giacomini, M., Sinuff, T., & Heyland, D. (2006). Understanding and changing attitudes toward withdrawal and withholding of life support in the intensive care unit. *Critical Care Medicine, 34*(11), S317–323.

Corley, M., Minick, P., Elswick, R., & Jacobs, M. (2005). Nurse moral distress and ethical work environment. *Nursing Ethics, 12*(4), 381–390.

Corley, M. (2002). Nurse moral distress: A proposed theory and research agenda. *Nursing Ethics, 9*(6), 636–650.

Corley, M., Elswick, R., Campbell Sargeant, C., & Scott, S. (2000). Attitude, self-image, and quality of life of living kidney donors. *Nephrology Nurisng Journal, 27*(1), 43–50.

Corley, M., Elswick, R., Gorman, M., & Clor, T. (2000). Development and evaluation of a moral distress scale. *Journal of Advanced Nursing, 33*(2), 250–256.

Corley, M. (1995). Moral distress of critical care nurses. *American Journal of Critical Care, 4*, 280–285.

Eizenberg, M., Desivilya, H., & Hirschfeld, M. (2008). Moral distress questionnaire for clinical nurses: Instrument development. *Journal of Advanced Nursing, 65*(4), 885–892.

Elpern, E., Covert, B., & Kleinpell, R. (2005). Moral distress of staff nurses in a medical intensive care unit. *American Journal of Critical Care, 14*, 523–530.

Ericson-Lidman, E., & Strandberg, G. (2007). Burnout: Co-workers' perceptions of signs preceding workmates' burnout. *Journal of Advanced Nursing, 60*(2), 199–208.

Ferrell, B. (2006). Understanding the moral distress of nurses witnessing medically futile care. *Oncology Nursing Forum, 33*(5), 922–930.

Gillespie, M., & Melby, V. (2003). Burnout among nursing staff in accident and emergency and acute medicine: A comparative study. *Journal of Clinical Nursing, 12*, 842–851.

Gutierrez, K. (2005). Critical care nurses' perceptions of and responses to moral distress. *Dimensions in Critical Care Nursing, 24*(5), 229–241.

Hamric, A., Spross, J., & Hanson, C. (2009). *Advanced practice nursing* (4th ed.). St. Louis, MO: Elsevier Saunders.

Hamric, A., & Blackhall, L. (2007). Nurse-physician perspectives on the care of dying patients in intensive care units: Collaboration, moral distress, and ethical climate. *Critical Care Medicine, 35*(2), 422–429.

Hanna, D. (2005). The lived experience of moral distress: Nurses who assisted with elective abortions. *Research and Theory for Nursing Practice: An International Journal, 19*(1), 95–124.

Hawryluck, L. & Crippen, D. (2002). Ethics and critical care in the new millennium. *Critical Care, 6*, 1–2.

Jameton, A. (1984). *Nursing Practice: The ethical issues*. Englewood Cliffs, NJ: Prentice Hall.

Jenkins, R., & Elliott, P. (2004). Stress, burnout and social support: Nurses in acute mental health settings. *Nursing and Healthcare Management and Policy, 48*(6), 622–631.

Kirchoff, K., & Beckstrand, R. (2000). Critical care nurses' perceptions of obstacles and helpful behaviors in providing end-of-life care to dying patients. *American Journal of Critical Care, 9*(2), 96–105.

Kirchhoff, K., Spuhler, V., Walker, L., Hutton, A., Vaughan Cole, B., & Clemmer, T. (2000). Intensive care nurses' experiences with end-of-life care. *American Journal of Critical Care, 9*(1), 36–42.

Laabs, C. (2005). Moral problems and distress among Nurse Practitioners in primary care. *Journal of the American Academy of Nurse Practitioners, 17*(2), 76–84.

McCaffree, D. (2006). Moral distress and the intensive care unit. *Critical Care Medicine, 34*(12), 3049–3050.

McDaniel, C. (1997). Development and psychometric properties of the Ethics Environment Questionnaire. *Medical Care, 35,* 901–914.

Meltzer, L., & Huckabay, L. (2004). Critical care nurses' perceptions of futilie care and its effect on burnout. *American Journal of Critical Care, 13*(3), 202–208.

ABSTRACTS

Miller, P., Forbes, S., & Boyle, D. (2001). End-of-life care in the intensive care unit: A challenge for nurses. *American Journal of Critical Care, 10*(4), 230–237.
Mobley, M., Rady, M., Verheijde, J., Patel, B., & Larson, J. (2007). The relationship between moral distress and perception of futile care in the critical care unit. *Intensive and Critical Care Nursing, 23*, 256–263.
Neuhauser, P. (2002). Building a high-retention culture in healthcare. *Journal of Nursing Administration, 32*(9), 470–478.
Oberle, K., & Hughes, D. (2001). Doctors' and nurses' perceptions of ethical problems in end-of-life decisions. *Philosophical and Ethical Issues, 33*(6), 707–715.
Patrick, K., & Lavery, J. (2007). Burnout in nursing. *Australian Journal of Advanced Nursing, 24*(3), 43–49.
Pauly, B., Varcoe, C., Storch, J., & Newton, L. (2009). Registered Nurses' perceptions of moral distress and ethical climate. *Nursing Ethics, 16*(5), 561–572.
Portney, L., & Watkins, M. (2000). *Foundations of clinical research: Applications to practice* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
Puntillo, K., & McAdam, J. (2006). Communication between physicians and nurses as a target for improving end-of-life care in the intensive care unit: Challenges and opportunities for moving forward. *Critical Care Medicine, 34*(11), S322–340.
Reynolds, S., Cooper, A., & McKneally, M. (2005). Withdrawing life-sustaining treatment: Ethical considerations. *Surgical Clinics of North America, 87(*4), 457–465.
Rice, E., Rady, M., Hamrick, A., Verheijde, J., & Pendergast, D. (2008). Determinants of moral distress in medical and surgical nurses at an adult acute tertiary care hospital. *Journal of Nursing Management, 16*, 360–373.
Sahraian, A., Fazelzadeh, A., Mehdizadeh, A., & Toobaee, S. (2008). Burnout in hospital nurses: A comparison of internal, surgery, psychiatry and burn wards. *International Nursing Review, 55*, 62–67.
Schneiderman, L. (2006). Effect of ethics consultations in the intensive care unit. *Critical Care Medicine, 34*(11), S359–363.
Schwenzer, K., & Wang, L. (2006). Moral distress in respiratory care practicioners. *Critical Care Medicine, 34*(12), 2967–2973.
Statistics Canada. (2003). *Study: Work stress among health care providers*. Retrieved from http://www.statcan.gc.ca/daily-quotidien/071113/dq071113a-eng.htm
Taormina, R., & Law, C. (2000). Approaches to preventing burnout: the effects of personal stress management and organizational socialization. *Journal of Nursing Management, 8*, 89–99.
Thibault-Prevost, J., Jensen, L., & Hodgins, M. (2000). Critical care nurses' perceptions of DNR status. *Journal of Nursing Scholarship, 32*(3), 259–265.
Webster Dictionary. (2009). *Malfeasance*. Retrieved from http://www.webster-dictionary.net/definition/malfeasance
Wilkinson, J. (1988). Moral distress in nursing practice: Experience and effect. *Nursing Forum, 23*, 16–29.
Zuzelo, P. (2007). Exploring the moral distress of registered nurses. *Nursing Ethics, 14*(3), 344–359.

National Survey of Critical Care Nurses' Experiences of Conflict in the Intensive Care Unit

Marie Edwards, RN, PhD, University of Manitoba, Karen Throndson, RN, BN, MN Student, Health Sciences Centre, and Julie Girardin, BN Student, University of Manitoba, Winnipeg, MB

Studies have shown that conflict of various types is common in the intensive care unit (ICU). In a large multinational survey, Azoulay, Timsit, Sprung, Soares, Rusinova, Lafabrie et al. (2009) found that 72% of respondents (n=7,358) had experienced at least one situation of conflict within the week the questionnaire was completed. In studies carried out in adult ICUs in the United States, conflict arose in the care of 32.1% of 656 patients with prolonged ICU admissions (Studdert, Mello, Burns, et al., 2003) and 78% of the 102 cases where discussions had taken place regarding withholding or withdrawing life-sustaining treatment (Breen, Abernethy, Abbott, & Tulsky, 2001). The purpose of this study was to enhance our understanding of Canadian critical care nurses' experiences of and responses to situations of conflict in the ICU. The research objectives were to: a) identify the types, causes, and frequency of conflict experienced by critical care nurses in ICU settings; b) identify the nursing interventions critical care nurses find most helpful in situations of conflict; c) describe the knowledge and skills required by critical care nurses when working in situations of conflict; and d) identify the resources critical care nurses find helpful in responding to situations of conflict. Based on an extensive review of the literature, a questionnaire was developed and reviewed by a sample of critical care nurses, advance practice nurses, educators, and researchers (n=11). The questionnaire was revised based on their feedback, research ethics board approval was obtained, and, with the approval and assistance of the Canadian Association of Critical Care Nurses (CACCN), an e-mail recruitment message was sent out to members of CACCN inviting them to complete the on-line survey. A total of 241 critical care nurses responded to the survey. The majority of respondents were female (94.3%), and worked full-time (78%), as general duty nurses (66.4%), in mixed medical/surgical intensive care units (66.4%). Approximately 49% of respondents had more than 20 years of experience in nursing and approximately 30% had worked more than 20 years in critical care. In this presentation, we will discuss the results of this study, with a particular emphasis on respondents' perceptions of: the factors associated with conflict; critical care nurses' roles in situations of conflict; the most helpful resources for patients/families and nurses in situations of conflict; and strategies for dealing with conflict.

References

Azoulay, E., Timsit, J.-F., Sprung, C., Soares, M., Rusinova, K., Lafabrie, A., Abizanda, R., et al. (2009). Prevalence and factors of intensive care unit conflicts. The Conflicus study. *American Journal of Respiratory and Critical Care Medicine, 180*, 853–860.

Breen, C., Abernethy, A., Abbott, K., & Tulsky, J. (2001). Conflict associated with decisions to limit life-sustaining treatment in intensive care units. *Journal of General Internal Medicine, 16*(5), 283–289.

Studdert, D., Mello, M., Burns, J., Puopolo, A., Galper, B., Truog, R., & Brennan, T. (2003). Conflict in the care of patients with prolonged stay in the ICU: Types, sources, and predictors. *Intensive Care Medicine, 29*(9), 1489–1497.

Exploring the Use of a Family Assessment Tool by Nurses in an Intensive Care Unit

Frances Fothergill Bourbonnais, RN, PhD, School of Nursing, University of Ottawa, Ottawa, ON

Implementing family nursing in critical care settings poses unique challenges. The urgency of decision-making related to physiologic crises mandates focus on the patient. However, providing support to the family is crucial. Time constraints can limit opportunities for nurses to build relationships with patients, as well as families in intensely stressful situations. Family members may need to become the patient's spokesperson and this new role may affect the family's stability, resources and coping abilities (Gavaghan & Carroll, 2002). Lack of communication is a major reason for challenges between health care professionals and families, between patients and families and among members of the family themselves. Families require attention, information and assurance (Van Horn & Kautz, 2007). Critical care nurses need to promote a communication process that involves the family early on so that future decisions can be facilitated. The author has developed a family assessment tool to help enter the world of the family so that this relationship can be established.

A pilot study was conducted that utilized this family assessment tool to determine its applicability in helping nurses work with families. The tool includes sections on family structure, information needs and support, as well as specific questions pertaining to areas such as why their loved one is in intensive care. Seven families utilized the tool and their nurses were interviewed to obtain feedback regarding the tool. Families were able to complete the tool with minimal guidance from the nurse and provided information that gave them a voice for their family member. The nurses, when interviewed, cited that information gathered from the tool assisted them in family assessment and engagement. This engagement with families is important as nurses accompany patients and their families on an uncertain journey from aggressive treatment through to recovery or to palliation and a peaceful death.

References

Gavaghan, S.R. & Carroll, D. (2002). Families of critically ill patients and the effect of nursing interventions. *Dimensions of Critical Care Nursing. 21*(2), 64–71.

Van Horn, E.R., & Kautz, D. (2007). Promotion of family integrity in the acute care setting. *Dimensions of Critical Care Nursing, 26*(3), 101–107

Wound Care...What to do with what you see

Nancy Giles-McIntosh, RN, CNCC(C), IIWCC, London Health Sciences Centre, London, ON

Critical care is a busy and ever-changing environment in which the clinical nurse is responsible for providing holistic patient care. Nurses are trained to recognize early signs of complications and act to promptly and accurately halt or minimize these complications.

In the critical care setting, the patient's ability to heal is often impaired due to many factors such as pre-existing wounds, poor glycemic control, infection, inotropic support and nutritional deficiencies. These factors increase the patient's risk for a variety of complications, including skin tears, pressure ulcers, complex surgical wounds and wound deterioration due to infection.

These wound complications can become a challenge since, often, the focus of attention is on supporting the patient in the acute care setting where clinical knowledge required for up-to-date wound care has not been a major focus. The advanced wound care product market has developed significant improvements in managing skin/wound care over the past 10 years, which has been matched by the increased expectation of evidence-based practice. Nurses in the critical care area need the support of experienced wound care specialists who can use the expertise of industry representatives to develop knowledge and confidence in using the appropriate skin/wound treatment for this challenging patient population.

Although many areas have access to and use advanced wound care products, a lack of knowledge about how to use these products properly creates expense, both in terms of the dressings themselves and in nursing time. This can lead to frustration for patient/family, staff and administrators. as this knowledge/practice gap can contribute to a delayed recovery.

This presentation will review wound care basics, using case studies and examples of different wounds one might see in the ICU. Appropriate treatment options for a variety of wound care scenarios will be examined. Audience participation will be encouraged as the different cases are presented and wound care plans reviewed. Suggestions will be made on how these wounds can be treated using wound care products and technologies available on the market today. Best practice guidelines and team work will be emphasized.

References

Braden, B., & Bergstrom, N. (1988). *Braden Scale for Predicting Pressure Ulcer Risk.*

Canadian Association of Wound Care. (2006). Special Issue: Best Practice Recommendations *Wound Care Canada, 4*(1).

ABSTRACTS

Krasner, D.L., Rodeheaver, G.T., & Sibbald, R.G. (Eds.). (2007). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals* (4th ed.). Surgical Site Infection Prevention and Treatment of Surgical Site Infection.

LeBlanc, K, Christensen, D., Orsted, H.L., & Keast, D.H. (2008). Prevention and Treatment of Skin Tears. *Wound Care Canada, 6*(1), 14–28.

Registered Nurses Association of Ontario. (n.d.). *Nursing Best Practice Guidelines—Risk Assessment and Prevention of Pressure Ulcers*. Retrieved from http://www.rnao.ca/Page.asp?PageID=924&ContentID=816

Registered Nurses Association of Ontario. (2007). *Nursing Best Practice Guidelines—Assessment and Management of Stage 1–4 Pressure Ulcers*. Retrieved from http://www.rnao.ca/Page.asp?PageID=924&ContentID=721

The Wound Infection Institute, www.woundinfection-institute.com

The Canadian Association of Wound Care, www.cawc.net

Woodbury, G., & Houghton P.E. (2004) Prevalence of Pressure Ulcers in Canadian Healthcare Settings. *Ostomy/Wound Management, 50*(10), 22–38.

Necrotizing Fasciitis Complicated by Extreme Morbid Obesity in the ICU Setting

Ruth Haydock, RN,BScN, CNCC(C), and Coleen Karr, RN, BScN, MScN, CNCC(C), Toronto East General Hospital, Toronto, ON

The Amazing Story of Mrs. B.
Necrotizing Fasciitis in the Extremely Morbidly Obese Patient

Mrs. B. is a 40-year-old, 800-pound woman, who comes to hospital presenting with severe abdominal pain. She is assessed and admitted to a medical floor for further investigations. During this time, the Outreach Team (Rapid Response Team) is seeing another patient on the same floor and hears someone crying in pain. The Outreach Team investigates the crying patient and, with a critical eye, quickly suspects that Mrs. B.'s pain is stemming from necrotizing fasciitis. As necrotizing fasciitis progresses rapidly and has a high mortality rate, early diagnosis and treatment are essential for positive outcomes.

This presentation will discuss the pathophysiology, early disease detection, diagnostic and treatment challenges in the setting of an extreme morbidly obese patient. Care for this patient required a team approach from surgery, critical care, wound care specialists, and nurses. Critical care management including initial fluid resuscitation, antimicrobial therapy, pain management, wound care management, nutritional support, fecal and urinary support will be addressed. Appropriate critical care nursing interventions and challenges faced by the wound care team caring for this patient will be highlighted.

References

Astorino, T., Genrich, I., Macgregor, L., Victor, C.S., Eckhouse, D.R., & Barbour, L. (2009). Necrotizing fasciitis: Early detection may save your patient's limb. *Orthopaedic Nursing, 28*(2), 70–76.

Cainzos, M., & Gonzalez-Rodriguez F.J., (2007). Necrotizing soft tissue infections. *Current Opinion in Critical Care. 13*(4), 433–439.

Hefny, A., Eid, H.O., Al-Hussona, M., Idris, K.M., & Abu-Aidan, F.M. (2007). Necrotizing fasciitis: A challenging diagnosis. *European Journal of Emergency Medicine, 14*(1,) 50–52.

Magel, D.C. (2008). The nurse's role in managing necrotizing fasciitis. *AORN Journal, 88*(6), 977–982.

Phan, H.H., & Cocanour, C.S. (2010). Necrotizing soft tissue infections in the intensive care unit: Supplement, current management of the critically ill surgical patient. *Critical Care Medicine, 38*(9), 5460–5468.

Ryssel, H., Germann, G., Kloeters, O., Radu, C. A., Reichenberger, M., & Gazyakan, E., (2010) Necrotizing fasciitis of the extremities: 34 Cases at a single centre over the past five years. *Archives of Orthopaedic and Trauma surgery, 130*(12), 1515–1522.

Yamashiro, S., Asato, Y., Taira, K., Awazawa, R., Yamamoto, Y., Hagiwara, K., Tamaki, H., & Uezato, H. (2009). Necrotizing fasciitis caused by streptococcus pneumonia. *Journal of Dermatology, 36*(5), 298–305.

Family Presence During Resuscitation In Intensive Care—A Collaborative Effort Promotes Holistic Family-Centred Care

Sherry Hergott, RN, Lisa Pell, RN, and Lynn Voelzing, RN, BScN, MBA, CNCC(C), Grand River Hospital, Kitchener, ON

Today, many health care institutions are placing more value on family-centred care, even in intensive care unit (ICU) settings, recognizing the importance of patient and family needs during a time of crisis. Historically, family presence during resuscitation was taboo. Patient care was focused on the health care team's skill and ability to provide life-saving measures such as cardiopulmonary resuscitation, giving little thought to the families' well-being and ability to cope. Consequently, there is a clear absence of policy and procedure within health care organizations supporting the opportunity for family presence during such crises. This presentation will address the problem: why is family presence during resuscitation not supported in the ICU setting?

Discussion will begin with a brief snapshot of our end-of-life care program, the building blocks that provided the foundation for the work that followed. Then, the concepts of family presence during resuscitation will be highlighted: how families were viewed during a critical event, attitudes and beliefs of health care providers, and the benefits and challenges inher-

ent in having family present during resuscitation. This will be followed by an in-depth review of the development and implementation of a policy and procedure within our organization that allows for the option of family presence during resuscitation. Furthermore, a review of incidences of family presence during resuscitation, evaluation of education provided to staff members, and survey results of the health care team members and family member experiences of resuscitation will be revealed.

The presentation summary will recognize several major conclusions including the rationale for policy and procedure development, and recognition of the education requirements for the health care team regarding skills related to grieving and bereavement. Additionally, the appreciation for this major paradigm shift will be shared: the notion of allowing families to be present during resuscitation in critical care settings, which is strongly supported by evidence-based practice.

Nursing leaders had the opportunity to demonstrate leadership in the ICU by questioning previous practices, interventions and family involvement. This, the final phase of our end-of-life care project, provided nurses the chance to develop a policy and procedures, and implement education that enabled change in practice and support family presence during resuscitation. Going forward, a commitment for further scrutiny of family presence during resuscitation will ensure that families are supported during the crisis and the grieving process.

References

Agard, M. (2008). Creating advocates for family presence during resuscitation. *MEDSURG Nursing, 17*(3), 155–160.

Barrett, F., & Wallis, D. (1998). Relatives in the resuscitation room: their point of view. *J Accid Emergency Med, 15*, 109–111.

Blair, P. (2004). Is family presence practical during emergency resuscitation. *Nursing Management, 35*(6), 20–23.

Canadian Association of Critical Care Nurses. (2005). *Family Presence During Resuscitation*. Retrieved from http://www.caccn.ca/en/publications//family_presence_during_resuscitation_2005.html

Dill, K., & Gance-Cleveland, B. (2005). With you until the end: Family presence during failed resuscitation. *Journal for Specialist in Pediatric Nursing, 10*(4), 204–207.

Emergency Nurses Association. (2001). *Position statements*. Retrieved from http://www.ena.org/about/position

Fallis, W.M., McClement, S.E., & Pereira, A. (2009). Family presence during resuscitation: Canadian critical care nurses' perspective. *Journal of Nursing Scholorship: Third Quarter, 41*(3), 233.

Fell, O.P. (2009). Family presence during resuscitation efforts. *Nursing Forum, 44*(2), 144.

Filzmaurice, J., Mian, P., Tancredi, D., Warchal, S., & Whitney, S. (2007). Impact of a multifaceted intervention on nurses' and physcians' attitudes and behaviors toward family presence during resuscitation. *Critical Care Nurse, 27*(1), 52–60.

Grice, A., Picton, P., & Deakin, C. (2003). Study examining attitudes of staff, patients, and relatives to witnessed resuscitation in adult intensive care units. *British Journal of Anaesthesia*, 20–30.

Halm, M.A. (2005). Family presence during resuscitation: A Critical Review of the Literature. *American Journal of Critical Care, 14*(6), 494–511.

King, C.A. (2001). Family presence during invasive procedures and resuscitation. *Association of Operating Room Nurses Journal, 73*(5), 979–980.

Marino, P.A. (1998). The effects of cumulative grief in the nurse. *Journal of Intravenous Nursing, 21*(2), 101–104.

Meyers, T., Eichhorn, D., & Guzzette, C. (1998). Do families want to be present during CPR? A retrospective survey. *Journal of Emergency Nursing, 24*(5), 400–405.

Meyers, T., Eichhorn, D., Clark, C., Guzzetta, C., Clark, A., Klein, J., & Calvin, A. (2000). Family presence during invasive procedures: The experience of family members, nurses, and physicians. *American Journal of Nursing, 100*(2), 32–42.

Redley, B., & Hood, K. (1996). Staff attitudes toward family presence during resuscitation. *Accident and Emergency Nursing, 4*, 145–151.

Rosenczweig, C. (1998). Should relatives witness resuscitation? Ethical issues and practical considerations. *Canadian Medical Association Journal, 158*(5), 617–620.

Shaner, K., & Eckle, N. (1997). Implementing a program to support the option of family presence during resuscitation. *The ACCH Advocate, 3*(1), 3–7.

Twedell, D. (2008). Family presence during resuscitation. *The Journal of Continuing Education in Nursing, 39*(12), 530–531.

Williams, J.M. (2002). Family presence during resuscitation: To see or not to see? *Nursing Clinics of North America, 37*(1), 211–220.

Achieving Excellence in Treatment: Stemming the Tide for Heart Failure Patients

Claire Holland, BScN RN, Toronto General Hospital, Suzanne Moore, RN, University Health Network, and Jennifer Requindin, BScN, MScN, York University/University Health Network, Toronto, ON

Heart failure (HF) is a cardiovascular syndrome affecting Canadians and is the most common cause of hospitalization of patients over the age of 65 (Lepage, 2008). Statistics demonstrate that the numbers of patients requiring admittance to hospital due to HF will triple by the year 2050 with a similar correlation to health care costs of an estimated 1.4 to 2.3 billion dollars (Lepage, 2008). This cost is, in part, due to recurrent hospitalizations and is estimated at 23.6% within one year (Lepage, 2008). Of these hospital admissions, 20% of patients will receive care in either intensive care units (ICU) or coronary intensive care units (CICU) due to acute decompensated heart failure (ADHF) with the median length of stay being 2.5 days.

HF is a complex syndrome in which the heart is unable to pump sufficient amounts of blood through the circulatory system to meet the peripheral oxygen demands; clinically recognized by decreased cardiac output and accompanied by pulmonary and systemic congestion. HF is predominately

ABSTRACTS

caused by a defect in myocardial contraction and relaxation accompanied with increased filling pressures within the heart. HF is a chronic condition that is progressive wherein periods of asymptomatic stability and acute decompensation eventually lead to increased mortality. The patient facing ADHF is experiencing a serious medical condition and may require a number of intensive treatments with the possibility of heart transplant.

The purpose of this presentation is to provide an overview of HF, discuss best practice guidelines for treatment of this syndrome and provide nurses with the knowledge of HF in order to provide excellent nursing care for patients and their families within a traditional non-cardiac ICU. Heart failure is difficult to diagnose and manage. Recognition of a deteriorating patient requires astute observation and assessment skills from practitioners. The CICU adapts a collaborative, interprofessional approach to providing care of patients experiencing ADHF. The experiences of nurses facing the complexity of treating these patients in the CICU will be highlighted.

References

Arnold, J. M.O., Liu, P., Demers, C., Dorion, P., Giannetti, N., Haddad, H., Heckman, G. A. et al (2006). Canadian Cardiovascular Society consensus conference recommendations of heart failure 2006: Diagnosis and management. *Canadian Journal of Cardiology, 22*(1), 23–45.

Cardoso, J.S. (2006). Treatment of acute heart failure—What we have learned to date and how to put it into practice. *European Cardiovascular Disease, 1*, 100–102.

Foy, D., & Twedell, D. (2007). Heart Failure. *The Journal of Continuing Education in Nursing, 38*(5), 198–199.

Howlett, J.G. (2008). Current treatment options for early management in acute decompensated Heart failure. *Canadian Journal of Cardiology*, Supplement B, 9B–13B.

Lepage, S. (2008). Acute decompensated heart failure. *Canadian Journal of Cardiology*, Supplement B, 6B–8B.

Racine, N. (2006). The heart failure challenge: Optimizing medical and surgical management. *Canadian Journal of Cardiology,* Supplement C, 8C–12C.

The Devastating Effects of Protein Metabolism Disorder in an ICU Patient

Sheila Hunt, BScN, RN, and Jill Pikul, Registered Dietitian, London Health Sciences Centre, London, ON

The diagnosis of protein metabolism disorders is classically made in newborns. However, under certain circumstances an enzyme deficiency can come to light in adulthood. The balance of nitrogen in the body can be tipped, causing ammonia levels to rise to dangerous levels. After increasing protein intake and taking an anabolic steroid, a young athlete presented to an emergency department with a one-week history of nausea, vomiting, increasing confusion and agitation. The patient seized, required intubation and was thus transferred to our intensive care unit for neurological assessment and treatment. It was discovered that his ammonia level was critically high and he was subsequently diagnosed with Orthinine Transcarbamylase Deficiency (OTC), a urea cycle disorder. The care of this patient challenged all members of the health care team, as we collaboated to understand the physiological process, stop seizure activity, reduce ammonia levels, maintain hemodynamics, and support a devastated family.

References

Summar, M.L., Barr, F., Dawling, S., Smith, W., Lee, B., Singh, R.H., et al. (2005). Unmasked adult-onset urea cycle disorders in the critical care setting. *Critical Care Clinics 21*, S1–S8.

A Synopsis of the 2010 Advanced Cardiac Life Support Guidelines

Darlene Hutton, RN, BScN, MSN, QRS Educational Services, Whitby, ON

In October 2010, the new *Advanced Cardiac Life Support* guidelines were published by the American Heart Association. This presentation will include an overview of the new guidelines and rationale for changes.

References

American Heart Association. (2010). 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science. *Circulation, 122*, S640–S861.

The Importance of Ongoing Education for the Routine Measurement of the QT Interval

Darlene Hutton, RN, BScN, MSN, QRS Educational Services, Whitby, ON

From September to November 2007, the findings from a survey from 180 nurses working in critical care areas throughout a variety of rural and urban hospitals in Ontario and British Columbia demonstrated that less than 20% of nurses working with patients requiring cardiac monitoring or electrocardiograms routinely measured the QT interval. Reasons identified on the pre-implementation survey for this finding were a lack of understanding the importance of QT interval measurement and not having a clear understanding on how to measure this interval. Surveys conducted post-implementation resulted in 100% of the respondents identifying that they would now routinely measure QT interval when doing rhythm interpretation.

In ongoing surveys of 1,570 nurses from a variety of rural and urban hospitals in Ontario, British Columbia, Alberta,

and Saskatchewan between 2008 and 2010, less than 30% of respondents indicated they routinely measure QT interval measurement.

Conclusion: A large nursing practice gap continues to exist in nurses working with patients requiring cardiac monitoring specific to the routine measurement of QT interval measurement. Policies on QT interval measurement need to be developed universally. Ongoing education to nursing staff on the importance of this measurement and the method of measuring this interval will help to increase understanding and adherence.

This presentation will include an overview of the literature available on QT and QTc interval measurements, a discussion on the various medications and other conditions that may increase the QT interval leading to the development of Torsades de Pointes, and the important issues to include in staff education on QT interval measurement.

References

Drew, B. (2005). American Heart Association scientific statement: Practice standards for electrocardiographic monitoring in hospital settings: An American Heart Association scientific statement from the councils on Cardiovascular Nursing, Clinical Cardiology, and Cardiovascular Disease in the Young: Endorsed by the International Society of Computerized Electrocardiology and the American Association of Critical Care Nurses. *Journal of Cardiovascular Nursing, 20*, 76–106.

Kligfield, P., Gettes, L., Bailey, J., Childers, R., Deal, B., Hancock, W., et al. (2007). Recommendations for the standards and interpretation of the ECG. A Scientific Statement from the American Heart Association Electrocardiography and Arrhythmias Committee, Council on Clinical Cardiology; the American College of Cardiology Foundation; and the Heart Rhythm Society. *Journal of the American College of Cardiology, 49*, 10, n.p.

Luo, S., Michler, K., Johnston, P., & Macfarlane, P. (2004). A comparison of commonly used QT correction formulae: The effect of heart rate on the QTc of normal ECGs. *The Journal of Electrocardiology, 37*, 81–90.

The University of Arizona Center for Education and Research on Therapeutics. (2005). *Drugs that prolong the QT interval and/or induce Torsades de Pointes ventricular arrhythmia*. Retrieved from http://www.qtdrugs.org

Health Care Providers' Perceptions of Family Presence in Resuscitation

Susan Launder, RN BScN, Janelle Plouffe, RNEP, Kimberly Fraser, RN, and Helen Cooper, RN BN, Health Sciences Centre, Winnipeg, MB

Background: A pediatric intensive care unit (PICU) team strives to achieve the family-centred care philosophy consistent with vision and mission of their institution. In 2006, a team of nurses began exploration of the evidence on family presence during pediatric resuscitation with the primary goal to integrate this knowledge into practice. From the literature search, it was apparent that there was limited published research on this topic, especially from a Canadian pediatric setting. This led to a staged research project over the subsequent three years to explore and integrate family presence during resuscitation into the culture of the PICU. Objectives 1) To explore health care providers' perceptions of family presence during pediatric resuscitation (2007); 2) Develop and integrate a guideline to best support this practice (2008–2009); and 3) Re-examine health care providers perceptions post guideline implementation (2010).

Methodology: Following approval from an academic ethics review board and the site research coordinating committee, survey methodology was utilized to gather data at baseline (2007) and again post-implementation (2010). Data were analyzed independently at each time interval and then in comparison to explore the quantitative and qualitative responses.

Findings: In 2007, data demonstrated sufficient support to move this project forward. In addition, the survey indentified facilitators and barriers to assist in both the development of an evidence-based guideline and the successful integration into practice. In 2010, the post implementation survey supported that the evidence-based practice guideline for family presence during pediatric resuscitation had achieved its goal despite significant changes in both the unit personnel and physical layout.

Success factors: Several factors were evident: 1) strong leadership support, 2) consistency with the mission and vision, 3) clear comprehensible guideline, 4) research being done by the frontline nurses, and 5) topic important to staff and the families.

References

Meyers, T., Eichorn, D., Guzzetta, C., Clark, A., Klein, J., Taliaferro, E., & Calvin, A. (2004). Family presence during invasive procedures and resuscitation: The experience of family members, nurses and physicians. *Topics in Emergency Medicine, 26*(1), 61–73.

Nibert, L., & Ondrejka, D. (2005). Family presence during pediatric resuscitation: An integrative review for evidence-based practice. *Journal of Pediatric Nursing 20*(2), 145–147.

The Children's Hospital of Winnipeg Health Sciences Centre. (n.d.). *Mission statement.* Winnipeg, MB. Retrieved from http://www.wch.ca/content.asp?view=CH-29189

York, N. (2004). Implementing a family presence protocol option. *Dimensions of Critical Care, 23*(2), 84–88.

Gray's Anatomy for the ICU

Kara Livy, RN, MN, CCNP, Royal Alexandra Hospital, and Daniel Livy, PhD, Edmonton, AB

Anatomy is one of the foundational subjects in nursing. Although many of us have taken an anatomy course, for most this was a cursory examination using only a textbook with coloured drawings. Most of the time this was not a true anatomy course, but rather one paired with the equally important

Dynamics 2011
Critical Care: Our Kaleidoscope

topic of physiology. Very few have had the privilege of participating in the dissection of human bodies in a gross anatomy laboratory, an opportunity more often associated with the training of physicians. However, as critical care nurses and nurse practitioners, we are expected to provide similar levels of advanced care to our patients, including performing advanced procedures. Although we are provided with the basics of landmarking for the execution of these techniques, it is often unclear how our landmarking skills relate to the underlying anatomy of our patient. This understanding is critical, not only to perform the procedure, but also to understand the potential for, and correction of, possible complications of these procedures.

In two sessions, we will introduce you to surface anatomy and landmarking as it relates to the underlying structures involved with some of our most common, yet demanding clinical procedures. The first session will include a guided visual anatomical tour of oral/nasal gastric tube insertion, femoral/subclavian/internal jugular central venous line insertion, and PICC line insertion. The second session will continue with oral/nasal intubation, chest tube insertion, lumbar puncture and foley catheter insertion. Diagnostic imaging will be used to provide a more classic view of how we usually see the deep structures of our patients. This session will enable critical care nurses and nurse practitioners to integrate and relate the surface anatomy of their patients with those important anatomical structures lying deep to the surface, allowing them to perform these advanced procedures with greater confidence and skill.

Session one: Take a guided visual anatomical tour through your patient's body during invasive procedures such as nasogastric, orogastric, central venous line, and PICC line insertions to enhance your knowledge of surface, gross and radiological anatomy while improving your ability to perform these procedures safely and skillfully.

Session two: Take a guided visual anatomical tour through your patient's body during invasive procedures such as oral/nasal intubation, chest tube insertion, lumbar puncture and foley catheter insertion to enhance your knowledge of surface, gross and radiological anatomy while improving your ability to perform these procedures safely and skillfully.

References

Lumley, J.S.P. (2008). *Surface anatomy: The anatomical basis of clinical examination* (4th ed.). Churchill Livingstone.

Moore, K.L., Dalley, A.F., & Agur, A.M.R. (2009). *Clinical oriented anatomy* (6th ed.). Lippincott Williams & Wilkins.

ICU Nurses' Perceptions of Nutrition Education and Training

Gwynne MacDonald, RN, MN, CNCC(C), Cathy Alberda, MSc, RD, Royal Alexandra Hospital, and Leah Gramlich, MD, Alberta Health Services, University of Alberta

Despite evidence-based clinical practice guidelines (CPGs) for nutrition therapy in the intensive care unit (ICU), delivery of optimum nutrition provisions remains difficult to achieve in most ICUs. The role of the ICU nurse with respect to optimizing nutrition therapy has not been clearly defined. Recognizing that critical care nurses are key stakeholders in facilitating adequate and safe provision of nutrition in the ICU, we conducted three focus groups to target strategies to enhance nursing performance in the delivery of nutrition therapy to critically ill patients.

ICU nurses were asked to discuss the following questions in an open format:

- What is your role with respect to nutrition in the ICU patient? Identify the knowledge, skills and attitudes an ICU nurse should have for nutrition therapy.
- What are your biggest challenges with respect to delivery of nutrition to the ICU patient?
- Are there any gaps in your training, with respect to nutrition therapy? Can you think of any strategies to address the gaps?

Information was gathered and analyzed using a framework developed by N. Cahill to understand barriers/challenges in adhering to nutrition CPGs.

The ICU nurses indicated they had virtually no nutrition training in formal education programs; nutrition knowledge is gained during ICU orientation. With respect to training, nurses have suggested:

- They learn best through personal communication with other nurses.
- CPGs need to address nursing concerns such as management of diarrhea, skin breakdown and wound management. The guidelines must be developed to allow the nurse to utilize critical thinking skills that permit best practice.

The level of uncertainty surrounding nutrition guidelines needs to be addressed to allow the nurse to make the best decision at the bedside in a rapidly changing clinical context.

Identified strategies to enhance nutrition therapy include:

- Engaging formative nursing programs and continuing education programs to address knowledge gaps especially around outcomes related to nutrition;
- Developing "clinically credible" nursing resource experts to facilitate ongoing education in the ICUs;
- Developing evidence-based feeding protocols based upon the perspective of the bed-side nurse; coupling protocols with sufficient educational materials to enable critical thinking and independent decision-making at the bedside;

- Sponsoring more research on topics pertinent to nursing nutritional management issues; and
- Evaluating and improving organizational characteristics that impact on teamwork and interdisciplinary communication.

Ultimately, the goal is to enhance delivery of nutrition therapy to ICU patients and improve their outcome.

References

Cahill, N.E., Suurdt, J., Oulette-Kuntz, H., & Heyland, D.K. (2010). Understanding adherence to guidelines in the intensive care unit: Development of a comprehensive framework. *JPEN J Parenter Enteral Nutr, 34*(6), 616–624.

Dodek, P., Cahill, N.E., & Heyland, D.K. (2010). The relationship between organizational culture and implementation of clinical practice guidelines: a narrative review. *JPEN J Parenter Enteral Nutr, 34*(6), 669–674.

Heyland, D.K., Dhaliwal, R., Drover, J.W., Gramlich, L., & Dodek, P. (2003). Canadian critical care practice guidelines for nutrition support in mechanically ventilated, critically ill patients. *JPEN J Parenter Enteral Nutr, 27*(5), 355–373.

Marshall, A., Cahill, N.E., Gramlich, L., MacDonald, G., Alberda, C., & Heyland, D.K. (2011). *Optimizing nutrition in the ICU: Empowering the critical care nurse to be an effective agent of change*. (Submitted for publication).

Did That Really Happen? Delusional Memories and the Impact of an ICU Patient Diary

Gwynne MacDonald, RN, MN, CNCC(C), Kara Livy, NP, and Allan Shustack, MD, Royal Alexandra Hospital, University of Alberta, Edmonton, AB

Anxiety, numbness, helplessness, horror, flashbacks and fear. These are some of the most powerful post-traumatic stress disorder (PTSD) symptoms described by intensive care unit (ICU) survivors following their ICU experience. Vivid, bizarre, and sometimes painful memories may haunt the survivor of critical illness for an unknown period of time following their ICU discharge. Did That Really Happen? Delusional Memories and the Impact of an ICU Patient Diary will explore the idea of sharing an ICU-created diary in combating these agonizing thoughts and fragmented recollections. The presentation will focus on a review of ICU survivor literature, with an emphasis on patient recollection of their ICU experience. Contributing factors associated with the occurrence of delusional memories, and, the creation of an ICU Diary to deal with these reminiscences will be explored. ICU survivor memories from two PTSD studies, at different points in time during patient recovery, will be used to highlight the ability of such an endeavour to restore missed periods of time and hopefully decrease PTSD symptoms in those who survive ICU.

References

Backman, C., & Walther, S. (2001). Use of a personal diary written on the ICU during critical illness. *Intensive Care Medicine, 27*, 426–429.

Combe, D. (2005). The use of patient diaries in an intensive care unit. *Nursing in Critical Care, 10*(1), 31–34.

Engstrom, A., Grip, K., & Hamren, M. (2008). Experiences of intensive care unit diaries: 'Touching a tender wound'. *Nursing in Critical Care, 14*(2), 61–67.

Granja, C., Gomes, E., Amaro, A., Ribeiro, O., Jones, C., Carneiro, A. & Costa-Pereira, A. (2008). Understanding posttraumatic stress disorder symptoms after critical care: The early illness amnesia hypothesis. *Critical Care Medicine, 36*(10), 2801–2809.

Griffiths, R., & Jones, C. (2007). Delirium, cognitive dysfunction and posttraumatic stress disorder. *Current Opinion in Anaesthesiology, 20*, 124–129.

Johansson, L., Ringdal, M., & Bergbom, I. (2008). Memories following physical trauma in patients treated in the ICU: Does gender and head injury make a difference? *International Emergency Nursing, 16*, 241–249.

Jones, C., Backman, C., Capuzzo, M., Egerod, I., Flaatten, H., Granja, C., … Griffiths, R. (2010). Intensive care diaries reduce new onset posttraumatic stress disorder following critical illness: A randomized, controlled trial. *Critical Care*. Retrieved from http://ccforum.com/content/14/5/R168.

Jones, C., Griffiths, R., Humphris, G., & Skirrow, P. (2001). Memory, delusions, and the development of acute posttraumatic stress disorder-related symptoms after critical care. *Critical Care Medicine, 29*(3), 573– 580.

Kiekkas, P., Theodorakopoulou, G., Spyratos, F., & Baltopoulos, G. (2010). Psychological distress and delusional memories after critical care: A literature review. *International Nursing Review, 57*, 288–296.

Knowles, R., & Tarrier, N. (2009). Evaluation of the effect of prospective patient diaries on emotional well-being in intensive care unit survivors: A randomized controlled trial. *Critical Care Medicine, 37*(1), 184–191.

Loff, L., Berggren, L., & Ahlstrom, G. (2006). Severely ill ICU patients recall of factual events and unreal experiences of hospital admission and ICU stay—Three and 12 months after discharge. *Intensive and Critical Care Nursing, 22*, 154–166.

Magarey, J., & McCutcheon, H. (2005). 'Fishing with the dead'—Recall of memories from the ICU. *Intensive and Critical Care Nursing, 21*, 344–354.

Minton, C., & Carryer, J. (2005). Memories of former intensive care patients six months following discharge. *Contemporary Nurse, 20*, 152–158.

Myhren, H., Toien, K., Ekeberg, O., Karlsson, S., Sandvik, L., & Stokland, O. (2009). Patients' memory and psychological distress after ICU stay compared with expectations of relatives. *Intensive Care Medicine, 35*, 2078–2086.

Ringdal, M., Johansson, L, Lundberg, D., & Bergbom, I. (2006). Delusional memories from the intensive care unit—Experienced by patients with physical trauma. *Intensive and Critical Care Nursing, 22*, 346–354.

Ringdal, M., Plos, K., & Bergbom, I. (2008). Memories of being injured and patients' care trajectory after physical trauma. *BMC Nursing, 7*(8), 1–12.

Ringdal, M., Plos, K., Lundberg, D., Johansson, L., & Bergbom, I. (2009). Outcome after injury: Memories, health-related quality of life, anxiety, and symptoms of depression after intensive care. *Journal of Trauma, Injury, Infection and Critical Care, 66*, 1226–1233.

Roberts, B., Rickard, C., Rajbhandari, D., & Reynolds, P. (2007). Factual memories of ICU: Recall at two years post-discharge and comparison with delirium status during ICU admission—A multicenter cohort study. *Journal of Clinical Nursing, 16*, 1669–1677.

ABSTRACTS

Roulin, M., Hurst, S., & Spirig, R. (2007). Diaries written for ICU patients. *Qualitative Health Research, 17*(7), 893–901.
Russell, S. (1999). An exploratory study of patients' perceptions, memories and experiences of an intensive care unit. *Journal of Advanced Nursing, 29*(4), 783–791.
Samuelson, K., Lundberg, D., & Fridlund, B. (2007). Stressful memories and psychological distress in adult mechanically ventilated intensive care patients—A two-month follow-up study. *Acta Anaesthesiologica Scandinavica, 51*, 671–678.
Storli, S., Lindseth, A., & Asplund, K. (2008). A journey in quest of meaning: A hermeneutic-phenomenological study on living with memories from intensive care. *Nursing in Critical Care, 13*(2), 86–96.
Stori, S., & Lind, R. (2009). The meaning of follow-up in intensive care: patients' perspective. *Scandinavia Journal of Caring Science, 23*, 45–56.

Critical Care... On the Path

Janet MacIntyre, RN, Parish Nurse, and Pamela Westover, RN, BHScN, Juravinski Hospital, Hamilton Health Sciences, Hamilton, ON

The Juravinski Hospital of Hamilton Health Sciences was in the enviable position of opening a new ICU and CCU in 2010. This necessitated a physical move from a small antiquated ICU and CCU to a new state-of-the-art facility to manage the complex and changing health care needs of our community and patient population. This change required planning, coordination, collaboration and leadership of all health care providers at multiple levels.

At the unit level the Kouzes and Posner's model, titled the Leadership Challenge, was used to guide the project and transition to the new units. The model's components include the following elements:

- Inspiring a vision
- Modelling the way
- Challenging the process
- Enabling others to act
- Encouraging the heart.

An interactive oral presentation highlighting how the utilization of a model contributed to the success of this project will be shared. The presentation will highlight the successful strategies utilized to address each model element including remembering the past, experiencing the present, and stepping into the future, thereby allowed the staff to prepare themselves emotionally for this transition. The presentation will include a video used to create a vision, engage and challenge the frontline staff as they set forth to… Be Part of the Journey. The integration of the concept of… Being Part of the Journey into all aspects of the project including education, communication, and development of a logo will be shared.

The move to our new unit is now complete. However, the journey continues and the lessons learned will provide the framework for other challenging changes. Sharing our experience of Critical Care… On The Path will enable us to reflect and share our practical strategies with you as we continue to provide critical care in these challenging times.

References

Kouzes, J.M., & Posner, B.Z. (2007). *The Leadership Challenge* (4th ed.). San Francisco, CA: Jossey-Bass.

Change Theory and Spontaneity—Must They be Opposing Forces?

Liane Manz, RN, BScN, CNCC(C), and Kara Livy, NP, Royal Alexandra Hospital, Edmonton, AB

We all know about change theory. Lewin's Three-Step Change Theory, Lippitt's Phases of Change Theory, and Social Cognitive Theory are the backbone of behaviour change and form the foundation for nursing interventions. These change theories are based on a very structured paradigm that requires assessment, planning, implementation and evaluation.

But have you ever wanted to throw caution to the wind? Have you ever had a "great" idea that you wanted to implement immediately, without waiting? Or do you daydream during your dreadful planning committee meetings for the day you will march through the ICU hoisting a banner touting the phrase "Just Do It"?

Well we did it! This presentation will produce a lively discussion regarding the benefits and challenges of spontaneous change and how to harness the positive energy it can create. We will also share the very real consequences of challenging assumptions in both ourselves and our colleagues in the effort to create meaningful change.

References

Grol, R., & Grimshaw, J. (2003). From best evidence to best practice: effective implementation of change in patients' care. *Lancet, 362*, 1225–30.
Kritsonis, A. (2004-2005). Comparison of change theories. *International Journal of Scholarly Academic Intellectual Diversity, 8*(1).

Nursing Care of the Patient Post-Apicoaortic Conduit Surgery

Rachelle Mccready, RN BScN CNCC(C), University Hospital, London Health Sciences Centre, London, ON

Patients who require aortic valve replacement due to severe aortic stenosis are often elderly and present with several comorbidities such as left ventricular dysfunction, coronary artery disease, porcelain aorta, etc. The traditional aortic valve replacement surgery requires a median sternotomy, cardiopul-

monary bypass, cardioplegic arrest and aortic cross-clamping. Thus, it has substantial morbidity and mortality in these high-risk patients. An alternative option for some of these high-risk surgical patients may be the transcatheter aortic valve implantation (TAVI) procedure, which is less invasive. However, patients with significant peripheral vascular disease may not be candidates for the TAVI procedure.

Another option is the apicoaortic conduit (aortic valve bypass) procedure. Although this surgical approach is not new, better techniques have emerged making the procedure less risky than before. New cardiac surgical procedures challenge critical care nurses to upgrade their knowledge and skills to provide care to these patients.

This oral presentation will:

- discuss pathophysiology, symptoms, and treatments for aortic stenosis;
- describe the apicoaortic conduit procedure;
- outline the nursing care post procedure;
- present a case study of a patient who had the apicoaortic procedure performed at our institution.

References

Balaras, E., Cha, K.A., Griffith, B., & Gammie, J. (2009). Treatment of aortic stenosis with aortic valve bypass (apicoaortic conduit) surgery: An assessment using computational modeling. *The Journal of Thoracic and Cardiovascular Surgery, 137*, 680–687.

Cooley, D., Lopez, R., & Absi, T. (2000). Apicoaortic conduit for left ventricular outflow tract obstruction: Revisited. *Annals of Thoracic Surgery, 69*, 1511–1514.

David, T. (2006). *Chapter 25: Surgery of the aortic valve. Perioperative care in cardiac anesthesia and surgery*. Lippincott Williams and Wilkins.

Elmistekawy, E., Lapierre, H., Mesana, T., & Ruel, M. (2010). Apicoaortic conduit for severe aortic stenosis: Technique, applications, and systemic review. *Journal of the Saudi Heart Association, 22*, 187–194.

Gammie, J., Krowsoski, B.A., Brown, J., et al. (2008). Aortic valve bypass surgery: Midterm outcomes in a high-risk aortic stenosis population. *Circulation, 118*, 1460–1466.

Gammie, J., Brown, J., Poston, R., et al. (2006). Aortic valve bypass for the high-risk patient with aortic stenosis. *Annals of thoracic surgery, 81*, 1605–1611.

Lockowandt, U. (2006). Apicoaortic valve conduit: Potential for progress? *The Journal of Thoracic and Cardiovascular Surgery, 132*, 796–801.

Madden,S., & Hill, J. (2009). Treatment of older patients with aortic valve stenosis. *Nursing standard, 24*(12), 42–48.

McRae, M., Rodger, M., & Bailey, B. (2009) Transcatheter and transapical aortic valve replacement. *Critical care nurse, 29*(1), 22–36.

Ogawa, S., Okutani, R., Shigemoto, T., et al. (2009). Anesthetic management of apicoaortic bypass in patients with severe aortic stenosis. *Journal of Anesthesia, 23*, 427–431.

Stout, K., & Otto, C. (2007). Indications for aortic valve replacement in aortic stenosis. *Journal of Intensive Care Medicine, 22*, 14–25.

Vassiliades, T. (2003). Off-pump apicoaortic conduit insertion for high-risk patients with aortic stenosis. *European Journal of Cardio-thoracic Surgery, 23*, 156–158.

Vliek, C., Balaras, E., Li, S., et al. (2010). Early and midterm hemodynamics after aortic valve bypass (apicoaortic conduit) surgery. *Annals of Thoracic Surgery, 90*, 136–143.

Critical Care in Kandahar: Nursing in a Combat Zone

Lt(N) Melissa Mertens, BN, RN, and Lt(N) Joanna Streppa, BScN, RN, Officer Commanding Treatment Company, 1 Canadian Field Hospital, Canadian Forces Base, Petawawa, ON

Nursing with the Canadian Forces (CF) means you can be called upon to perform a variety of duties, such as management, education, research, bedside and emergency care—all at the same time. Canadian Forces Health Services (CFHS) provides support to humanitarian and combat missions. CFHS took the role of Lead Nation for the Role 3 Multinational Medical Unit at Kandahar Airfield in 2006. From May to September 2010, more than 800 battlefield casualties were treated. Nursing challenges specific to the mission in Afghanistan highlight some of the difficulties of providing care to traumatic injuries in an active combat zone. The following is a presentation of experiences of two CF nurses over five deployments.

Challenges to providing quality nursing care included personal, patient care and administrative stressors. Personal stressors experienced by nurses include sleep deprivation, rocket attacks, sirens and drills, carrying a personal weapon (9 mm pistol) everywhere, compassion fatigue and dealing with catastrophic injuries and deaths of Canadian soldiers, not to mention being away from home, family and social support networks.

Patient care challenges include caring for insurgents/detainees, not having the required supplies/staff when they were needed, lack of access to diagnostic testing, specialist care and interventions, such as dialysis. As well, short evacuation times mean extremely busy shifts coordinating critical care evacuation teams. The hospital is located right on the airfield, so it is noisy all the time and it can be difficult to hear changes in patient status, monitors and alarms. Mass casualty situations occur frequently, many requiring massive transfusions and the use of the walking blood bank.

Ethical dilemmas are also common. Withdrawal of care or having to turn patients away because they don't meet the rules of eligibility for treatment is difficult to process, but is a necessity.

Administrative challenges include the requirement to perform/manage secondary duties such as policy review and writing and workload measurement tools. The presence of multinational staff is also a challenge, not just due to the obvious language and cultural barriers, but due to differences in training and experience.

It is not all doom and gloom for deployed CF nurses. It is very rewarding to see patients, especially kids, go home knowing that without our care they would have died. As well, seeing Canadian soldiers with horrific injuries leave theatre and then hearing that they made it back to Canada and are doing well—that truly makes it all worthwhile.

ABSTRACTS

References

Brewer, T.L., & Ryan-Wegner, N.A. (2009). Critical care air transport team (CCATT) nurses' deployed experience. *Military Medicine, 174*, 508–14.

Brooks, J. (2006). "Damage control" surgery techniques used on soldiers. *Canadian Medical Association Journal, 175*(7), 727.

Brown. D. (2010, Nov. 2). Rescue and recovery: At Role 3 Hospital, 'There's essentially nothing that can come in here that we can't handle'. *Stars and stripes*.

CBC News. (2009, Feb. 10). *In-depth Afghanistan: Canada in Afghanistan*. Retrieved from http://www.cbc.ca/canada/story/2009/02/10/f-afghanistan.html

De Jong, M.J., Benner, R., Benner, P., Richard, M.L., Kenny, D.J., Kelley, P., Bingham, M., & Debisette, A.T. (2010). Mass casualty care in an expeditionary environment: Developing local knowledge and expertise in context. *Journal of trauma nursing, 17*(1), 45–58.

Government of Canada. (2011, Jan. 28). *Canada's engagement in Afghanistan*. Retrieved from http://www.afghanistan.gc.ca/canada-afghanistan/index.aspx

Hudson, T.L., & Morton, R. (2010). Critical care transport in a combat environment: Building tactical trauma transport teams before and during deployment. *Critical care nurse, 30*(6), 57–66.

Scannell-Desch, E., & Doherty, M. (2010). Experiences of U.S. Military Nurses in the Iraq and Afghanistan wars, 2003–2009. *Journal of Nursing Scholarship, 42*(1), 3–12.

It's Big, It's Bad, and It's Ugly: Abdominal Compartment Syndrome

Eugene Mondor, RN, BScN, MN, CNCC(C), Royal Alexandra Hospital, Edmonton, AB

It can occur suddenly and without warning. It may be associated with surgery, trauma, or may occur for reasons that are not entirely understood. And it frequently remains unrecognized in the critical care patient population, as it is often attributed to some other condition affecting the patient. But it's big, it's bad, and it's ugly. It's abdominal compartment syndrome, and the critical care registered nurse must be able to respond to this potentially life-threatening condition with both knowledge and skill to prevent devastating consequences. The purpose of this presentation is to identify and describe abdominal compartment syndrome. The physiology of intra-abdominal pressure and intra-abdominal hypertension will be reviewed. In addition, the pathophysiology of abdominal compartment syndrome, risk factors, clinical signs and symptoms, and diagnosis will be described. Most importantly, medical and nursing care management of the adult patient with abdominal compartment syndrome, including surgical options, will be discussed. This presentation will be of interest to critical care nurses who wish to enhance their knowledge of this unique condition.

References

An, G., & West, M.A. (2008). Abdominal compartment syndrome: A concise clinical review. *Critical Care Medicine, 36*, 1304–1310.

Balogh, Z., Moore, F.A., Moore, E.E., & Biffl, W.L. (2007). Secondary abdominal compartment syndrome: A potential threat for all trauma clinicians. *Injury: International Journal of the Care of the Injured, 38*, 272–279.

Cheatham, M.L., & Safcsak, K. (2010). Is the evolving management of intra-abdominal hypetrtension and abdominal compartment syndrome improving survival? *Critical Care Medicine, 38*, 402–407.

Gestring, M. (2010). *Abdominal compartment syndrome*. Retrieved from http://www.uptodate.com

Maerz, L., & Kaplan, L.J. (2008). Abdominal compartment syndrome. *Critical Care Medicine, 36*, S212–S215.

Paula, R. (2009). *Abdominal compartment syndrome*. Retrieved from http://emedicine.medscape.com/article/829008

Walker, J., & Criddle, L.M. (2003). Pathophysiology and management of abdominal compartment syndrome. *American Journal of Critical Care, 12*, 367–371.

Is My Patient Having the Big Jammer? Recognition, Assessment, and Diagnosis of Acute Myocardial Infarction in ICU

Eugene Mondor, RN, BScN, MN, CNCC(C), Royal Alexandra Hospital, Edmonton, AB

The ability to recognize that a critically ill or injured patient is experiencing a myocardial event is of considerable importance. While prompt recognition and treatment of myocardial infarction (MI) is often considered routine in coronary care units (CCU), the appearance of electrocardiographic (ECG) changes coupled with the complexity of a multisystem problem patient may make identification of MIs much more difficult in the general ICU. The purpose of this presentation is to assist critical care registered nurses to recognize, assess, and assist with the diagnosis of acute myocardial infarction. A brief examination of the physiology of the heart and the pathophysiology of myocardial infarction will be reviewed. The important components of a patient history and the essential elements of a focused cardiac physical assessment will be identified. More specifically, this presentation will focus on how to recognize and interpret significant changes in the 12-lead electrocardiogram (ECG), understand the meaning of a rise in cardiac biomarkers (Creatine Kinase Myocardial Fraction B [CK-MB], Brain Natriuretic Peptide, C-Reactive Protein, and Troponin), and how to assist the ICU team in establishing a diagnosis of acute myocardial infarction. The ability of all critical care nurses to "put the pieces of the cardiac puzzle" together will only enhance care of the patient with acute MI in the general ICU.

References

Aehlert, B. (2007). *ACLS Study Guide* (3rd ed.). St. Louis: Mosby Jems Elsevier.

Fenton, D.E. (2010). *Myocardial infarction*. Retrieved from http://emedicine.medscape.com/article/759321

Keller, T., Zeller, T., Peetz, D., Tzikas, S., Roth, A., & Czyz, E., et al. (2009). Sensitive troponin I assay in early diagnosis of acute myocardial infarction. *New England Journal of Medicine, 361*, 868–877.

Reeder, G.S., & Kennedy, H.L. (2010). *Criteria for the diagnosis of acute myocardial infarction*. Retrieved from http://www.uptodate.com

Reichlin, T., Hochholzer, W., Bassetti, S., Steuer, S., Stelzig, C., Hartwiger, S., et al. (2009). Early diagnosis of myocardial infarction with sensitive cardiac troponin assays. *New England Journal of Medicine, 361*, 858–867.

White, H.D., & Chew, D.P. (2008). Acute myocardial infarction. *The Lancet, 372*, 570–584.

Zimetbaum, P.J., & Josephson, M.E. (2003). Current concepts: Use of the electrocardiogram in acute myocardial infarction. *New England Journal of Medicine, 348*, 933–940.

Brain, Heart and Courage: Leading from where you Stand

Linda Nusdorfer, RN, BScN, MN, CNCC(C), Sunnybrook Health Science Centre, Toronto, ON

Today's demanding health care environment requires resiliency, creativity and innovation in the delivery of patient care and service. Hospitals must create a workplace where staff feels supported to develop professionally, as knowledge workers.

Using the story of the *Wizard of Oz*, as an allegory to illustrate current workplace environment, we are introduced to Dorothy. Dorothy first encounters a wicked witch. The wicked witch symbolizes the inner voice of insecurity, as well as highly critical colleagues. Glinda, the good witch, is the mentor, leader, or friend who supports Dorothy as she follows her yellow brick road of career path enlightenment.

Along her journey, she befriends a scarecrow, a tin man and a cowardly lion. Together they venture to the Emerald City to meet the Wizard of Oz who bestows a brain, a heart and courage to the three companions. Dorothy, in turn, becomes the leader of the group.

The brain represents nurses as knowledgeable, critical thinkers who incorporate evidence into their daily practice. The heart represents the passion and caring needed to sustain an individual throughout their career. Our passion reflects determination to sustain personal and professional growth and therein lies job satisfaction. Without, passion we will becomes detached and dissatisfied, as represented by the Tin Man. Finally, courage is indicative of patient advocacy, nursing voice and leadership. No matter what position a nurse holds, from bedside to corporate offices, we are all leaders from our various vantage points.

This presentation will incorporate seminal points from Stephen Covey's *Seven Habits of Highly Effective People* and John Maxwell's *Laws of Leadership*. In adopting key ideas outlined in these references, nurses can positively impact their career development and career planning. By engaging the participants to create an individualized career vision and identify characteristics of leadership; individuals will feel empowered to lead from where they stand.

Learning objectives:

- Reflect on their specific work place environments and identify individuals who emulate characters represented in the *Wizard of Oz*
- Identify personal strengths and weakness as areas for personal and professional development
- Adopt the seven habits of effective people
- Describe characteristics of effective leadership.

References

Covey, S.R. (1999). *The seven habits of highly effective people*. New York: Fireside book.

Maxwell, J.C. (1998). *The 21 Irrefutable Laws of Leadership*. New York: Thomas Nelson, Inc.

Uncharted Territory: Our Family's Experience with Life-Threatening H1N1

Christine O'Leary, RN, MN, PNP, Alberta Children's Hospital, Alexandra Kroetsch, BA, and Anna-Marie Lyons, BA, MBA, Vancouver, BC

A., an otherwise healthy 26-year-old, was diagnosed with HIN1 in October, 2009. She was urgently intubated, ventilated and would be on extra corporeal membrane oxygenation (ECMO) for 25 days. She was sedated for seven weeks, dialyzed, had a tracheotomy and a pneumonectomy. She left hospital 25 weeks to the day from her admission, down one lung and five-and-a-half toes, but grateful to be alive.

She remembers:

- Am I dying?
- No idea of a timeline for my illness
- Being unable to move by myself, constantly needing to be boosted up in bed
- I want water, I want my voice!
- Some moments when I felt I would never be able to breathe on my own again
- I hate my life!
- Moments of Zen—This too shall pass
- "I needed to trust the nurses, doctors, and RTs, then they needed to learn to trust me"
- "We all learn to breathe and walk and figure out what we're going to do in life, I got to do it twice."

A.'s family was thrown into the ICU world. A.'s mother wrote poignantly in a daily blog: part diary, part therapy. She describes interactions with medical personnel that were most effective, how she managed the fear, the confusion, and even unexpected moments of hope and joy.

ABSTRACTS

Dynamics 2011

Critical Care: Our Kaleidoscope

"I sat by her bed for much of the day and watched her nostrils flair with each breath, much like I did when she was a newborn baby."

"A. turned towards my voice and looked at me for the first time since October. It was a brief moment, but a very precious one."

For A.'s aunt C., who is a nurse practitioner, her professional world became personal. She felt burdened by knowledge she had about prognosis and recovery that her family did not yet understand. Her experience is not unique: few nurses will go through their lives without being the medical supporter and interpreter for a family member or a friend.

"I see where people can lose their way in a crisis and I feel less judgment. I now know that strength is something you can borrow, because lots of my colleagues gave theirs to me."

We would like to share our three different perspectives via a story-telling conversation. It's foundation is A.'s H1N1, but we believe the themes are universal and will inform the art of complex critical care nursing.

The Sleep/Wake Patterns of Critical Care Nurses: A Pilot Study

Asha Pereira, RN, MN, CNCC(C), Health Sciences Centre, Diana E. McMillan, RN, PhD, University of Manitoba, Wendy M. Fallis, RN, PhD, and Eleni Giannouli, MD, Section of Respirology/Critical Care, Winnipeg Regional Health Authority, Winnipeg, MB

Sleep is part of our kaleidoscope and is part of how critical care nurses care for themselves, as they work to care for the critically ill. Yet, sleep can be disrupted for a variety of reasons, including shift work. The purpose of this pilot research study was to describe sleep-wake patterns of critical care nurses who practise within a 12-hour shift work schedule.

The Revised Symptom Management Model (Dodd et al., 2001) was used as the conceptual framework to guide this non-experimental, descriptive correlational study. Demographic data from a convenience sample (N = 18) of the target population were collected. Perception of subjective and objective symptoms was measured using a variety of instruments.

The study sample corresponds to the national average, as 78% of nurses were between 31 and 60 years of age, more were female (83.3%), more than half (55.6%) worked full-time, and all worked a day/night rotation. Surprisingly, only 33.3% reported having one or more dependents.

Subjects demonstrated sleep/wake patterns observably poorer than sleep/wake patterns in the normative adult population. Immediately after working night shift, the average Epworth Sleepiness Scale (ESS) was 16.57, indicating significantly high daytime sleepiness. Poorer quality sleep was reported, with a mean global Pittsburgh Sleep Quality Index (PSQI) score of 8.42, almost three points higher than "good sleepers", and fewer hours of sleep per night (<6.5 hours), than the National Sleep Foundation (2005) recommended 7-9 hours per night. Subjects slept better during night shifts than during, or before day shifts. On work days, sleep times were very stable, but on days off, nurses went to bed later and slept in later than when working.

There was a positive relationship between subjective measures of sleep and wake, and objective rest and activity measures. Mean actual sleep time data are considered strongly, positively correlated (rs =.560, p = .016, two-tailed), between the Sleep Log and Actigraphy.

This study provides fertile information to guide research into the health and performance of nurses and the domestic factors related to sleep. Development of policies and education may help nurses to deal with the complexity of sleep, and offset the potential risks to safety associated with sleep deprivation. Priority must be given to ensure the safety of those who live and work within the healthcare system.

References

Äkerstedt, T. (2007). Altered sleep/wake patterns and mental performance. *Physiologic Behavior, 90*, 2–3, 209–218.

Åkerstedt, T., & Gillberg, M. (1990). Subjective and objective sleepiness in the active individual. *International Journal of Neurosciences, 52*, 29–37.

Åkerstedt, T., & Knutsson, A. (1989). Coping strategies used by nurses on night duty. *Ergonomics, 29*, 185–196.

Åkerstedt, T., Knutsson, A., Westerholm, P., Theorell, T., Alfredsson, L., & Kecklund, G. (2002). Sleep disturbances, work stress and work hours. A cross-sectional study. *Journal of Psychosomatic Research, 53*, 741–748.

American Association of Critical Care Nurses. (2006). *General Information about Certification*. Retrieved from www.aacn.org/AACN/mrkt.nsf/vwdoc/AboutCriticalCareNursing

Ancoli-Israel, S., Cole, R., Alessi, C., Chanbers, M., Moorcroft, W., & Pollock, C.P. (2003). The role of actigraphy in the study of sleep and circadian rhythms. *Sleep, 26*(3), 342–392.

Arnedt, J.T., Owens, J., Crouch, M., Stahl, J.,& Carskadon, M.A. (2005). Neurobehavioral performance of residents after heavy night call vs after alcohol ingestion. *JAMA, 294*(9), 1025–1033.

Axelsson, J., Åkerstedt, T., Kecklund, G., & Lowden, A. (2004). Tolerance to shiftwork-how does it relate to sleep and wakefulness? *International Archives of Occupational Environmental Health, 77*, 121–129.

Barton, J., Spelten, E., Totterdell, P., Smith, L., Folkard, S., & Costa, G. (1995). The Standard Shiftwork Index: A battery of questionnaires for assessing shiftwork-related problems. *Work and Stress, 9*, 4–30.

Beersma, D.G.M., & Gordijn, M.C.M. (2007). Circadian control of the sleep-wake cycle. *Physiology & Behavior, 90*(2–3), 190–195.

Blachowicz, E., & Letizia, M. (2006). *The challenges of shift work. MedSurg Nursing, 15*(5), 274–280.

Bonnet, M.H. (2005). Sleep Deprivation. In M.G. Kryger, T. Roth, & W.C. Dement (Eds.), *Principles and Practices in Sleep Medicine* (4th ed., pp. 51–66). Philadelphia: W.B.Saunders.

Budnick, L.D., Lerman, S.E., Baker, T.L., Jones, H., Czeisler, C.A. (1994). Sleep and alertness in a 12-hour rotating shift work environment. *Journal of Occupational Medicine, 36*, 1295–1300.

Buysse, D.J., Reynolds, C.F., Monk, T.H., Berman, S.R., Kupfer, D.F. (1989). The Pittsburgh sleep quality index: A new instrument. *Psychiatry Research, 28*(2), 193–213.

Canadian Association of Critical Care Nurses, (2003). *Mission Statement*. Retrieved from www.caccn.ca

Canadian Institute for Health Information Statistics, (2006). *Workforce Trends of Registered Nurses in Canada. Registered Nurses Database*. Retrieved from www.cihi.ca/nurses

Carskadon, M.A., & Dement, W.C. (2005). Normal human sleep. In M.G. Kryger, T. Roth, & W.C. Dement (Eds.), *Principles and Practices in Sleep Medicine* (3rd ed., pp.13–23). Philadelphia: W.B. Saunders.

Clissold, G., Smith, P., Accutt, B., & Di Milia, L. (2002). A study of female nurses combining partner and parent roles with working a continuous three-shift roster: The impact on sleep, fatigue and stress. *Contemporary Nurse, 12*(3), 294–302.

Coffey, L.C., Skipper, J.K., & Jung, F.D. (1988). Nurses and shiftwork: Effects on job performance and job-related stress. *Journal of Advanced Nursing, 13*(2), 245–253.

Dean, G.E., Scott, L.D., & Rogers, A.E. (2006). Infants at risk: when nurse fatigue jeopardizes quality care. *Advances in Neonatal Care, 6*(3), 120–126.

Dingley, J. (1996). A computer-aided comparative study of progressive alertness changes in nurses working two different night-shift rotas. *Journal of Advanced Nursing, 23*, 1247–1253.

Dodd, M., Janson, S., Facione, N., Faucett, J., Froelicher, E.S., Humphreys, J., et al. (2001). Advancing the science of symptom management. *Journal of Advanced Nursing, 33*(5), 668–676.

Dorrian, J., Lamond, N., Holmes, A.L., Burgess, H.J., Roach, G.D., Fletcher, A., et al. (2003). The ability to self-monitor performance during a week of simulated night shifts. *Sleep, 26*(7), 871–877.

Dracup, K., & Bryan-Brown, C.W. (2000). To work: Perchance to sleep. *American Journal of Critical Care, 9*(4), 224–226.

Drake, C., Roehrs, T., Richardson, G., Walsh, J., & Roth, T. (2004). Shift work sleep disorder: Prevalence and consequences beyond that of symptomatic day workers. *Sleep, 27*(8), 1453–1462.

Edell-Gustafsson, U.M. (2002). Sleep quality and responses to insufficient sleep in women on different work shifts. *Journal of Clinical Nursing, 11*, 280–288.

Engle-Friedman, M., Riela, S., Golan, R., Ventuneac, A.M., Davis, C.M., Jefferson, A.D., et al. (2003). The effect of sleep loss on next day effort. *Journal of Sleep Research, 12*(2), 113–124.

Fitzpatrick, J.M., While, A.E., & Roberts, J.D. (1999). Shift work and its impact upon nurse performance: Current knowledge and research issues. *Journal of Advanced Nursing, 29*(1), 18–27.

Folkard, S., Monk, T.H., & Lobban, M.C. (1978). Short and long-term adjustment of circadian rhythms in "permanent" night nurses. *Ergonomics, 21*, 785–799.

Gaba, D.M., & Howard, S.K. (2002). Fatigue among clinicians and the safety of patients. *New England Journal of Medicine, 347*(16), 1249–1255.

Gold, D.R., Rogacz, S., Bock, N., Tosteson, T.D., Baum, T.M., Speizer, F.E., et al. (1992). Rotating shift work, sleep and accidents related to sleepiness in hospital nurses. *American Journal of Public Health, 82*(7), 1011–1014.

Harrington, J.M. (2001). Health effects of shift work and extended hours of work. *Occupational Environmental Medicine, 58*, 68–72.

Hughes, R.G., & Rogers, A.E. (2004). First, do no harm. Are you tired? Sleep deprivation compromises nurses' health and jeopardizes patients. *American Journal of Nursing, 104*(3), 36–38.

Hughes, R., & Stone, P. (2004). The perils of shift work: Evening shift, night shift, and rotating shifts: Are they for you? *American Journal of Nursing, 104*(9), 60–63.

Inoue, K., Kakehashi, Y., Oomori, S., & Koizumi, A. (2004). Biochemical hypoglycemia in female nurses during clinical shift work. *Research in Nursing & Health, 27*(2), 87–96.

Johns, M.W. (1991). A new method for measuring daytime sleepiness: The Epworth Sleepiness Scale. *Sleep, 14*(6), 540–545.

Kaplan, K.A., Itoi, A., & Dement, W.C. (2007). Awareness of sleepiness and ability to predict sleep onset: Can drivers avoid falling asleep at the wheel? *Sleep Medicine, 9*, 71–78.

Kemper, M. (2001). The role and effectiveness of napping on the work performances of shift workers. *Work, 16*, 153–157.

Kivimäki, M., Kuisma. P., Virtanen, M., & Elovainio, M. (2001). Does shift work lead to poorer health habits? A comparison between women who had always done shift work with those who had never done shift work. Work and Stress, 15(1), 3-13.

Kobayashi, F., Furui, H., Akamatsu, Y., Watanabe, T., & Horibe, H. (1997). Changes in psycho-physiolocal functions during night shift in nurses. Influence of changing from full-day to half-day work shift before night duty. *International Archives of Occupational Environmental Health, 69*, 83–90.

Labyak, S., Lava, S., Turek, F., & Zee, P. (2002). Effects of shiftwork on sleep and menstrual function in nurses. *Health Care for Women International, 23*, 703–714.

Landrigan, C.P., Rothschild, J.M., Cronin, J.W., Kaushal, R., Burdick, E., Katz, J.T., et al. (2004). Effect of reducing interns' work hours on serious medical errors in intensive care units. *The New England Journal of Medicine, 351*(18), 1838–1848.

Learhart, S. (2000). Health effects of internal rotation of shifts. *Nursing Standard, 14*(47).

Lee, K.A. (1992). Self reported sleep disorders in employed women. *Sleep,15*(6), 493–498.

Lee, K.A., Landis, C., Chasens, E.R., Dowling, G., Merritt, S., Parker, K.P., et al.(2004). Sleep and chronobiology: Recommendations for nursing education. *Nursing Outlook, 52*(3), 126–133.

Lee, K.A., & Lipscomb, J. (2003). Sleep among shiftworkers-A priority for clinical practice and research in occupational health nursing. *AAOHN, 51*(10), 418–424.

Lockley, S.W., Cronin, J.W., Evans, E.E., Cade, B.E., Lee, C.J., Landrigan, C.P., et al. (2004). Effect of reducing interns' weekly work hours on sleep and attentional failures. *The New England Journal of Medicine, 351*(18), 1829–1837.

Monk, T.H. (2005). Shift Work. In M.G. Kryger, T. Roth, & W.C. Dement (Eds.), *Principles and Practices in Sleep Medicine* (4th ed., pp. 673–679). Philadelphia: W.B.Saunders.

ABSTRACTS

Monk, T.H., Buysse, D.J., Kennedy, K.S., Potts, J.M., DeGrazia, J.M., & Miewald, J.M. (2003). Measuring sleep habits without using a diary: The Sleep Timing Questionnaire. *Sleep, 26*(2), 208–215.

National Sleep Foundation (2005). Retrieved from http://www.sleepfoundation.org.

Novak, R.D., & Auvil-Novak, S.E. (1996). Focus group evaluation of night nurse shiftwork difficulties and coping strategies. *Chronobiology International, 13*(6), 457–463.

Papp, K.K., Stoller, E.P., Sage, P., Aikens, J.E., Owend, J., Avidan, A., et al. (2004). The effects of sleep loss and fatigue on resident-physicians: A multi-institutional mixed-method study. *Academic Medicine, 79*(5), 394–406.

Perkins, L. (2001). Is the night shift worth the risk? *RN, 64*(8) 65–66, 68.

Philip, P., Taillard, J., Sagaspre, P., Valtat, C., Sanchez-Ortuno, M., Moore, N., et al. (2004). Age, performance and sleep deprivation. *Journal of Sleep Research, 13,* 105–110.

Pilcher, J.J., & Huffcutt, A.I. (1996). Effects of sleep deprivation on performance: A meta-analysis. *Sleep, 19*(4), 318–326.

Poissonnet, C.M., & Veron, M. (2000). Health effects of work schedules in healthcare professions. *Journal of Clinical Nursing, 9*, 13–23.

Portela, L.F., Rotenberg, L., & Waissmann, W. (2004). Self-reported health and sleep complaints among nursing personnel working under 12 h night and day shifts. *Chronobiology International, 21*(6), 859–870.

Reid, K. & Dawson, D. (2001). Comparing performance on a simulated 12 hour shift rotation in young and older subjects. Occupational and Environmental Medicine, 58(1), 58–62.

Roehrs, T., Carskadon, M.A., Dement, W.C., & Roth, T. (2005). Daytime sleepiness and alertness. In M.G. Kryger, T. Roth, & W.C. Dement (Eds.), *Principles and Practices in Sleep Medicine* (4th ed., pp. 39–50). Philadelphia: W.B.Saunders.

Rogers, A.E., Hwang, W.T., Scott, L.D., Aiken, L.H., & Dinges, D.F. (2004). The working hours of hospital staff nurses and patient safety. *Health Affairs, 23*, 202–212.

Rollinson, D.C., Rahtlev, N.K., Moss, M., Killiany, R., Sassower, K.C., Auerbach, S., et al. (2003). The effect of consecutive night shifts on neuropsychological performance of interns in the emergency department: A pilot study. *Annals of Emergency Medicine, 41*(3), 400–406.

Ruggiero, J.S. (2003). Correlates of fatigue in critical care nurses. *Research in Nursing & Health, 26*, 434–444.

Sallinen, M., Härmä, M., Mutanen, P., Ranta, R., Virkkala, J., & Müller, K. (2003). Sleep-wake rhythm in an irregular shift system. *Journal of Sleep Research, 12*, 103–112.

Schardt, D. (2005). How sleep affects your weight. *Nutrition Action Healthletter, 7*, 10–11.

Schernhammer, E.S., Laden, F., Speizer, F.E., Willett, W.C., Hunter, D.J., Kawachi, I., et al., (2001). Rotating night shifts and risk of breast cancer in women participating in the nurses' health study. Journal of the National Cancer Institute, 93(20), 1563-1568.

Schernhammer, E.S., Laden, F., Speizer, F.E., Willett, W.C., Hunter, D.J., Kawachi, I., et al., (2003). Night-shift work and risk of colorectal cancer in the nurses' health study. *Journal of the National Cancer Institute, 95*(11), 825–828.

Scott, L.D., Rogers, A.E., Hwang, W.T., & Zhang, Y. (2006). Effects of critical care nurses' work hours on vigilance and patients' safety. *American Journal of Critical Care, 15*(1), 30–37.

Shechter, A., James, F.O., & Boivin, D.B. (2008). Circadian rhythms and shift working women. *Sleep Medicine Clinics, 3*, 13–24.

Shields, M. (2002). Shift work and Health. *Health Reports, 13*(4), 11–31.

Smith, L., Folkard, S., Tucker, P., & Macdonald, I. (1999). Workshift duration: A review comparing eight hour and 12 hour systems. *Occupational Environmental Medicine, 55*(4), 217–219.

Smith, L., Tanigawa, T., Takahashi, M., Mutou, K., Tachibana, N., Kage, Y., & Iso, H. (2005). Shiftwork locus of control, situational and behavioural effects on sleepiness and fatigue in shiftworkers. *Industrial Health, 43*, 151–170.

Statistics Canada (2001). Retrieved from http://www.statcan.ca/start.html

Stokowski, L.A. (2004). *A wake-up call for nurses: Sleep loss, safety and health*. Retrieved from http://www.medscape.com/viewarticle/481189

Sveinsdóttir, H. (2006). Self-assessed quality of sleep, occupational health, working environment, illness experience and job satisfaction of female nurses working different combination of shifts. *Scandinavian Journal of Caring Sciences, 20*, 229–237.

Tenkanen, L., Sjoblom, T., Kalimo, R., Alikoski, T., & Harma, M. (1997). Shift work, occupation, and coronary heart disease over six years of follow-up in the Helsinki Heart Study. *Scandinavian Journal of Work, Environment and Health, 23*(4), 257–265.

Todd, C., Reid, N., & Robinson, G. (1989). The quality of nursing care on wards working eight and twelve hour shifts: A repeated measures study using the MONITOR index of quality of care. *International Journal of Nursing Studies, 26*(4), 359–368.

Trinkoff, A., Geiger-Brown, J., Brady, B., Lipscomb, J., & Muntaner, C. (2006). How long and how much are nurses now working? *American Journal of Nursing, 106*(4), 60–71.

Trinkoff, A.M., Storr, C.L., & Lipscomb, J.A. (2001). Physically demanding work and inadequate sleep, pain medication use, and absenteeism in registered nurses. *Journal of Occupational Environmental Medicine, 43*(4), 355–363.

Trinkoff, A.M., & Storr, C.L. (1998). Work schedule characteristics and substance use in nurses. *American Journal of Internal Medicine, 34*(3), 266–271.

Weinger, M.B., & Ancoli-Israel, S. (2002). Sleep deprivation and clinical performance. *Journal of the American Medical Association, 287*(8), 955–957.

Wilson, J.L. (2002). The impact of shift patterns on healthcare professionals. *Journal of Nursing Management, 10*, 211–219.

Williams, G., Chaboyer, W., Thornsteindottir, R., Fullbrook, P., Shelton, C., Chan, D., & Wojner, A (2001). Worldwide overview of critical care nursing organizations and their activities. *International Nursing Review, 48*, 208–217.

Winwood, P.C., Winefield, A.H., & Lushington, K. (2006). Work-related fatigue and recovery: the contribution of age, domestic responsibilities and shiftwork. *Nursing and Healthcare Management and Policy, 56*(4),438–449.

Avatars and Technology for Interprofessional Education-Preventing Ventilator-Associated Pneumonia (VAP) and Central Line Infections (CLI) in Critical Care

Brenda Ridley, RN, BScN, MA(Ed), CCN(C), Elizabeth Gordon, BEd, BScN, Janine Boston, BScN, CCN(C), and Susanne Nelson, RN, MScN, CNS Vascular Access, University Health Network, Toronto, ON

A key component in the advancement of patient safety in Canada is the work of the Safer Healthcare Now (SHN) campaign to improve health care delivery by focusing on patients and their safety while in the care of health providers. SHN is a collaborative effort aimed at reducing the number of injuries and deaths related to adverse events, such as infections and medication incidents. Ventilator-associated pneumonia (VAP) and central line infections (CLI) are key elements of SHN and have become a big focus of interprofessional practice and care standards in critical care at our academic acute care centre. Previous benchmark statistics indicated that didactic format lectures and policies were not enough to create a paradigm shift in health care practices. Developing education programs that focus on content delivery to meet current technology expectations is a challenge for educators in critical care. The focus of this presentation will be to present our innovative approach to interprofessional education reaching more than 500 critical care staff in our centre. The use of digital characters in a simulated environment can provide life-like, exploratory learning that is enhanced by video, character scenarios and other learning activities. Our program allows for 24-hour access to learning using multimodal media. E-learning technology offers learners control over content, learning sequence, pace of learning, time, and often media, allowing them to tailor their experiences to meet their personal learning objectives (Ruiz, Mintzer, & Leipzig, 2006). The success of our educational program has been demonstrated by the reduction of VAP and CLI rates at our centre.

References

Augustyn B. (2007). Ventilator-associated pneumonia: Risk factors and prevention. *Critical Care Nurse, 27*, 32–39.

Safer Health Care Now. Retrieved from http://www.saferhealthcarenow.ca/EN/Pages/default.aspx

Ruiz, J.G. Mintzer, M.J., & Leipzig, R.M. (2006). The impact of E-learning in medical education. *Academic Medicine, 81*(3), 207–212.

Tolentino-DelosReyes, A., Rupport, S., & Shiao, S. (2007). Evidence-based practice: Use of the ventilator bundle to prevent ventilator-associated pneumonia. *American Journal of Critical Care, 16,* 20–27.

U.O.U. A Call to Action

Elaine Rose, RN BN MHS,
Mount Royal University, Calgary, AB

Providing safe patient care is a priority in all health care facilities but, for safe patient care to be realized, nurses cannot be fatigued, malnourished, ill (physically, emotionally, or mentally), or over-stressed. We, as nurses, must care for ourselves to safely care for others. The Canadian Nurses Association (CNA) and Registered Nurses Association of Ontario (RNAO) (2010) stated "undoubtedly, nurse fatigue is a significant problem that disrupts nurses" physical and mental health, jeopardizes the quality of patient care delivery and, ultimately, undermines the Canadian health care system (p. 33).

Recommendations for the system, the organization, and the individual are presented in the report. This report coupled with the 2005 American Association of Critical-Care Nurses (AACN) guidelines for developing and sustaining a healthy work environment to foster patient safety and enhance worker satisfaction are foundations on which each nurse can build. Among the AACN (2005) standards are appropriate staffing and authentic leadership. But this is not enough! The CNA/RNAO (2010) report stated:

> *Few women of this era know how to take care of themselves and many do not think they are "worth it", always putting themselves last. If you do exercise self-care you become a target for women who are unable to give themselves self-care and actively resent those who strive for balance in personal and professional spaces (p. 20).*

You are important, you owe yourself to care for you, I owe myself to care for me.

Whether you go to work when you are not well, or stay home you will not be doing the right things according to someone. You will be sharing your germs making others sick, or you will be leaving the unit short and are not pulling your weight if you stay home. This type of culture must change.

Patient safety, your safety, and the safety of others on the road when you drive home are all affected by your fatigue. An examination of some of the facts related to fatigue and poor health will be discussed with the audience. Included in the discussion will be the issues involved in the decisions we make, as nurses, to work that 16-hour shift, that extra overtime shift, or come to work when we are ill. How can we change the culture to one where we respect and care for ourselves.

References

Admi, H., Tzischinsky, O., Epstein, R., Herer, P., & Lavie, P. (2008). Shift work in nursing: Is it really a risk factor for nurses' health and patients' safety? *Nursing Economic$, 26*(4), 250–257. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009995707&site=ehost-live

ABSTRACTS

American Association of Critical-Care Nurses. (2005). *AACN standards for establishing and sustaining healthy work environments: A journey to excellence.* Aliso Viejo, CA: American Association of Critical-Care Nurses.

Berger, A.M., & Hobbs, B.B. (2006). Impact of shift work on the health and safety of nurses and patients. *Clinical Journal of Oncology Nursing, 10*(4), 465. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009261653&site=ehost-live

Canadian Nursing Association, & Registered Nurses Association of Ontario. (2010). *Nurse fatigue and patient safety; research report.* Ottawa, ON: Canadian Nurses Association.

Dorrian, J., Lamond, N., van, d. H., Pincombe, J., Rogers, A. E., & Dawson, D. (2006). A pilot study of the safety implications of Australian nurses' sleep and work hours. *Chronobiology International: The Journal of Biological & Medical Rhythm Research, 23*(6), 1149-1163. doi:10.1080/07420520601059615

Elfering, A., Semmer, N.K., & Grebner, S. (2006). Work stress and patient safety: Observer-rated work stressors as predictors of characteristics of safety-related events reported by young nurses. *Ergonomics, 49*(5-6), 457–469. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009210711&site=ehost-live

Ericksen, A.B. (2008). Violence in the workplace: How to care for your own safety while providing care to your patients. *RN, 71*(8), 38–42. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2010008689&site=ehost-live

Featon, K., Isedale, G., Hanger, G., McCarthy, D., & Garland, D. (2008). Night shift is hard on nurses. *Lamp, 65*(11), 14–15. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2010131912&site=ehost-live

Foley, M. (2004). Caring for those who care: A tribute to nurses and their safety. *Online Journal of Issues in Nursing, 9*(3), 12 p. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2005072929&site=ehost-live

Gold, D.R., Rogacz, S., Bock, N., Tosteson, T.D., Baum, T.M., Speizer, F.E., & Czeisler, C.A. (1992). Rotating shift work, sleep, and accidents related to sleepiness in hospital nurses. *American Journal of Public Health, 82*(7), 1011. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=9208170782&site=ehost-live

Kurtzman, E.T., & Kizer, K.W. (2005). Evaluating the performance and contribution of nurses to achieve an environment of safety. *Nursing Administration Quarterly, 29*(1), 14–23. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2005067027&site=ehost-live

New OHS laws threaten nurses' safety. (2010). *Lamp, 67*(1), 39-39. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2010570515&site=ehost-live

Olszewski, K., Parks, C., & Chikotas, N.E. (2007). Occupational safety and health objectives of healthy people 2010: A systematic approach for occupational health nurses—part II. *AAOHN Journal, 55*(3), 115–125. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009553394&site=ehost-live

Palumbo, M.V., Rambur, B., McIntosh, B., & Naud, S. (2010). Registered nurses' perceptions of health and safety related to their intention to leave. *AAOHN Journal, 58*(3), 95–103. doi:10.3928/08910162-20100216-01

Ramanujam, R., Abrahamson, K., & Anderson, J.G. (2008). Influence of workplace demands on nurses' perception of patient safety. *Nursing & Health Sciences, 10*(2), 144–150. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009990896&site=ehost-live

Rogers, A.E., Hwang, W., Scott, L.D., Aiken, L.H., & Dinges, D.F. (2004). The working hours of hospital staff nurses and patient safety. *Health Affairs, 23*(4), 202–212. doi:10.1377/hlrhaff.23.4.202

Salladay, S.A. (2001). You snooze, you lose. *Nursing, 31*(6), 81–81. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=5190401&site=ehost-live

Scott, L.D., Rogers, A.E., Hwang, W., & Zhang, Y. (2006). Effects of critical care nurses' work hours on vigilance and patients' safety. *American Journal of Critical Care, 15*(1), 30–37. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009096375&site=ehost-live

Unions set to discuss night shift napping. (2008). *Nursing Standard, 23*(10), 8. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=35584838&site=ehost-live

Interprofessional Preceptorship—Partners in Learning

Mary Elizabeth Roth, RN, BScN,
Conestoga College, Wellesley, ON

Preceptors play a vital role in the successful orientation of new learners, whether these learners are students or new employees. Preceptors contribute to safe, quality client care and advancement of their profession and are an integral part of any orientation program. The purpose of preceptorship in any profession is to provide the student/new learner with the best possible real world experience while still being supported and guided by a clinical expert. A preceptored experience is crucial to facilitate personal and professional development in a novice professional, by promoting valid career choices and successful clinical practice. Teaching and learning, the core principles in preceptorship, extend far beyond conveying knowledge and skills. The preceptor is a role model who encourages the preceptee to value attaining exemplary clinical skills and to embrace the significance of evidence-informed nursing practice. Because of the perceived rigours in critical care practice, many newcomers may be discouraged from choosing that focus if there is a dearth of constructive, sincere individuals who are willing to partner with them on their journey to achieve their highest potential. To motivate a learner to greater understanding, a preceptor must be inspired to share his/her knowledge and expertise. The professional practice guideline states that nurses have a professional obligation to support learners to develop and refine the competencies needed for safe, ethical and effective practice and to support the development and socialization of colleagues who are learning (College of Nurses of Ontario, 2009).

Some things are better "caught than taught". Collegial relationships amongst colleagues multiply learning opportunities—preceptees learn from their preceptors, in addition to interprofessional colleagues, as long as there is clear evidence of a cohesive, interconnected environment. It's important to fan the flames of a preceptee's enthusiasm and nudge them forward to reach their maximum capability. If they are not encouraged, their interest and passion will be extinguished.

It is worthwhile to remember that in this role, a preceptor is preparing future leaders and in turn, shaping the direction of the future (Myrick & Yonge, 2005)!

References

Alfaro-LeFevre, R. (2009). *Critical thinking and clinical judgment: A practical approach to outcome-focused thinking* (4th ed.). St. Louis, MO: Saunders Elsevier.

Alfaro-LeFevre, R. (2009). *Don't worry, be happy! Harmonize diversity through personality sensitivity*. Nurse.com CE course, Retrieved from http://www.nurse.com/ce/CE236.

Allen, S.L. (2002). Mentoring: The essential connection. *AORN Journal, 75*(3), 440.

Arthurs, J.B. (2007). A juggling act in the classroom: Managing different learning styles. *Teaching and Learning in Nursing, 2*(1), 2–7.

Bally, J.M.G. (2007, May/June). The role of nursing leadership in creating a mentoring culture in acute care environments. *Nursing Economic$, 25*(3), 143–148.

Burns, C., Beauchesne, M., Ryan-Krause, P., & Sawin, K. (2006). Mastering the preceptor role: Challenges of clinical teaching. *Journal of Pediatric Health Care, 20*(3), 172–183.

CAIPE. (1997 & 2006). *Interprofessional education—A definition*. London, UK: CAIPE.

Cohen, M.H. (2008). Professional communication and teamwork. *Creative Nursing, 14*(1), 17–23.

College of Nurses of Ontario. (2009). *Supporting Learners*. Toronto, Canada: Author.

Dealing with the emotional aspect of conflict. (2008, November). *Harvard Mental Health Letter*. Retrieved from Academic Search Premier database.

Dracup, K., & Bryan-Brown, C.W. (2004). From novice to expert to mentor: Shaping the future. *American Journal of Critical Care, 13(*6), 448–450.

Dunning, D. (2008). Accommodating learning style using personality type. *Workspan, 51*(10), 89.

Facione, P.A. (2007). Critical thinking: What it is and why it counts. Retrieved from http://www.insightassessment.com/pdf_files/what&why2006.pdf

Finger, S., & Pape, T. (2002). Invitational theory and perioperative nursing preceptorship. *AORN Journal, 76*(4), 630–642.

Fiumano, J. (2005). Navigate through conflict, not around it. *Nursing Management, 36*(8), 14, 18.

Fornasier, D. (2008). Teaching ethical leadership through the use of critical incident analysis. *Creative Nursing, 14*(3), 116–121.

Freeth, D., Hammick, M., Kippel, I., Reeves, S., & Barr, H. (2002). *A critical review of evaluations of interprofessional education*. London, LTSN-Centre for Health Sciences and Practices.

Goffee, R., & Jones, G. (2004). What makes a leader? *Personnel Today*. Retrieved from http://www.personneltoday.com/articles/2004/08/17/25119/what-makes-a-leader.html

Gopee, N. (2008). *Mentoring and supervision in healthcare*. Thousand Oaks, CA: Sage Publications, Ltd.

Gordon, F. (Ed). (2006). Combined universities interprofessional learning unit final report. Retrieved Nov. 20, 2008 from http://www.cuilu.group.shef.ac.uk/CUILU%20Final%20Report.pdf

Groarke, L.A., & Tindale, C.W. (2008). *Good reasoning matters! A constructive approach to critical thinking*. Don Mills, ON: Oxford University Press.

Grossman, S.C., & Valiga, T.M. (2009). *The new leadership challenge: Creating the future of nursing* (3rd ed.). Philadelphia, PA: F.A. Davis Company.

Halfer, D., & Saver, C. (2009). *Bridging the generation gaps.* Nurse.com CE course. Retrieved from http://www.nurse.com/ce/CE478.

Hardyman, R., & Hickey, G. (2001). What do newly-qualified nurses expect from preceptorship? Exploring the perspective of the preceptee. *Nursing Education Today, 9*(21), 58–64.

Heffner, J (2010). Integrins, selectin, and mentors. *Am J Respir Crit Care Med, 182*(10), 1216–1217.

Hickey, M.T.(2009). Preceptor perceptions of new graduate nurse readiness for practice. *Journal for Nurses in Staff Development, 25*(1), 35–41.

Interprofessional Education and Practice. (2009). *Interprofessional Collaboration.* Retrieved from https://www.cihc.ca/library/bitstream/10296/211/1/CoP_Interprofessional Collaboration.pdf

Kantek, F., & Gezer, N. (2009). Conflict in schools: Student nurses' conflict management styles. *Nurse Education Today, 29*(1), 100–107.

Kertis, M. (2007). The one-minute preceptor: The five-minute tool to improving clinical teaching skills. *Journal for Nurses in Staff Development, 23*(5), 238–242.

Knowles, M. (1975). *Self-directed learning: A guide for learners and teachers*. Parsippany, NJ: Globe Fearon, Inc.

Knowles, M. (1970). *The modern practice of adult education: Androgogy versus pedagogy*. New York, NY: Associated Press.

Kotelnikov, V. (2008). *Bad feedback vs. good feedback: Helpful hints for providing feedback*. Retrieved from http://www.1000ventures.com/business_guide/crosscuttings/feedback_bad-good.html

Krugman, M. (2009). *Precepting: The chance to shape nursing's future.* Retrieved from http://www.nurse.com/ce/CE393-60.

LaFleur, A.K., & White, B.J. (2010). Appreciating mentorship: The benefit of being a mentor. *Professional Case Management. 15*(6), 305–311.

Lipe, S.K., & Beasley, S. (2004). *Critical thinking in nursing*. Philadelphia, PA: Lippincott Williams & Wilkins.

Mangold, K. (2007). Educating a new generation: Teaching baby boomer faculty about millennial students. *Nurse Educator, 32*(1), 21–23.

Marquis, B.L., & Huston, C.J. (2009). *Leadership roles and management functions in nursing: Theory and application* (6th ed.). Philadelphia, PA: Lippincott, Williams & Wilkins.

Metcalfe, S.E. (2010). Educational innovations: Collaborative mentoring for future nursing leaders. *Creative Nursing, 16*(4), 167–170.

Mind Tools Ltd. (2008). *Improve your communication skills*. Retrieved from http://www.mindtools.com/page8.html

Morton-Cooper, A., & Palmer, A. (2000). *Mentoring, preceptorship and clinical supervision: A guide to professional roles in clinical practice*. [Electronic resource]. Boston, MA: Blackwell Scientific Publications.

Myers, I.B. (1995). *Gifts differing: Understanding personality type*. Palo Alto, CA: Davies-Black Pub.

Myrick, F., & Yonge, O. (2001). Creating a climate for critical thinking in the preceptorship experience. *Nurse Education Today, 6*(21), 461– 467.

ABSTRACTS

Myrick, F., & Yonge, O. (2005). *Nursing preceptorship: Connecting practice & education*. Philadelphia, PA: Lippincott Williams & Wilkins.

Paton, B., Thompson-Isherwood, R., & Thirsk, L. (2009). Preceptors matter: An evolving framework. *Journal of Nursing Education, 48*(4), 213–216.

Paul, R., & Elder, L. (2004). *Critical thinking: Concepts and tools*. Dillon Beach, CA: The Foundation for Critical Thinking.

Paul, R., & Elder, L. (2005). *The foundations of analytic thinking: How to take thinking apart and what to look for when you do*. Dillon Beach, CA: The Foundation for Critical Thinking.

Purkey, W.W., & Aspy, D. (2003). Overcoming tough challenges: An invitational theory of practice for humanistic psychology. *Journal of Humanistic Psychology, 43*(3), 146–155.

Penman, J., & White, F. (2006). Peer-Mentoring program 'pop-up' model for regional nursing students. *Journal of University Teaching and Learning Practice, 3*(2), 123–135.

Phillips-Jones, L. (2003). *Reasons to be a mentor.* The Mentoring Group—Archived articles. Retrieved from http://www.mentoringgroup.com/html/articles/mentor_1.html

Reeves, S., Suter, E., Goldman, J., Martimiankis, T., Chatalalsingh, C., & Dematteo, D. (2007). *A scoping review to identify organizational and education theories relevant for interprofessional practice and education.* Canadian Interprofessional Health Collective (CHIC). Retrieved from http://www.cihc.ca/files/publications/ScopingReview_IP_Theories_Dec07.pdf

Registered Nurses Association of Ontario. (2002). Preceptorship and mentorship. Toronto, Canada: Registered Nurses Association of Ontario.

Registered Nurses Association of Ontario. (2006). *Healthy work environments: Best practice guidelines*. Toronto, Canada: Author.

Schaubhut, R.M., & Gentry, J.A. (2010). Nursing preceptor workshops: Partnership and collaboration between academia and practice. *The Journal of Continuing Education in Nursing, 41*(4), 155–160.

Smith, J.A., & Zsohar, H. (2007). Essentials of neophyte mentorship in relation to the faculty shortage. *Journal of Nursing Education, 46*(4), 184–186.

Smith, M.K. (2002) *Malcolm Knowles: Informal adult education, self-direction and andragogy. The Encyclopedia of Informal Education*. Retrieved from www.infed.org/thinkers/et-knowl.html

Sportsman, S. (2005). Building a framework for conflict management. *Nursing Management, 36*(4), 32–40.

Stewart, D.W. (2006). Generational mentoring. *The Journal of Continuing Education in Nursing, 37*(3), 113–120.

Ullrich, S., & Haffer, A. (2009). *Precepting in nursing: Developing an effective workforce*. Mississauga, ON: ones and Bartlett Publishers, Canada.

Vaughn, L. (2005). *The power of critical thinking: Effective reasoning about ordinary and extraordinary claims*. New York, NY: Oxford University Press.

Webb, C., & Shakespeare, P. (2007). Judgments about mentoring relationships in nurse education. *Nurse Education Today, 28*(5), 563–571.

Whitehead, D.K., Weiss, S.A., & Tappen, R.M. (2007). *Essentials of nursing leadership and management* (4th ed.). Philadephia, PA: F.A. Davis Company.

Wilson, V.W., Woodard-Leners, D., Fenton, J., & Connor, P. (2005). Mentorship: Developing and inspiring the next generation of nursing leaders. *Nurse Leader, 3*(6), 44–46.

Wieck, K.L. (2008). Managing the millennials. *Nurse Leader, 6*(6), 26–29.

Wink, D. (2007). Discovering your mentoring mosaic. *Nurse Educator, 32*(3), 95–96.

Wood, L.D.H. (2010). Mentorship in pulmonary and critical care medicine. *Am J Respir Crit Care Med, 182*(10), 1215–1216.

Yoder, L. (2009). *Partnership: Making the most of mentoring*. Nurse.com CE course, Retrieved from http://www.nurse.com/ce/CE190

Yonge, O., Myrick, F., Ferguson, L., & Lughana, F. (2005). Promoting effective preceptorship experiences. *Journal of Wound, Ostomy and Continence Nursing, 32*(6), 407–412.

The FACT about PACT: Factors in Assembling Coordinated Treatment—The Creation of a Post Arrest Consult Team

Orla Smith, RN, BScN, MN, CNCC(C), Karen Wannamaker, RN, BSc, CNCC(C), Maria Teresa Diston, RN, BScN, CNCC(C), Cindy Eikens-Stafford, RN, BScN, CGN(C), Lee Barratt, RN, BScN, MN, Michelle Gaudio, BSc, Chris Hayes, MD, MSc, Med, FRCPC, Laurie Morrison, MD, MSc, FRCPC, Steven C. Brooks, MD, MHSc, FRCPC, St. Michael's Hospital, Toronto, ON

Out-of-hospital cardiac arrest (OHCA) is a common problem with high mortality. In patients who are successfully resuscitated from a cardiac arrest, anoxic neurologic injury and other organ damage are important causes of morbidity and mortality. Induced controlled moderate hypothermia in patients with coma after cardiac arrest from ventricular tachycardia (VT) or ventricular fibrillation (VF) has been shown to improve morbidity and mortality (1, 2). Yet, based on the literature and our own local experience, it is known that there are significant barriers to the timely delivery of therapeutic hypothermia in this population of patients (3). Our local data indicate that only 50% of eligible patients receive therapeutic hypothermia post-cardiac arrest. Lack of clinician familiarity with best practices, workload, and sub-optimal collaboration between emergency and intensive care staff have been identified as barriers in the translation of this therapy into practice (4).

In an attempt to optimize the delivery of best practices and improve patient outcomes two academic health sciences centres in Toronto, Ontario, are piloting a post arrest consult team (PACT). The PACT consists of specially trained nurses and physicians who will respond to all out-of-hospital cardiac arrests and collaborate with clinicians from the emergency department, intensive care unit, respiratory therapy, and cardiology to provide timely evidence-based therapy for post-cardiac arrest syndrome. The PACT will provide collaboration, expert guidance, and "hands-on" human resources focused on specific aspects of post cardiac arrest care (5). The PACT will

use standardized clinical pathways to guide recommendations to the team in charge of the patient's care, including the rapid induction of mild therapeutic hypothermia. PACT will use a standardized trouble shooting algorithm for patients who are not achieving cooling rates. PACT will encourage goal-directed therapy with respect to hemodynamic optimization, oxygenation, and ventilation to mitigate reperfusion injury.

Thirteen critical care response team nurses, two medical-surgical intensive care unit resource nurses, five staff physicians, and six respiratory therapists have been trained as PACT members at St. Michael's Hospital. The team will be available 24 hours a day/7 days a week to respond to OHCA. The purpose of this presentation is to describe the development and implementation of the PACT initiative at St. Michael's Hospital including PACT nurse selection, team training, and the process of hospital-wide marketing and communication of this active knowledge-translation strategy.

References

Bernard, S., Gray, S., Buist, M., et al. (2002). Treatment of comatose survivors of out-of-hospital cardiac arrest with induced hypothermia. *New England Journal of Medicine, 346*(8), 557–563.

Holzer, M. (2010). Targeted temperature management for comatose survivors of cardiac arrest. *New England Journal of Medicine, 353*(13), 1256–1264.

Hypothermia after Cardiac Arrest Study Group. (2002). Mild therapeutic hypothermia to improve the neurologic outcome after cardiac arrest. *New England Journal of Medicine, 346(*8), 549–556.

Kennedy, J., Green, R.S., Stenstrom, R., on behalf of the CAEP Critical Care Committee. (2008). The use of induced hypothermia after cardiac arrest: A survey of Canadian emergency physicians. *Canadian Journal of Emergency Medicine, 10*(2), 125–30.

Toma, A., Bensimon, C.M., Dainty, K.N., Rubenfeld, G.D., Morrison, L.J., & Brooks, S.C. (2010). Perceived barriers to therapeutic hypothermia for patients resuscitated from cardiac arrest: A qualitative study of emergency department and critical care workers. *Critical Care Medicine, 3*(2), 504–509.

Continuous Renal Replacement Therapy: Overcoming Challenges in Children

Cecilia St. George-Hyslop, BA Gen, BScN, RN, MEd, CNCCP (C), Karen Dryden-Palmer, RN, BSN, MN(C), CNS, Dr. Hadi Mohseni-Bod, MD, FRCP, and Dr. Elizabeth Harvey, MD, MRCPCH(Uk), FAAP, The Hospital for Sick Children, Toronto, ON

Timely initiation of CRRT therapy and effective treatment in children relies upon a well-trained team. Understanding principles of fluid/electrolyte management, and complexities of technology and its application to a unique pediatric population is critical.

Objectives: This session will review the history of CRRT therapy in the critical care unit, including our collaborative model, interprofessional team training and evaluation, development of policies/procedures/guidelines/order sets, overcoming challenges and implementing strategies for improvement. Identification of systems issues that lead to error will be discussed and opportunities for improvements shared.

Methods: Complexities faced included: high risk patients, relative infrequency of treatments, maintenance assessment of competency, multiple delivery systems (machines and filters), need for adaptation of adult technology for pediatrics, delays in initiation, citrate therapy and hemodynamic instability in the infant population. A review of system errors, interdisciplinary team collaboration and enhanced training, testing and evaluation over an 18-month period resulted in significant improvements.

Results: Strategies for improvements in pediatric CRRT programs are feasible and endorsed by CRRT team members. Identified system errors resulted in changes to our processes.

Technology/equipment errors: Adopting a single model of machine decreased errors.

Knowledge/experience errors: Lectures, Wetlabs, OSCE testing resulted in enhanced staff training and skill retention.

Complexities of orders/policies/procedures: Revision of order sets, policies, guidelines improved usability and communication.

Conclusions: Continuous renal replacement therapy is an effective technology for managing fluid and electrolye imbalances, and/or removal of toxins. A quality program and optimal patient outcomes depend upon efficiencies in performance of a large interdisciplinary team.

References

Eding, D., Jelsma, L., Metz, C., Steen, V., & Wincek, J. (2011). Innovative techniques to decrease blood exposure and minimize interruptions in pediatric continuous renal replacement therapy. *Crit Care Nurse, 1*(31), 64–71.

Goldstein, S.L. (2009). Overview of pediatric renal replacement therapy in acute kidney injury. *Semin Dial., 22*(2),180–184.

Hothi, D., St. George-Hyslop, C., Geary, D., Bohn, D., & Harvey, E. (2006). Continuous renal replacement therapy (CRRT) in children using the AQUARIUSTM. *Nephrol Dial Transplant 21*, 2296–2300.

Jander, A., Tkaczyk, M., Pagowska-Klimek, I., Pietrzykowski, W., Moll. J., Krajewski, W., & Nowicki, M. (2007). Continuous veno-venous hemodiafiltration in children after cardiac surgery. *Eur J Cardiothorac Surg, 31*, 1022–1028.

Santiago, M.J., Lopez-Herce, J., Urbano, J., Solana, M.J., Del Castillo, J.D., Ballestero, Y., Botran, M., Bellon, J.M. (2009). Complications of continuous renal replacement therapy in critically ill children: A prospective observational evaluation study. *Crit Care, 13*, R184.

Symons, J., Chua, N., Somers, M., Baum, M., Bunchman, T., Benfield, M., Brophy, P., … Goldstein S. (2007). Demographic Characteristics of Pediatric Continuous Renal Replacement Therapy: A Report of the Prospective Pediatric Continuous Renal Replacement Therapy Registry. *Clin J Am Soc Nephrol, 2*, 732–738.

Palmieri, T.L. (2010). Complications of continuous renal replacement therapy in children: Are all created equal? *Critical Care, 14,* 105.

ABSTRACTS

Dynamics 2011

Critical Care: Our Kaleidoscope

Benzo's and Blockers, Coma and Cardiac Arrest: What's a Nurse to Do?

Teddie Tanguay, RN, MN, NP, CNCC(C), Royal Alexandra Hospital, Edmonton, AB

The admission of an unstable, post-cardiac arrest patient to the ICU can be overwhelming for even the most seasoned critical care nurse. While the primary goal post-admission is to address airway, breathing, circulation, and achieve hemodynamic stability, it is essential that critical care staff also attempt to determine the cause of the cardiac arrest. The purpose of this presentation is to review the approach to the patient with a sudden, acute, and unexplained onset of coma followed by cardiac arrest and subsequent admission to the critical care unit. A real-life case study will be presented to highlight several key elements of the admission and diagnostic investigation which ultimately revealed a diagnosis of benzodiazepine and beta-blocker overdose as the primary cause of the patient's acute coma and Pulseless Electrical Activity (PEA) arrest. The pathophysiology of beta-blocker toxicity, signs and symptoms, diagnosis, and evidence-based management and treatment plan for the patient with beta-blocker overdose will be discussed.

References

American Heart Association. (2008). Post cardiac arrest syndrome: Epidemiology, pathophysiology, treatment and prognostication—A Consensus Statement. *Circulation, 118s*, 2452–2483.

Bailey, B. (2003). Glucagon in B-blocker and Calcium Channel blocker overdose a systematic review.*Clinical Toxicology, 41,* 595–602.

Boyd, R. (2003). Glucagon for the treatment of symptomatic Beta blocker overdose. *Journal of Emergency Medicine, 22*, 391.

Howell, J. (2002). Electrocardiographic changes associated with {beta}-blocker toxicity. *Annuals of Emergency, 40*, 603–610.

Love, J., et al. (2000). Acute Beta blocker overdose: factors associated with the development of cardiovascular morbidity. *Clinical Toxicology, 38*, 275–281.

Sandroni, C., et al. (2007). In-hospital cardiac arrest: Incidence, prognosis and possible measures to improve survival. *Intensive Care Medicine, 33*, 237–245.

Shepard, G. (2006). Treatment of poisoning caused by {Beta}-adrenergic and calcium-channel blockers. *American Journal of health-system Pharmacy, 63*, 1828–1840.

Donation after Cardiac Death: Our Journey Through the Last Five Years

Barbara vanRassel, BScN, Trillium Gift of Life and Janet Taylor, RN, CNCC(C), London Health Sciences Centre, London, ON

The objectives of the presentation will be to provide a brief history of Donation after Cardiac Death, the consent process, patient management and testing, the withdrawal process, organ recovery and transplant, and the recipient outcome. Only through education and sharing of experiences can health care professionals come to understand the complexity and rewarding outcome of Donation after Cardiac Death (DCD) (Steinbrook, 2007; Csele, 2010).

Hospitals have focused much energy and resources on improving their end-of-life care for patients and families. The opportunity for organ and tissue donation provides families with comfort, and literature has shown that it helps families with the grieving process.(Trillium Gift of Life Network, n.d.). Health care providers need to have complete understanding of the choices they can offer families with end-of-life care and what those choices entitle.

With the introduction of Donation after Cardiac Death in 2005, many families have been allowed to fulfill their loved ones' wishes for organ donation, but this would not have been possible in previous years. Prior to 2005, donor patients had to have progressed to Neurological Determination of Death which accounted for 1.5% to 2% of hospital deaths (Trillum Gift of Life Network, n.d.). DCD patients do not meet the criteria for Neurological Determination of Death. These patients have suffered a severe head injury or have an end stage disease (Steinbrook, 2007; Csele, 2007). Once a decision has been made to withdraw care (a mutual decision between the health care team and family), the option for DCD organ donation can be offered. Though the total number of potential donors remains low in this group (1% to 3%), these opportunities did not exist for such families in the past (Trillium Gift of Life Network, n.d.).

Though Donation after Cardiac Death is still in its infancy, the commitment from health care professionals to support families who have made the decision to proceed with donation has been overwhelming. Community hospitals that have never been part of organ donation now can offer such an opportunity to families without having to transfer their loved ones to another facility (Trillium Gift of Life Network, n.d.).

As with all new initiatives, Donation after Cardiac Death has not been without some learning curves. Throughout the years we have trialed, documented and shared information to improve the donation process and the outcome of the recipients. It is only by sharing our experiences that we can improve our skills, as well as provide a solid base for other centres willing to learn.

References

Csele, M. (2010). Donation after cardiac death and the anesthesiologist. *Anesthesia and Analgesia Journal*. Philadelphia, PA: Lippincott, Williams&Wilkins/Wolters, Kluwer Health.

Steinbrook, R. (2007). Organ donation after cardiac arrest. *New England Journal of Medicine*. Waltham, MA: Massachusetts Medical Society.

Trillium Gift of Life Network. (n.d.). Retrieved from http://www.giftoflife.on.ca/

POSTER PRESENTATIONS

Facilitating the Care of Families: ICU Nurses' Perspectives

Joanna Bailey, BA, RN, MSc(A), Che Pang, BSc, MSc(A), Milla Kerusenko, BSc, RN, MSc(A) and Margaret Purden, N, PhD, Jewish General Hospital, Montreal, QC

Extending care to family members of the critically ill has become the standard expected of critical care providers, yet there is considerable evidence that nurses struggle in their efforts to do so. Despite this challenge, no previous work was found that examined what ICU nurses believe would assist them in meeting the needs of family members. This presentation reports on a descriptive qualitative study that explored what ICU nurses believe would facilitate the care of family members of critically ill patients. A convenience sample of 15 nurses employed in the adult medical-surgical Intensive Care Unit of a university-affiliated teaching hospital participated in focus group discussions on the topic. Verbatim transcripts were analyzed using thematic content analysis. The nurses acknowledged the importance of extending care to families. However, they also emphasized that the realities of critical care sometimes made this difficult or impossible. The challenges nurses faced in caring for families, along with their suggestions for facilitating family care were categorized into three main themes. Sharing the load included difficulties and suggestions related to workload. Collaborative approach to care focused on issues and strategies related to the manner in which the health care team collaborates and communicates both with each other and with families. Relevant expertise encompassed challenges and suggestions related to ICU nurses' expertise and the availability of other experts to assist families in crisis. These findings are shared as a valuable first step towards developing the necessary resources and supports for nurses faced with balancing the care of both critically ill patients and their families on a day-to-day basis.

References

Agard, A.S., & Maindal, H.T. (2009). Interacting with relatives in intensive care unit. Nurses' perceptions of a challenging task. *Nursing in Critical Care, 14*(5), 264–272.

Bruce, B., Letourneau, N., Ritchie, J., Larocque, S., Dennis, C., & Elliot, M.R. (2002). A multisite study of health professionals' perceptions and practices of family-centered care. *Journal of Family Nursing, 8*(4), 408–429.

Bruce, B., & Ricthie, J. (1997). Nurses' practices and perceptions of family-centered care. *Journal of Pediatric Nursing, 12*(4), 214–222.

Canadian Association of Critical Care Nurses. (2009*). Standards for Critical Care Nursing Practice* (4th ed.). London, ON: Author.

Chesla C.A., & Stannard, D. (1997). Breakdown in the nursing care of families. *American Journal of Critical Care, 6*(1), 64–71.

Davidson, J.E., Powers, K., Hedayat, K.M., Tieszen, M., Kon, A.A., Shepard, E., Spuhler, V., … Armstrong, D. (2007). Clinical practice guidelines for support of the family in the patient-centered intensive care unit: American College of Critical care medicine task Force 2004–2005. *Critical Care Medicine, 35*, 605–622.

Dunkel, J., & Eisendrath, S. (1983). Families in the intensive care unit: Their effect on staff. *Heart & Lung, 12*(3), 258–261.

Engstrom, A., & Soderberg, S. (2007). Close relatives in intensive care from the perspective of critical care nurses. *Journal of Clinical Nursing, 16*, 1651–1659.

Fox, S., & Jeffrey, J. (1997). The role of the nurse with families of patients in the ICU: The nurses' perspective. *Canadian Journal of Cardiovascular Nursing, 8*(1), 17–23.

Hays, M.A., All, A.C., Mannahan, C., Cuaderes, E., & Wallace, D. (2006). Reported stressors and ways of coping utilized by *Intensive Care Unit nurses. Dimensions of Critical Care Nursing, 25*(4), 185–193.

Hickey, M., & Lewandowski, L. (1988). Critical care nurses' role with families: A descriptive study. *Heart & Lung, 17*, 670–676.

Hupcey, J.E. (1998). Establishing the nurse-family relationship in the intensive care unit. *Western Journal of Nursing Research, 20*(2), 180–194.

Kinrade, T., Jackson, A.C., & Tomnay, J.E. (2009). The psychosocial needs of families during critical illness: Comparison of nurses' and family members' perspectives. *Australian Journal of Advanced Nursing, 27*(1), 82–88.

Kosca, M., & Warren, N. (2000). Critical Care nurses' perceptions of family needs as met. *Critical Care Nursing, 23*(2), 60–67.

Marco, L., Bermejillo, I., Garayalde, N., Sarrate, I., Margall, M.A., & Asiain, M.C. (2006). Intensive care nurses' beliefs and attitudes towards the effect of open visiting on patients, family and nurses. *Nursing in Critical Care, 11*(1), 33–41.

Nelms, T.P., & Eggenberger, S.K. (2010). The essence of the family critical illness experience and nurse-family meetings. *Journal of Family Nursing, 16*, 462–486.

McAdam, J.L., & Puntillo, K. (2009). Symptoms experienced by family members of patients in intensive care units. *American Journal of Critical Care, 18*(3), 200–210.

Petersen, M.F., Cohen, J., & Parsons, V. (2004). Family-centered care: Do we practice what we preach? *Journal of Obstetric, Gynecologic and Neonatal Nursing, 33*, 421–427.

Plowright, C.I. (1998). Intensive therapy unit nurses' beliefs about and attitudes towards visiting in three district general hospitals. *Intensive and Critical Care Nursing, 14*(6), 262–270.

Pryzby, B.J. (2005). Effects of nurse caring behaviors on family stress responses in critical care. *Intensive and Critical Care Nursing, 21*(1), 16–23.

Quinn, S., Redmond, K., & Begley, C. (1996). The needs of relatives visiting adult critical care units as perceived by relatives and nurses. Part 1. *Intensive and Critical Care Nursing, 12*(3), 168–172.

Quinn, S., Redmond, K., & Begley, C. (1996). The needs of relatives visiting adult critical care units as perceived by relatives and nurses. Part 2. *Intensive and Critical Care Nursing, 12*(4), 239–245.

Soderstrom, I.-M., Benzein, E., & Saveman, B.-I. (2003). Nurses' experiences of interactions with family members in intensive care units. *Scandinavian Journal of Caring Sciences, 17*(2), 185–192.

Soderstrom, I.-M., Saveman, B.-I., & Benzein, E. (2006). Interactions between family members and staff in intensive care units—An observation and interview study. *International Journal of Nursing Studies, 43*, 707–716.

Stayt, L.C. (2007). Nurses' experiences of caring for families with relatives in intensive care units. *Journal of Advanced Nursing, 57*, 623–630.

ABSTRACTS

Dynamics 2011

Critical Care: Our Kaleidoscope

In-Vitro Studies Demonstrate that Fecal Management Systems (FMS)* Effectively Contain and Prevent C. Difficile from Spreading into the Environment

Philip G. Bowler, MPHIL, BSc, Samantha Jones, BSc, Victoria Towers, BSc and Sarah Welsby, BSc, Convatec Wound Therapeutics, Deeside, Flintshire, UK

The global threat of Clostridium difficile (C difficile) highlights the need for effective measures of bacterial control. The purpose of this study was to evaluate the ability of the FMS to contain C difficile in vitro. In the first study, FMS devices were challenged with C difficile over 31 days, with swab samples taken daily along the device to determine penetration of the bacterium.(1) The containment properties were compared to those of disposable, absorbent underpads. The second study tested the containment properties of the (FMS-S) device and collection bags with (two collection bags) two types of charcoal filters.(2) Swab samples were taken daily for 11 days. For both studies, air and settle plate counts were taken to determine environmental contamination and one device was deliberately punctured to serve as a positive control. The FMS and FMS-S devices and collection bags effectively contained C difficile, while the positive controls did not. For the absorbent underpads, lateral spread of the bacterium across the inner challenged side was observed. The use of fecal management systems to contain stool may play a role in a protocol of care to help reduce the environmental contamination of C difficile.

References

ConvaTec. (2008, May 8). Containment of Clostridium difficile by the Flexi-Seal® Fecal Management System: An In Vitro Study. WHRI3107 MA106.

ConvaTec. (2009, Spetember 25). Use of Filtered Fecal Collection Bags to Contain Clostridium difficile: An In vitro Study. WHR13274 MA138.

What are the Attitudes, Perceptions and Experiences of Critical Care Nurses who are Engaged in a Unit-Specific Mentorship Program (Mentorship in Nursing Development [MIND])?

Liz Butorac, BScN, MN, Julie Kruchowski, BScN, Steve Manning, RN, and Mary Mutuna, BScN, St. Michael's Hospital, Toronto, ON

The current nursing shortage affects critical care (Cavanagh & Huse, 2004) where 1:1 and 1:2 nurse-patient ratios are required to manage high patient acuity. Literature demonstrates that nurses who are dissatisfied with their work and leave their profession often do so due to lack of peer and workplace support (Funderburk, 2008.) One strategy that addresses nursing shortages is mentorship programs (Bally, 2007).

In January 2010, a study was conducted in the MSICU to explore the attitudes, perceptions and experiences of nurses who were engaged in the inaugural MIND program. This program, piloted in 2008, was developed to address workplace satisfaction and retention of MSICU nurses. All nurses involved in the program were invited to participate in audiotaped interviews, and participant data were analyzed for emergent themes.

Seven themes depicted from the study involved the importance of providing support and socialization, embracing a learning environment; asking questions, job satisfaction; fear of the environment; nervousness; as well as program improvements. Also, woven within the themes were numerous positive comments about male mentors. It was found that male mentors were frequently chosen over female mentors.

Study findings to be applied to the next MIND program involve alleviating fear and nervousness in mentees and promoting them to ask questions. Promoting the need for mentee support and socialization, as well as exploring the importance of embracing a learning environment may further benefit the program. Also of interest for future study is the role of male mentors in mentorship relationships. Overall, all seven themes suggested that mentorship programs contribute to elements of nurses' job satisfaction.

References

Bally, J.M.G. (2007). The role of nursing leadership in creating a mentoring culture in acute care environments. *Nursing Economics, 25*(3), 143–148.

Cavanaugh, D.A., & Huse, A.L. (2004). Surviving the nursing shortage: developing a nursing orientation program to prepare and retain intensive care unit nurses. *The Journal of Continuing Education in Nursing, 35*(6), 251–256.

Funderburk, A.E. (2008). Mentoring: The retention factor in the acute care setting. *Journal for Nurses in Staff Development, 24*(3), E1–5.

Hurst, S., & Koplin-Baucum, S. (2003). Role acquisition, socialization, and retention: Unique aspects of a mentoring program. *Journal for Nurses in Staff Development, 19*(4), 176–180.

McKinley, M.G. (2004). Mentoring matters: Creating, connecting, empowering. *AACN Clinical Issues: Advanced Practice in Acute and Critical Care, 15*(2), 205–214.

Minnesota State University Mankato. *Mentor Match*. Retrieved from https://www.msumavericks.com/csw/mentorlist.html

Queensland Continence Clinicians. (2006). *Mentoring Framework* Retrieved from www.health.qld.gov.au/mass/docs/resources/continence/mentorframeworkmar06.pdf

Zucker, B., Williams, D., Bloodworth, L., Lynn, M., Denker, A., & Gibbs, J. (2006). Nursing retention in the era of nursing shortage: Norton navigators. *Journal for Nurses in Staff Development, 22*(6), 302–306.

PACE (Practice Advancing through Continuing Education) Days Two: Keeping up the Pace of Nurse Education to Ensure Evidence-Based Knowledge and Advanced Nursing Competencies in the Medical Surgical Intensive Care Unit (MSICU)

Liz Butorac, BScN, MN, Julie Kruchowski, BScN, Orla Smith, MN, Karen Wannamaker, BScN, and Maria Teresa Diston, BScN, St. Michael's Hospital, Toronto, ON

Nurses need to be well-informed with evidence-based knowledge. However, sending them away from the bedside for education can result in sub-standard patient care (Picton, 2009.) In 2008, the MSICU developed educational PACE Days to promote nursing evidence-based practice and advanced skill competency. As PACE Days feedback was very positive, a decision was made to continue this practice on a biannual basis.

Continuing with the original PACE Day format and feedback from PACE Days evaluations, a new and improved PACE Days Two was created. Six eight-hour sessions, also open to multidisciplinary team members, were held over a three-month period. Based on pre-session survey results, session topics included sepsis, spinal cord testing, anterior cervical decompression and fusion, therapeutic hypothermia, wound care, lumbar drains, epidurals, pacemakers, cervical collars and rapid infusers. Clicker technology questions were introduced to assess nurse knowledge.

Eighty-nine nurses attended the sessions. An evaluation response rate of 76% showed that 94.3% found the sessions relevant to their learning needs. Evaluation comments suggested that the sessions were the best ever; annual sessions are needed, and although information was compressed, it was valuable. Verbal comments included that there was no time to get tired and clicker testing was fun.

Based on the success of PACE Days Two, it was confirmed that education days are needed to provide nurses with evidence-based knowledge and competent practice. PACE Days will continue to be part of MSICU's education plan to assist nurses with maintaining competency.

References

Picton C. (2009). Putting portfolios to work. *Emergency Nurse, 16*(9), 26–27.

Use of Phototherapy in Circadian Rhythm Regulation in the Intensive Care Unit: Application of the Symptom Management Theory

Alanna Chau, RN, BScN , University of Manitoba, Winnipeg, MB

Sleep in the Intensive Care Unit (ICU) is a challenging and often elusive experience for patients. Despite health care providers's best efforts, environmental factors such as prolonged light exposure can suppress the patients' natural sleep hormone melatonin, leading to a shift in their circadian rhythm. This change in the body's natural clock is ultimately responsible for causing sleep deprivation and a host of neurophysiologic symptoms. The use of phototherapy has been demonstrated to effectively shift the natural circadian rhythm, although no previous research has studied this intervention in an ICU setting. The Symptom Management Theory (SMT) can be utilized as a tool to direct such an intervention. Developed by nurses, the theory was established to facilitate collaboration between health care providers to effectively manage patients' symptoms. The theory has three main concepts: symptom experience, symptom management strategies and symptom status outcomes. These concepts will be used as a guide to implement the use of phototherapy in the ICU and evaluate its effectiveness. Measureable outcomes of the intervention will include the patients' level of confusion, restlessness and urine melatonin level. Since the SMT's inception, an array of research has validated this theory as an effective tool in managing symptoms, though no studies have yet examined its efficacy in an ICU population. This poster study demonstrates the feasibility of application of this well-established theory in this population, used to direct an intervention that has the capacity to reduce the significant and potentially life-threatening symptoms of sleep deprivation.

References

Crowley, S.J., Lee, C., Tseng, C.Y., Fogg, L.F., & Eastman, C.I. (2003). Combination of bright light, scheduled dark, sunglasses, and melatonin to facilitate circadian rhythm entrainment in night shift work. *Journal of Biological Rhythms, 18*(6), 513–523. doi: 10.1177/0748730403258422

Dennis, C.M., Lee, R., Knowles Woodard, E., Szalaj, J.J., & Walker, C.A. (2010). Benefits of quiet time for neuro-intensive care patients. *American Association of Neuroscience Nurses, 42*(4), 217-227. Retrieved from http://www.aann.org/journal/content/index.html

Dodd, M., Janson, S., Facione, N., Faucett, J., Froelicher, E.S., Humphreys, J., Lee, K., … Taylor, D. (2001). Advancing the science of symptom management. *Journal of Advanced Nursing, 33*(5), 668–676. Retrieved from http://www.journalofadvancednursing.com

Dunn, H., Anderson, M. A., & Hill, P.D. (2010). Nighttime lighting in intensive care units. *Critical Care Nurse, 30*(3), 31–37. doi: 10.4037/ccn2010342

Ely, E.W., Gautam, S., Margolin, R., Francis, J., May, L., Speroff, T., Truman, B., … Inouye, S.K. (2001). The impact of delirium in the intensive care unit on hospital length of stay. *Intensive Care Medicine, 27*, 1892–1900. doi: 10.1007/s00134-001-1132-2

Figueroa-Ramos, M.I., Arroyo-Novoa, C.M., Lee, K.A., Padilla, G., & Puntillo, K.A. (2009). Sleep and delirium in ICU patients: A review of mechanisms and manifestations. *Intensive Care Medicine, 35*, 781–795. doi: 10.1007/s00134-009-1397-4

Hardin, K.A. (2009). Sleep in the ICU: Potential mechanisms and clinical implications. *Chest, 136*, 284–294. doi: 10.1378/chest.08-1546

Humphreys, J., Lee, K.A., Carrieri-Kohlman, V., Puntillo, K., Faucett, J., Janson, S., Aouizerat, B., & Donesky-Cuenco, D. (2008). Theory of symptom management. In M.J. Smith & P.R. Liehr (Eds.), *Middle range theory for nursing* (2nd ed., pp. 145–158). New York: Springer.

ABSTRACTS

Nelson, J.E., Meier, D.E., Oei, E.J., Nierman, D.M., Senzel, R.S., Manfredi, P.L., … Morrison, R.S. (2001). Self-reported symptom experience of critically ill cancer patients receiving intensive care. *Critical Care Medicine, 29*(2), 277–282. doi: 10.1097/00003246-200102000-00010

Pisani, M.A. Kong, S.Y.J., Kasl, S.V., Murphy, T.E., Araujo, K.L.B., & Van Ness, P.H. (2009). Days of delirium are associated with one-year mortality in an older intensive care unit population. *American Journal of Respiratory Critical Care Medicine, 180*, 1092–1097. doi: 10.1164/ rccm.200904-0537OC

Responding to the Needs of a New Nursing Generation

Annie Chevrier, Royal Victoria Hospital, Elaine Doucette, McGill School of Nursing, Marcel Lamontagne and Pascale Fulcher, Royal Victoria Hospital, Montreal, QC

Introduction: Current orientation programs that are in place in the acute and critical care settings are in the process of being revised in order that they better reflect the unique needs of our new nursing recruits. The challenges related to the nursing shortages, multigenerational nursing teams, combined with the demands of these highly complex environments, require a significant review of educational and clinical practice strategies that are currently in use to integrate our newer nurses.

Methods: A committee was formed with the specific mandate to adapt the orientation program to current best practices for acute and critical care settings. A literature review, as well as a needs assessment, was conducted and from these results the orientation program was modified to incorporate new clinical benchmarks with the corresponding theoretical knowledge and practical skills, as well as the clinical support required for each step.

Objective: The goal of this presentation is to describe the process and the strategies that we undertook to implement a program that utilized alternative strategies that were in part guided by Benner's (2010) conceptual model for the acquisition of skills and knowledge over a modified time period. Ultimately, this approach was deemed better suited to the level of preparation and clinical expertise of the recruits coming to our units.

Conclusion: The redesign of our current orientation program has provided us an opportunity to review current practices and to adapt to the needs of the changing workforce. As well, it reinforced our commitment to delivering high-quality evidence-based, patient-centred care.

A research-based orientation program informed by the standards of professional practice for acute and critical care is a step towards improved recruitment and retention of new nurses to these settings.

References

Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park: Addison-Wesley.

Benner, P., Sutphen, M., Leonard,V., & Day, L. (2010). *Educating nurses: A call for radical transformation.* Josey-Bass, Stanford, CA.

Curley, M.A. (1998). Patient-nurse synergy: Optimizing patients' outcomes. *American Journal of Critical Care, 7*, 64–72.

Dixon, F.J. (2008). The American Association of Critical Care Nurses standards for establishing and sustaining healthy work environments: Off the printed page and into practice. *Critical Care Nursing Clinics of North America, 20*, 393–401. doi: 101016/ j.ccell.2008.08.010

Durkin, J.G. (2010). Development and implementation of an independence rating scale and valuation process for nursing orientation of new graduates. *Journal of nurses in staff development, 26*, 64–72.

Horwath, K.S. (2010, June). Improving the novice nurses orientation plan: A collaborative model. *Nursing Management*, 10–14.

Lavoie-Tremblay, M., Leclerc, E., Marchionni, C., & Drevniok, U. (2010). The needs and expectations of generation Y nurses in the workplace. *Journal for Nurses in Staff Development, 26*, 2–8.

Levin et al. (2010). Evidence-based practice improvement: Merging 2 paradigms. *Journal of Nursing Care Quality, 25*, 117–126.

Morris et al. (2007). Designing a comprehensive model for critical care orientation. *Critical Care Nurse, 27*, 37–60.

Park, M., & Jones, B.C. (2010). A retention strategy for newly graduated nurses. *Journal for Nurses in Staff Development, 26*, 142–149.

Wider, L., Frizt, J.D., Albers, L., & Zahn, K. (2010). Establishing Partnerships to recruit and retain critical care nurses. *Journal for nurses in staff development, 26*, E17–23.

Culture Assessment Survey Tools: What Critical Care Nurses Need to Know

Craig Dale, RN, PhD(c), CNCC(C), Lawrence S. Bloomberg Faculty of Nursing, Toronto, ON

According to the Institute of Medicine (2001), "the biggest challenge to moving toward a safer health system is changing the culture." Nowhere does this appear more apparent than in the Institute of Medicine's report on patient safety "To err is human, building a safer health care system." Its focus on preventable morbidity and mortality led to high-level calls for increased surveillance and the nascent science of cultural survey assessment (Pronovost & Sexton, 2005). Although culture is often coined "the way things are done around here", it is also a social force impacting patient experiences and outcomes (Deal & Kennedy, 1982). Not surprisingly, hospital and unit culture has shifted into the forefront of hospital accreditation procedures in Canada and the United States. Because critical care nurses will be asked to complete a cultural assessment survey every three years, as part of hospital accreditation, it is incumbent on them to understand the strengths and weaknesses of these tools. In general, culture assessment provides an organization with a basic understanding of the perceptions and attitudes of its managers and staff. Cultural measures can be used as diagnostic tools to identify areas for improvement. In particular, surveys may identify areas that are considered more problematic than others. In contrast to the number of cultural tools available, information about their quality is currently difficult to find. Evidence on instrument reliability is lacking for many, and validity evidence is even more elusive. For many tools, there is limited evidence establishing a linkage between positive

safety culture and positive clinical outcomes or medical error reduction. However, some studies have shown linkages between staff perceptions of culture and outcomes such as central line infection prevention, nursing retention and lower-risk adjusted length of stay. Less considered to date are the material actualities of critical care nursing that survey tool domains cannot capture. Forces organizing work processes that may be detrimental to patients and staff may require other methods of inquiry.

References

Deal, T.E., & Kennedy, A.A. (1982). *Corporate cultures: The rites and rituals of corporate life*. Harmondsworth, Penguin Books.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.

Pronovost, P., & Sexton B. (2005). Assessing safety culture: Guidelines and recommendations. *Quality and Safety in Health Care,* 14231–14233.

Shortell, S.M., Rousseau, D.M., Gillies, R.R., et al. (1991). Organizational assessment in intensive care units (ICUs): Construct development, reliability, and validity of the ICU nurse-physician questionnaire. *Med Care, 29*, 709–26.

Shortell, S.M., Zimmerman, J.E., Rousseau, D.M., et al. (1994). The performance of intensive care units: Does good management make a difference? *Med Care, 32*, 508–25.

Implementing Skin Care Rounds: A Hands-On Approach to Integrating Knowledge into Practice at the Bedside

Maria Teresa Diston, RN, BScN, CACCN(C), Janice Hon, BScOT, Meghan Hoult, BSc, Chiropody, Allison Rankine, RN, ET, BScN, Sreenath Rave, BSc, Chiropody, Laura Teague, RN(EC), MN, NP, and Karen Wannamaker, RN, BSc, CACCN(C), St. Michael's Hospital, Toronto, ON

Skin has historically been an under-appreciated organ in intensive care units even though pressure ulcers are often indicative of poor overall prognosis and may contribute to premature mortality. Risk assessment tools have been developed for the general population to identify individuals who may be at risk for developing pressure ulcers. None have been validated for the critically ill population. The Braden Scale is one such tool, but its value in the intensive care setting has been questioned, as virtually all patients tend to be classified as "at risk". Our local data indicate that greater than 60% of the patients in the medical surgical intensive care unit (MSICU) at our academic health science centre fall under this risk classification. Individual subscales of this tool may be more predictive of pressure ulcer development in the ICU population.

In April and May 2010, 90 nurses (approximately 75% of the nurses employed in the MSICU) engaged in a full-day educational curriculum designed to promote evidence-based practice. In response to an alarming rise in pressure ulcers in our MSICU in 2009, a one-hour session was included focusing on risk assessment linking the Braden subscales to best practice preventive strategies and the availability of supplies and equipment for prevention.

The MSICU Skin Care Committee then developed Skin Care Rounds. The rounds were implemented to build on existing knowledge and integrate key learning into skin care at the bedside. Partners from the corporate Wound Care Team (nurses, occupational therapists and chiropodists) were engaged to share their expertise and participate in the rounds. A Skin Care Team member and the bedside RN worked together to review risk assessment, assess patients' skin, evaluate preventive strategies in place and need for additional interventions.

In addition, a tool for data collection was developed based on the Braden subscales. Through this process, gaps could be identified in order to inform the need for future wound care quality improvement initiatives recognizing that not all pressure ulcers are avoidable and appreciating that engagement in best practice minimizes pressure ulcer development.

References

Carlson, E.V., Kemp, M.G., & Shott, S. (1999). Predicting the risk of pressure ulcers in critically ill patients. *American Journal of Critical Care, 8*, 262–269.

Jiricka, M.K., Ryan, P., Carvalho, M.A., & Bukvich, J. (1995). Pressure ulcer risk factors in an ICU population. American Journal of Critical Care,. 4, 361–367.

Keller, B.P.J.A., Wille, J., van Ramshorst, B., & van der Werken, C. (2002). Pressure ulcers in intensive care patients: A review of risks and prevention. *Intensive Care Med., 28*, 1379–1388.

McCall, M. et al. (2003). Adequate enteral feeding can be achieved in the Intensive Care Unit. *Critical Care Medicine, 30*, (12, Suppl.).

National Pressure Ulcer Advisory Panel. (2007). *Staging of Pressure Ulcers*. Washington, DC: Author.

Reddy, M., Gill, S.S., & Rochon, P.A. (2006). Preventing pressure ulcers: A systematic review. *JAMA, 296*, 974–984.

Registered Nurses Association of Ontario. (2005). *RNAO Best Practice Guideline: Risk Assessment and Prevention of Pressure Ulcers*. Toronto, ON: Author.

Symptom Congruence among Patients with Acute Myocardial Infarction: Contribution of Symptom Experiences and Demographic Characteristics

Susan Fox-Wasylyshyn, RN, PhD, Faculty of Nursing, University of Windsor, Windsor, ON

Symptom congruence, or the extent of match between one's AMI symptom experience and preconceived ideas about the nature of heart attack symptoms, can influence when AMI victims seek medical care (references 1–5). Lengthy delays impede timely receipt of medical interventions and result in greater morbidity and mortality. However, little is known about the factors that contribute to symptom congruence. Hence, the purpose of this study was to examine how specific AMI symptoms and demographic characteristics are associated with symptom congruence. Secondary data analyses were performed on data from 135 AMI patients. Using hierarchical multiple regression analyses, chest pain and other symptom variables (type and location) were included in step one, while symptom severity and demographic factors were included in step two. Chest pain,

ABSTRACTS

the only significant variable in step one, became non-significant in step two. Severe discomfort ($\hat{I}^2 = .29$, $p < .001$), history of AMI ($\hat{I}^2 = .21$, $p < .01$), and male gender ($\hat{I}^2 = .17$, $p < .05$) were the only significant predictors of symptom congruence in the final model. In a second analysis, quality descriptors of discomfort were included in step one of the analysis. The significant variables in step one (heaviness and cutting) again became non-significant in the final model, which included only severe discomfort ($\hat{I}^2 = .23$, $p < .01$) and history of AMI ($\hat{I}^2 = .17$, $p < .05$) as significant predictors of symptom congruence. The findings suggest that, although descriptors of discomfort (i.e., chest pain, heaviness and cutting) were important components of symptom congruence, symptom severity and a positive history of AMI negated their influence. Implications pertaining to the findings are discussed.

References

Fox-Wasylyshyn, S., El-Masri, M., Artinian, N.T. (2010). Testing a model of delayed care-seeking for acute myocardial infarction. *Clin Nurs Res, 19*(1), 38–54.

Horne, R., James, D., Petrie, K., Weinman, J., & Vincent, R. (2000). Patients' interpretation of symptoms as a cause of delay in reaching hospital during acute myocardial infarction. *Heart, 83*(4), 388–393.

King, K.B., & McGuire, M. (2007). Symptom presentation and time to seek care in women and men with acute myocardial infarction. *Heart Lung, 36*(4), 235–243.

Perry, K., Petrie, K.J., Ellis, C.J., Horne, R., & Moss-Morris, R. (2001). Symptom expectations and delay in acute myocardial infarction patients. *Heart, 86*(1), 91–93.

Zerwic, J.J. (1998). Symptoms of acute myocardial infarction: Expectations of a community sample. *Heart Lung, 27*(2), 75–81.

Appropriate Sedation in Critically Ill Patients

Stephanie Gillis, RN, BScN, Cindy Cashman, RN, BScN, and Theresa Hagerman, RN, Queensway Carleton Hospital, Ottawa, ON

The adequate management of sedation and analgesia in a critically ill, mechanically ventilated patient is a topic of significant interest in the critical care environment. Effective sedation and analgesic management is imperative to improve patient outcomes and is best controlled using a patient-specific approach encompassing the multidisciplinary health care team.

Over-sedation and prolonged sedative use negatively affect patient outcome, delay return of functional status, and lengthen amount of time spent in ICU, whereas under-sedation of a critically ill patient may result in anxiety, increased agitation, and may place the patient at risk for injury.

Adequate sedation and analgesic levels in a patient must be met with the use of validated tools such as a sedation-agitation scale, pain scale, and bispectral index monitoring. In addition, continuous monitoring of oxygenation and ventilation, heart rate, and blood pressure are necessary to assess patient response.

Patient-focused sedation and analgesia is essential, as patients possess unique comorbidities and chronic health issues; tailoring sedative needs to individually meet the requirements of each patient is crucial. The evaluation of organ function, patient age, drug metabolism, side effects, and laboratory results, therefore, must also be closely monitored.

There are several ways to sedate critically ill patients—uninterrupted or continuous sedative-analgesic infusions, intermittent infusions, and daily interruptions of continuous infusions (sedation vacations) are just a few. The latter two are the preferred methods. Prior to using pharmacological methods to help with agitation, however, the health care team should evaluate what is causing the agitation. Subsequently, the stressor should be controlled using non-pharmacological interventions if possible. When treatment of the cause of distress with non-pharmacological interventions is not sufficient, then sedative agents must be added. It is imperative that the multidisciplinary team be involved in this process in a holistic manner.

Complications of prolonged and/or over-sedation of critically ill patients can be prevented. Educating staff on how to determine and assess if a patient needs sedation or analgesia, how to select the appropriate medication for the individual and situation, maintaining infusions, and assessing those infusions to determine whether the patient is being adequately managed are essential. Incorporating scoring systems such as sedation and pain scales into daily practice and tapering and withdrawing sedation according to patient response is crucial. Furthermore, it is necessary to acknowledge the complexity and uniqueness of each individual and remember that each patient's response will be different.

References

Aitken, L., Marshall, A., Elliott, R., & McKinley, S. (2008). Critical care nurses' decision making: Sedation assessment and management in intensive care. *Journal of Clinical Nursing, 18,* 36–45. doi:10.1111/j.1365-2702.2008.02318x

Bateman, S., & Grap, M. (2003). Sedation and analgesia in the mechanically ventilated patient. *American Journal of Nursing, 103* [Online version].

Foster, J. (2005). Complications of sedation and critical illness. *Critical Care Nursing Clinics of North America, 17*, 287–296. doi:10.1016/j.ccell.2005.04.012

O'Connor, M., Bucknall, T., & Manias, E. (2008). A critical review of daily sedation interruption in the intensive care unit. *Journal of Clinical Nursing, 18*, 1239–1249. doi: 10.1111/j.1365-2702.2008.02513.x

Schweickert, W., Gehlbach, B., Pohlman, A., Hall, J., & Kress, J. (2004). Daily interruption of sedative infustions and complications of critical illness in mechanically ventilated patients. *Critical Care Medicine, 32*(6), 1272–1276. doi: 10.1097/01.CCM.0000127263.54807.79

Skrobik, Y., Ahern, S., Leblanc, M., Marquis, F., Awissi, D., & Kavanagh, B. (2010). Protocolized intensive care unit management of analgesia, sedation, and delirium improves analgesia and

subsyndromal delirium rates. *International Anesthesia Research Society*, 451–463. doi: 10.1213/ANE.06013e31Sld7e1b8
Tietze, K., & Fuchs, B. (2010). *Sedative-analgesic medications in critically ill patients: selection, initiation, maintenance, and withdrawal.* Retrieved from www.uptodate.com

Historical Development of Intensive Care Nursing 1960–1985

Deborah Hamilton, RN, BN, MTS, MSN,
Vancouver General Hospital, Vancouver, BC

When the adult critical care unit (ICU) was established at a large teaching hospital in a downtown hospital in 1968, nurses realized their undergraduate education and training did not adequately prepare them to care for critically ill patients. Nurses who cared for patients in the new ICU depended upon their previous experiences to guide their practice, and physicians taught nurses advanced pathophysiology at the bedside on a need-to-know basis. As patient diseases became more complex and new technologies were used in patient care, nurses sought out ways to deepen their knowledge of patient care. They created critical care nursing theory from the ground up, eventually moving critical care nursing education from the bedside into the classroom. The process was not without its tensions.

In this paper, I analyze the social, political and economic forces that influenced the development of specialty nursing education and standards for practice.

Oral history accounts from nurses involved in the establishment of intensive care units and nurse educators form the primary source material, augmented with archival records and other primary and secondary sources. These stories reveal how nurses incorporated the changes in nursing education to patient care. The central categories for analysis include the value of experience in practice, the transfer of nurses' education into the hands of nurses, the effect of the expansion of new medical technologies upon nurses' work, and a critical shortage of trained or experienced critical care nurses, all of which became the catalysts for creating intensive care nursing, and the standards of practice for intensive care nursing today.

References

Agnew, H.G., Peckham, A.H. Jr., & McQueen, R.J.C. (1966). *Present and long range program of development for the Vancouver General Hospital Vancouver, British Columbia*. Vancouver: Agnew, Peckham and Associates Ltd.
Fairman, J., & Lynaugh, J.E. (1998). *Critical care nursing. A history*. Philadelphia: University of Pennsylvania Press.
Gagan, D., & Gagan, R. (2002). *For patients of moderate means. A social history of the Voluntary Public General Hospital in Canada, 1890–1950*. Kingston: McGill-Queen's University Press.
Hamilton, D. (2006, March 8). *An historical analysis of the Canadian Critical Care Nursing Journal 1985–1992*. Unpublished paper, University of British Columbia School of Nursing.
Myers, A. (1966, March 1). General Hospital 20 Years Behind. *The Vancouver Sun, 12*, 13, CVA 561-E-4-File 7.
Myers, A. (1966). No Hospital Can Provide the Best of Everything. *The Vancouver Sun, 13*, CVA 561-E-4-7.
Sandelowski, M. (1997). Making the best of things: technology in American nursing, 1870–1940. *Nursing History Review, 3*, 3–22.
Toman, C. (2001). Blood Work. Canadian Nursing and Blood Transfusion, 1942–1990. *Nursing History Review, 9*, 57–8.
Vancouver General Hospital. Intensive Care Committee Meeting Minutes. (1975, June 26). *SSF 38-6, Professional and Academic Experience, Section of Neonatology, Nursing Staff, 1969-1979.* Intensive Care Committee Meeting Minutes.
Zalumas, J. (1995). *Caring in crisis. An oral history of critical care nursing*. Philadelphia: University of Pennsylvania Press.

Maintaining Competency in Critical Care Nursing

Heather Harrington, RN, BScN, CNCC(C), Barbara Duncan, RN, Grace Walter, RN, BScN, CNCC(C), and Melissa Adamson, RN, BScN, Sunnybrook Health Sciences Centre, Toronto, ON

Background: Critical care nursing requires a high level of qualifications and competencies (Riitta-Liisa et al., 2008). Competency has been defined as a level of performance demonstrating an effective application of knowledge, skill and judgment (Riitta-Liisa et al., 2008). As research generates new therapies and technologies, ongoing education to maintain competency in critical care nursing is becoming more challenging.

As a large academic, tertiary/quaternary care facility and a major trauma centre we have five critical care units comprising 62 adult critical care beds. Several clinical nurse educators and advanced practice nurses comprise the critical care central nursing education team. We are responsible for managing the learning needs of our individual units, as well as maintaining advanced nursing competencies. As a group, the educators and advanced practice nurses have developed a series of educational days that provide roughly 130 nurses annually with the opportunity to maintain clinical and professional competence.

The Advanced Nursing Competency (ANC) renewal day takes place in a large auditorium with several stations, each offering learning experience in an advanced nursing skill. In order to provide optimal interaction and hands-on learning opportunities, the nurses rotate through each station in small groups. Some of the stations are designed so the educators can provide learning opportunities in unit specific skills. The educators are committed to providing interesting and fun opportunities to learn by offering a mix of didactic and interactive teaching modalities. Stations may consist of hands-on learning on machinery used in the Critical Care setting, such as CRRT & IABP; other stations may use interactive games or case-scenarios which provide staff with the opportunity to hone their critical thinking skills in a safe learning environment.

The institution is committed to nursing education and has supported this initiative. This annual event is now a mandatory part of ongoing critical care education and each nurse is paid for the 7.5-hour day. We begin planning the next year's event almost as soon as the current event is finished. Evaluation from attendees assists us in directing the activities for the subsequent sessions.

ABSTRACTS

References

Canadian Nurses Association. (2007). *CNA: Framework for the practice of registered nurses in Canada.* Retrieved from http://www.cna-aiic.ca/CNA/documents/pdf/publications/RN_Framework_Practice_2007_e.pdf

College of Nurses of Ontario (2009). *CNO: Practice guideline; supporting learners.* Retrieved from http://www.cno.org/en/search/?q=competency+guidelines&p=1

Riitta-Liisa, A., Suominen, T., & Leino-Kilpi, H. (2008). Competence in intensive and critical care nursing: A literature review. *Intensive and Critical Care Nursing, 24*, 78–89.

Heparin-Induced Thrombocytopenia: Immune Mediated versus Non-Immune Mediated in Post-op Cardiac Surgery Patients—A Case Study

Jagdeep (Nicki) Johal, RN, NP, MSc, Zdravko Zjalic, RN, NP, MN, Karen Then, RN, ACNP, PhD, Nancy Gwadry, RN, ACNP, MN, Leslie Poirier, RN, ACNP, MN, and Frances Krawiec, RN, ACNP, MHSC, Alberta Health Services, Calgary, AB

Heparin-induced thrombocytopenia (HIT) is an uncommon and serious complication of heparin therapy that can result in fatal outcomes (Baker & Flattery, 2006; Cooney, 2006). In the post-operative cardiac surgery population HIT is a common complication due to the high doses of heparin that patients receive intra-operatively (Levy & Winkler, 2010). Unfortunately, the diagnosis of HIT in cardiac surgery patients is challenging due to the variation and fluctuation of platelet counts compared to a typical presentation of HIT. A major drop in platelet count of 40% to 50% routinely occurs in the first 72 hours following cardiac surgery. Furthermore, 25% to 70% of patients develop heparin antibodies detectable by immunoassays, but only a small proportion of those patients develop clinically evident HIT (Selleng et al., 2009). HIT can be further divided into immune mediated and non-immune mediated. This is important in the post-operative cardiac surgery population since the pattern of presentation varies (Cooney, 2006). The clinical significance is key; one is benign and one can be fatal. Nurses can assist with the diagnosis and management of these patients. Clinical exam is of extreme importance in monitoring for signs and symptoms of HIT. This presentation/poster presents two cases, one of immune-mediated HIT and the other of non-immune-mediated HIT. Both patients were post-operative cardiac surgery patients and had very different post-operative courses. We will discuss clinical presentation, lab values, diagnosis, testing and treatment.

References

Baker, K., & Flattery, M. (2006, Winter). Heparin-induced thrombocytopenia and cardiovascular patients: Recognition and treatment. *Progress in Cardiovascular Nursing*, 47–50.

Cooney, M. (2006). Heparin-induced thrombocytopenia: Advances in diagnosis and treatment. *Critical Care Nurse, 26*(6), 30–36.

Levy, J., & Winkler, A. (2010). Heparin-induced thrombocytopenia and cardiac surgery. *Current Opinion in Anaesthesiology, 23*, 74–79.

Selleng, S., Malowsky, B., Strobel, U., Wessel, A., Itterman, T., Wollert, H., Warketins, T., & Greinacher, A. (2009). Early onset and persisting thrombocytopenia in post-cardiac surgery patients is rarely due to heparin-induced thrombocytopenia, even when antibody tests are positive. *International Society on Thrombosis and Haemostasis, 8*, 30–36.

Patient Confidentiality and a Password System

Mary Kroh, RN, BScN, London Health Sciences Centre, London, ON

Patient confidentiality and a need for increased awareness by nursing staff to protect the sharing of medical information in response to requests by visitors or by telephone is challenging. In the intensive care unit (ICU) many patients cannot communicate with their family members due to the critical nature of their illness and the nurse is then called upon to share the patient's private medical details.

In our unit, we proposed a password system to control access to patient information. It is a simple method to improve not only the safety of the health care provider in sharing confidential information, but also to increase the trust between caregivers and family. It demonstrates to family members that every effort to protect the privacy of their loved one is considered while meeting their need for information.

A description of the collaborative process used to develop and implement our password system will be outlined. Evaluation through the use of surveys from family and nursing staff will be included.

References

Lewis, K.,, & Olah, C. (2009). Ring! Ring!: Safeguarding patient information with password protection for phone calls. *The American Journal of Nursing, 109*(11 Suppl.), 33–34. AN/PMID: 19826333: 00000446-200911001-00010

Experiences and Practical Lessons Learned from Conducting a Canadian Survey of Critical Care Nurses

Elena K. Luk, RN, BScN, PhD Student, Louise Rose, RN, BN, MN, PhD, and Craig Dale, RN, PhD(C), CNCC(C), Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, ON

Survey research provides information regarding clinician opinions and perspectives, adherence to evidence-based recommendations, and practice variation. Yet, the conduct of large surveys can present numerous challenges. Practical chal-

lenges such as establishing a sampling strategy consistent with a population's distribution may be anticipated and addressed. However, unanticipated challenges may emerge during survey implementation that require immediate attention and action.

Our objective is to inform nurse clinicians and researchers of our experiences in the conduct of a large, national survey of critical care nurses across Canada. Specifically, we describe administrative, financial, and logistical considerations and challenges.

Administrative challenges included obtaining approval from and continuous correspondence with each provincial and territorial nurse registering body to facilitate survey distribution. Coding to identify nurses working in adult intensive care units differed in each province, as did the regulations and time required to release contact details for research purposes. This meant survey distribution methods and schedules differed and additional costs were incurred due to the inability to track responses in those provinces/territories that did not release contact details directly to the research team. Financial considerations included budgeting for large mailing costs associated with the delivery of multiple rounds of survey and follow-up reminders to maximize response rates, as well as other costs associated with nurse registering body fees, printing, shipping, and clerical work. Logistical challenges included maintaining the survey package under the weight of a standard letter to limit costs, and efficiently coordinating the matching and stuffing of numbered surveys to numbered and/or pre-addressed envelopes. Other logistical challenges included survey tracking to regulate survey delivery and response, and translation of all survey materials and returned comments for bilingual provinces.

Conduct of this large, national survey required considerable financial resources, as well as time, energy, and coordination. We anticipate a greater understanding of the work and cost associated with planning and implementing such surveys may cause critical care nurses to consider responding to future practice surveys.

References

Dillman, D.A. (2000). *Mail and internet surveys: The tailored design method*. New York: John Wiley and Sons.

Management of patient agitation with dexmedetomidine in the ICU

Rachelle Mccready, RN, BScN, CNCC(C), University Hospital, London Health Sciences Centre, London, ON

The causes of agitation and anxiety in the ICU setting are well documented. Outcomes such as length of stay are significantly influenced by the management of anxiety and agitation. Nurses provide comfort with both non-pharmacological methods and medications. Critical care nurses must be expert "balancers", providing comfort while being cognizant of the adverse effects the medications may produce. Many medications are available to prevent and treat agitation and anxiety but there is no perfect sedative and analgesic regime. The perfect sedative would allow the patient to be easily arousable, cooperative, sustain spontaneous ventilation and protect their airway with minimal adverse effects. Traditional medications such as benzodiazepines, propofol, opioids and antipsychotics may not be effective in some patients and have many adverse effects.

Dexmedetomidine is an alpha 2 adrenoreceptor agonist which produces sedation, anxiolysis and analgesia. It has a rapid onset with no respiratory depression. The patient will be sedated but is easily arousable. It is often compared to clonidine.

This poster presentation will describe:
a) common treatments of agitation and anxiety
b) pharmacology of dexmedetomidine
c) administration and side effects of dexmedetomidine.

A case study will demonstrate the use of dexmedetomidine with an agitated, delirious critical care patient at our centre.

References

Abramov, D., Nogid, B., & Nogid, A. (2005).The role of dexmedetomidine in the sedation of critically ill patients. *Pharmacy and Therapeutics, 30*(3), 158–161.

Arend, E., & Christensen, M. (2009). Delirium in the intensive care unit: A review. *Nursing in Critical Care, 14*(3), 145–157.

Barber, J. (2003). Pharmacologic management of integrative brain failure. *Critical Care Nursing Quarterly, 26*(3), 192–207.

Boyer, J. (2009). Treating agitation with dexmedetomidine in the ICU. *Dimensions of Critical Care Nursing, 28*(3), 102–109.

Boyer, J. (2010). Patient agitation and dexmedetomidine. *The Nurse Practitioner, 35*(10), 7–11.

Bruno, J.J., & Warren, M.L. (2010). Intensive care unit delirium. *Critical Care Nursing Clinics of North America, 22*(2), 161–178.

Cohen, I., Gallager, T., James, Pohlman, A., et al. (2002). Management of the agitated intensive care unit patient. *Critical Care Medicine, 30*(1, Suppl.), S97–S123.

Guinter, J., & Kristeller, J. (2010). Prolonged infusions of dexmedetomidine in critically ill patients. *American Journal of Health-Systems Pharmacy, 67*, 1246–1253.

Haselman, M. (2008). Dexmedetomidine: A useful adjunct to consider in some high-risk situations. *AANA Journal, 76*(5), 335–339.

Idemoto, B. (2006). Assessment of intensive care unit (ICU) delirium and depression. *American Journal of Critical Care, 15*(3), 326.

Joint Task Force of The American College of Critical Care Medicine, Society of Critical Care Medicine and the American Society of Health Service Pharmacists. (2003). Providing sedation in the ICU: Goal directed guidelines. *The Journal of Critical Illness, 18*(3), 123–129.

Luetz, A., Heymann A., Radtke, F.M., et al. (2010). Different assessment tools for intensive care unit delirium: Which score to use. *Critical Care Medicine, 38*(2), 409–418.

Riker, R., Shehabi, Y., Bokesch, P., et al. (2009). Dexmedetomidine vs midazolam for sedation of critically ill patients: A randomized trial. *JAMA, 301*(5), 489–499.

Rogers, E.M. (2004). Brain drain: ICU delirium as integrative brain failure. *Dynamics, 15*(2), 29–30.

Short, J. (2009). Use of dexmedetomidine for primary sedation in a general intensive care unit. *Critical Care Nurse, 30*(1), 29–37.

Szumita, P., Baroletti, S., Anger, K., & Wechsler, M. (2007). Sedation and analgesia in the intensive care unit: Evaluating the role of dexmedetomidine. *American Journal of Health System pharm, 64*(1), 37–44.

Van Eijk, M.M., & Slooter, A.J. (2010). Duration of ICU delirium, severity of the underlying disease and mortality. *American Journal of Respiratory and Critical Care Medicine, 181*(4), 419–420.

ABSTRACTS

Dynamics 2011

Critical Care: Our Kaleidoscope

A Checklist for Dynamic, Real-Time Change Management

Mary Mustard, RN(EC), MN, CCN(C), CNCC(C), Ellen Lewis, RN, and Richard Bowry, MB, BS, FRCA, FRCPC, St. Michael's Hospital, Toronto, ON

Although health care practice strives to improve patient outcome, errors occur at a staggering rate. According to the Institute of Medicine (Kohn et. al., 1999), medical errors result in as many as 98,000 preventable deaths per year in the United States. The critical care environment is especially vulnerable given the complexity and high acuity of the patient: fast-paced decisions and actions are mandatory. Rothschild et al. (2005) reported an average of 149.7 serious errors/1,000 patient days and 36.2 preventable adverse effects/1,000 patient days in an ICU at a university-affiliated hospital. Errors of omission are associated with failure to implement "routine" ICU evidence-based practices (Ilan et al., 2007). To address these safety concerns, many hospitals have developed tools to reduce errors and promote evidence-based care.

Standardization of "routine" critical care activities in the CVICU first occurred during the 1990s through the development of preprinted order sets and protocols. In 2004, following a visit by Dr. Jean-Louis Vincent, nurses spurred the rapid adoption of his mnemonic "FAST HUG" (Vincent, 2005), as a nursing-driven quality assurance protocol. Routine audits of all critical care areas were performed in the summer of 2004. Since then, staff has been educated in each of the components of the mnemonic and a "FAST HUG" has been implemented as a part of the daily, multidisciplinary rounds.

With the introduction of "safety bundles" to reduce the incidence of central line-associated infections, ventilator-associated pneumonia, and surgical site infections, it became evident that many components of the "bundles" did not fall into the FAST HUG review. An online daily checklist was developed to facilitate data collection during rounds and allow daily, weekly, monthly or quarterly analysis. Discussions at the bedside helped improve compliance with best-practice guidelines.

The use of a website format with server-based data storage allows iterative change and the ability to adapt to practice changes. Over time, this tool has evolved from a quality implementation checklist to a daily knowledge translation tool to assist the rapid implementation of practice change.

References

Byrnes, M., Schuerer, D., Schallom, M., Sona, C., Mazuski, J., Taylor, B, et. al. (2009). Implementation of a mandatory checklist of protocols and objectives improves compliance with a wide range of evidence-based intensive care unit practices. *Critical Care Medicine, 37*(10), 2775–2781.

Despins, L. (2009). Patient safety and collaboration of the intensive care unit team. *Critical Care Nurse, 29*(2), 85–91.

Ilan, R., Fowler, R., Geerts, R., Pinto, R., Sibbald, W., & Martin, C. (2007). Knowledge translation in critical care: Factors associated with prescription of commonly recommended best practices for citically ill patients. *Critical Care Medicine, 35*(7), 1696–1702.

Kohn, L., Corrigan, J., & Donaldson, M. (1999). *To err is human: Building a safer health system. Institute of Medicine.* Washington, DC: National Academy Press.

Rothschild, J., Landrigan, C., Cronin, J., Kaushal, R., Lockley, S., Burdick, E., et. al. (2005). The critical care safety study: The incidence and nature of adverse events and serious medical errors in intensive care. *Critical Care Medicine, 33*(8), 1694–1700.

Simpson, S., Peterson, D., & O'Brien-Ladner, A. (2007). Development and implementation of an ICU quality improvement checklist. *AACN Advanced Critical Care, 18*(2), 183–189.

Vincent, J-L. (2005). Give your patient a fast hug (at least) once a day. *Critical Care Medicine, 33*(6), 1225–1229.

Challenges of Nursing Morbidly Obese Patients in Critical Care—A Growing Problem

Art Lopez, RN, BScN, and Linda Nusdorfer, RN, BScN, MN, CNCC(C), Sunnybrook Health Science Centre, Toronto, ON

Obesity is recognized as a chronic disease at epidemic proportion (Lau, Douketis, Morrison, Haramiak, Sharma,et al. 2007; Peavy, 2009). In 2005, World Health Organization projections indicated that globally there were approximately 1.6 billion adults (age 15+) overweight and at least 400 million adults were obese (Lau et al., 2007; Peavy, 2009; Starky, 2005). At least 20 million children under the age of five years are overweight globally (Peavy, 2009). In 2004, approximately 6.8 million Canadian adults ages 20 to 64 were overweight, and an additional 4.5 million were obese (Lau et al, 2007; Starky, 2005). Obesity is the second leading cause of preventable death, exceeded only by cigarette smoking. Obesity has been established as a major risk factor for diabetes, hypertension, cardiovascular disease and some cancers in both men and women (Lau et al, 2007). Other co-morbid conditions include sleep apnea, osteoarthritis, infertility, idiopathic intracranial hypertension, lower extremity venous stasis disease, gastro-esophageal reflux and urinary stress incontinence. This presentation will address the complex care needs of the morbidly obese.

The complex list of co-morbid conditions experienced with morbidly obese patients increases the likelihood of an admission into a critical care setting. Understanding the multifaceted interplay between respiratory stabilization, compromised cardiac function, increased circumferential adipose tissue, fatty liver, predisposed risk of infections, skin integrity, vascular issues, and nutritional needs confound the overall management of this patient population (Winkelman, Maloney, & Kloos, 2009).

Not only are the physical ailments a challenge to critical care nurses, but intricate life-long psychological issues. Depression and anxiety are among some of the mental health issues experienced by the morbidly obese. This is also compounded by societies weight bias. False perceptions within our society and health care system that limits resources to adequately care for this population. Patients with excess weight need specialized knowledge and technologies if we endeavour to create safe environments for patients and nurses (Winkelman et al., 2009).

Nurses caring for patients with morbid obesity must learn of the complex chronic health issues that confronts one out of five Canadians. Challenges in caring for this patient population necessitate we have the access resources, such as equipment, diagnostic devises, medication dosing to name a few. With increase interest in bariatric surgery, critical care nurses need to be informed of the unique challenges to morbidly obese patients present. This presentation will address these issues.

References

Davidson, J.E., Kruse, M.W., Cox, D.H.,& Duncan, R. (2003). Critical Care of the morbidly obese. *Critical Care Nursing, 26*(2), 105–116.

Lau, D.C.W., Douketis, J.D., Morrison, K.M., Hramiak, I.M., Sharma, A.M., & Ur, E. (2007). 2006 Canadian clinical practice guidelines on the management and prevention of obesity in adults and children. *Canadian Medical Association Journal, 170*(8). doi: 10.1503/cmaj.061409

Luo, W., Morrison, H., de Groh, M., Walters, C., DesMeules, M., Jones-McLean, E. … Mao, Y. (2007). The burden of adult obesity in Canada. *Chronic Diseases in Canada, 27*(4),135–144.

Peavy, W.C. (2009). Cardiovascular effects of obesity: implications for critical care. *Critical Care Nurse Clinical North America, 21,* 293–300. doi:10.1016/j.ccell.2009.07.005

Starky, S. (2005). *The obesity epidemic in Canada.* Parliamentary Library and Research Services. Parliament of Canada. Retrieved from http://www.parl.gc.ca/Content/LOP/researchpublications/prb0511-e.htm

Trimble, T. (2008). Outsize patients—A big nursing challenge. *Emergency Nursing World Online* Retrieved from http://ENW.org/Obese.htm

Winkelman, C., Maloney, B., & Kloos, J. (2009). The impact of obesity of critical care resource use and outcomes. Critical Care Nurse Clinical North America, 21, 403-422. doi:10.1016/j.ccell.2009.07.002

World Health Organization, Obesity Unit. (2009). *Obesity.* Retrieved from: http://www.diabetes-obesity.org/content/obesity

Enhancing Family-Centred Care in Intensive Care: The Family Clinical Nurse Specialist

Lara Parker, RN, MSN, British Columbia Institute of Technology and Vancouver General Hospital, Vancouver, BC

Families and family-centred care have been an integral component in intensive care since watershed research acclaimed five family needs: information, assurance, proximity, hope, and support (Molter, 1979). Unfortunately, family needs are not being satisfied and while family-centred care is the ideal model, it is not delivered effectively, consistently, and it lacks clearly defined standards.

Family-centred care is a philosophical approach that encompasses the patient and patient's family as the unit of care. Family-centred care is necessary because: it broadens the traditional definition of family, impacting elements such as who can visit and receive information; it endeavours to stabilize the balance of power between the health care team and family; it recognizes cultural diversity, intricacies, and complexities of families; it promotes positive relationships; it recognizes families are in crisis and need adaptive strategies; and it acknowledges the value of having family present.

In today's complex and rapidly changing health care system, there are many components that affect the delivery of family-centred care, to list a few: time allowance; level of staff's family theory knowledge; level of experience and comfort; institute policy; and interdisciplinary team commitment. Recognizing and validating a commitment to family-centred care's best practice would be to designate a Family Clinical Nurse Specialist. A FCNS would demonstrate leadership in family care by providing, promoting, and educating others about family-centred care in coordination and collaboration with the interdisciplinary team.

In this presentation, the FCNS would be presented as a strategy to enhancing family-centred care. Discussions on the many multiple benefits this role can have, for example, enhanced family communication and therapeutic relationship; knowing patients' wishes about end-of-life decisions earlier in course of stay; and family crisis management, to list a few, will be presented. I hope that with this presentation an increased awareness to family-centred care and a FCNS will encourage further research and a national understanding about our current practices. Limitations are recognized that not all intensive care's can provide a FCNS, but the overriding principles can be utilized.

Questions to promote dialogue and future research:

1. Within your intensive care unit, what strategies are in place to promote family-centred care and what barriers exist to prevent it?
2. A FCNS is a designated role to improve FCC. Do you have a comparable role in your intensive care unit? Who currently helps families manage crisis?

References

Molter, N.C. (1979). Needs of relatives of critically ill patients: A descriptive study. *Heart & Lung, 8*(2), 332–339.

Transitioning Staff through Change Utilizing a Shared Governance Approach

Lisa Rodger, RN, BScN, CNCC(C), Jennifer Wright, RN, CNCC(C), Maharani (Rani) Thakoordeen, RN, MAed, CNCC(C), and Carolyn Roche, RN, CNCC(C), William Osler Health System, Brampton, ON

Critical care environments are in a constant state of change. Growing communities support the need for health care facilities that provide quality care. Health care organizational restructuring coupled with new treatments, therapies, and advancing technology promote ever-changing work processes that, like the patterns of light within a kaleidoscope, redefine, and reshape the work design of a critical care unit. Transitioning staff through these and other large change processes requires professional leadership that promotes and enhances shared governance and participative decision-making.

Shared governance and participative decision-making empowers frontline clinical staff to make decisions based on best evidence regarding their daily professional practice. The forma-

ABSTRACTS

tion of a Unit Based Practice Council (UBC) creates a formal structure that embodies ownership, partnership, and accountability through direct stakeholder involvement. Stakeholder involvement is necessary to the success of any project and the sustainability of the project changes.

Reintroducing a UBC after the opening of a large new health care facility and the growth of a small eight-bed, level-three intensive care unit (ICU) and six-bed, level-two intermediate care unit (IMU) to that of a 24-bed, level-three ICU has been highly beneficial to providing support to the professional staff and the changing needs of the program and organization.

Frontline professionals from all supportive disciplines of care in the ICU voluntarily participate on the council and in the quality projects that are discussed, planned and designed, implemented, and evaluated. Quality projects must have a focus on one of the following four topics: patient/family satisfaction, practice improvement, creating a healthy work environment, and/or teambuilding. The projects are to build upon the supportive structure, processes, and outcomes for critical care based on available best practice evidence or professional/clinical guidelines. Also, the UBC provides a communication network between all ICU team members that enhances collaboration and a sharing of formal and informal information in a cross directional flow. This process is indicative of a shared governance model and participative decision making.

Quality-based projects such as a unit-based healthy workplace charter or structured visitation guidelines based on family/patient-centred care provide clear expectations to all stakeholders. Setting clear expectations are required in the development of a highly functioning team. Highly functioning teams can accomplish what no individual could ever dream of doing alone.

So, although the light changes within the path of the kaleidoscope, the team controls the vision and focus of the outcomes.

References

Lencioni, P. (2002). *The five dysfunctions of a team: A leadership fable*. Jossey-Bass, San Francisco, United States.

Pinkerton, S. (2008). The unit practice council: Center of professional practice. *Nursing Economics, 26*(6), 1–3.

Prince, S.B. (1997). Shared governance: Sharing power and opportunity. *The Journal of Nursing Administration, 27*(3), 28–35.

Robbins, S.R., Coulter, M., & Langton, N. (2009). *Management*. Toronto, ON: Pearson Canada Inc.

Seguin, D. (2003). Professional nursing councils empower staff nurse to solve clinical problems and increases RN retention. *Journal of Emergency Nursing, 29*(1), 78–79

Conversations about Challenging Cases: Ethics Debriefing in the Medical Surgical Intensive Care Unit

Cecilia Santiago, RN, MN, CNCC(C), Steve Abdool, RN, BA, MA, PhD(C), Christine Lee, MSW, RSW, Liz Butorac, RN, MN, CNN(C), Rose Piacentino, BSW, RSW, Dorinda Sinnott, MSW, RSW, and Jamie Villeneuve, BA, MTS, St. Michael's Hospital, Toronto, ON

Clinicians frequently encounter and grapple with extensive ethical issues and perplexing moral dilemmas in critical care settings. Further, intensive care unit (ICU) clinicians often experience moral distress in situations in which the ethically right course of action is intuitively known, but cannot be acted upon. For example, a common disconcerting issue occurs when ICU clinicians and substitute decision-makers disagree on the benefit and value of the continuation of aggressive medical interventions. Feeling that they are incapable of advocating for their most vulnerable patients, practically all clinicians experience tremendous anguish and torment, which leads to compassion fatigue, moral distress and burnout. Still, current literature shows that moral distress and moral residue is most predominant among critical care nurses. It is, therefore, essential that all ICU clinicians (and nurses, in particular) need an ongoing opportunity to safely work through these pressing ethical dilemmas and conflicts. When ethical dilemmas occur, best practice guidelines recommend that ICU team members should have the opportunity to decompress and confront their feelings. ICU clinicians ought to have a safe "space" where they can safely express, validate and process their experiences and emotions. The MSICU provides timely debriefing sessions by trained team members after critical incidents as well as regularly scheduled monthly meetings. While inter-professional ethics round tables are scheduled regularly and considered beneficial by ICU clinicians, particularly nurses, attendance in these opportunities to decompress is not optimized. Debriefs after critical incidents are well attended, but attendance is much more varied at the regular monthly sessions. This poster describes the MSICU experience on this monthly ethics initiative and explores the next steps to enhance its utilization through maximizing greater attendance and value to MSICU clinicians. To optimize attendance of staff, a small focus group of critical clinicians (n = 8) was conducted asking about their perceptions of the debriefing sessions and their suggestions on how to promote its uptake. Process changes were implemented based on the group's suggestions. The process changes resulted in increased awareness of its benefits, increased frequency of sessions and demonstrated utility. We plan to conduct a survey to systematically evaluate team members' attitude and perception of ethics debrief sessions, and to assess the feasibility of establishing a systematic mechanism to inform the team about the outcomes of ethics round table discussions.

References

Canadian Nurses Association. (2003*). Ethical distress in health care environments. Ethics in Practice for Registered Nurses*. Ottawa, ON: Author.

Davidson, J. E., Powers, K., Hedayat, K.H., et al. (2007). Clinical practice guidelines for support of the family in the patient-centred intensive care unit: American College of Critical Care Medicine Task Force 2004–2005. *Critical Care Medicine, 35*(2), 605–622.
Elpern, E.H., Covert, B., & Kleinpell, R. (2005). Moral distress of staff nurses in a medical intensive care unit. *American Journal of Critical Care, 14*, 523–530.
Hansen, L., Goodell, T.T., DeHaven, J., & Smith, M.D. (2009). Nurses' perceptions of end-of-life care after multiple interventions for improvement. *American Journal of Critical Care, 18*, 263–271.

Comprehensive Approach to Promote and Engage Staff in Patient and Family-Centred Care (PFCC) in the Medical Surgical Intensive Care Unit (MSICU)

Cecilia Santiago, RN, MN, CNCC(C), Maria Teresa Diston, RN, BScN, CNCC(C), Pamela Greco, RRT, BA, BEd, Kattey Knott, RPT, MSPT, Lorena Lazar, MSW, RSW, Karen Wannamaker, RN, BSc, CNCC(C), and Christine Lee, MSW, RSW, St. Michael's Hospital, Toronto, ON

Families of critically ill patients experience emotional challenges often producing disruptions in the family systems. Throughout patient's critical care trajectory, family members may experience anxiety, anger, sadness or resignation. The literature identifies needs of family members during critical illness of patients, which include obtaining information, honesty, caring, access to the patient and support. The interprofessional MSICU PFCC Committee strives to meet these needs in ongoing bases through scientific inquiry in research. The committee is also instrumental in the development of patient education materials, staff communication tools and guidelines to improve the experience of patients and families while in the MSICU.

The objectives of this poster are to:

1) describe the multifaceted best practice initiatives the interprofessional committee has undertaken through the years in order to meet the patient, family and staff needs,
2) present the evidence behind the committee's initiatives, and
3) illustrate the committee's next steps to advance therapeutic relationships in engaging families as extension of the patient and as part of the care team.

The committee's current and future action plans include initiatives that build competencies among MSICU staff to integrate more family focused interventions through continuing education opportunities about family systems, viewing families as helpful, resourceful systems that can bring strengths and resources to a critical care situation, and taking the time to engage and assess each family system's dynamics, patterns, needs, and resources.

References

Davidson, J.E. (2009). Family-centered care: Meeting the needs of patients' families and helping families adapt to critical illness. *Critical Care Nurse, 29*(3), 28–34.
Davidson, J.E., Powers, K., Hedayat, K.H., et al. (2007). Clinical practice guidelines for support of the family in the patient-centered intensive care unit: American College of Critical Care Medicine Task Force 2004–2005. *Critical Care Medicine, 35*(2), 605–622.
Leon, A.M., & Knapp, S. (2008). Involving family systems in critical care nursing challenges and opportunities. *Dimension in Critical Care Nursing, 27*(6), 255–262.
McAdam, J.L., & Puntillo, K. (2009). Symptoms experienced by family members of patients in intensive care unit. *American Journal of Critical Care, 18*(3), 200–209.
Soltner, C., Lassalle, V., Galienne-Bouygues, S., Pottecher, J., Floccard, B., Delapierre, L., et al. (2009). Written information that relatives of adult intensive care unit patients would like to receive—A comparison to published recommendations and opinion of staff members. *Critical Care Medicine, 37*(7), 2197–2202.
Stapleton, R.D., Engelberg, R.A., Wenrich, M.D. Goss, C.H., & Curtis, J.R. (2006). Clinician statements and family satisfaction with family conferences in the intensive care unit. *Critical Care Medicine, 34*(6), 1679–85.
Stayt, L.C. (2007). Nurses' experiences of caring for families with relatives in intensive care units. *Journal of Advanced Nursing, 57*(6), 623–630.
Teno, J.M., Mor, V., Ward, N., Roy, J., Wennberg, J.E., Fisher, E.S., et al. (2005). Bereaved family member perceptions of quality of end-of-life care in U.S. regions with high and low usage of intensive care unit care. *Journal of American Geriatric Society. 5*, 1905–1911.

CLI BLITZ (Bring Line Infections to Zero) in MSICU: Not as Easy as One Might Think

Cecilia Santiago, RN, MN, CNCC(C), Julie Kruchowski, RN, BScN, CNCC(C), Liz Butorac, RN, MN, CNN(C), and Gwen Coulas, RN, St. Michael's Hospital, Toronto, ON

Studies of catheter-related blood steam infections (BSI) suggest that central line infections (CLI) are responsible for up to 20% mortality rate and can prolong hospitalization. Considering the potential sequelae of ICU acquired CLI BSI, the Ministry of Health and Long-Term Care requires that CLI rates are reported publicly. In 2009, the medical surgical intensive care unit (MSICU) faced the challenge of a rising CLI rates that ranged from 2.24% to 2.93% despite the CLI bundle implementation in 2008. This necessitated the team to review the Safer Health Care Now best practice processes to reduce CLIs. In January 2010, we initiated the CLI BLITZ campaign. We administered a CLI survey to MSICU nurses to determine their knowledge gaps. Thirty-nine per cent of MSICU nurses (n=130) responded to the survey, out of which 84% obtained a score of greater than 60%. Areas for education identified in the survey include scrubbing catheter hubs and types and location of line pathogens. The education program includes providing emailed literature, access to the hospital's electronic central line learning package, and bedside in-services to review the central line bundle and proper technique to drawing blood cultures. In the spring of 2010, the hospital's microbiology department congratulated the MSICU for its reduction of contaminated

blood cultures. Incidentally, in the spring of 2010, the MSICU reported a decrease in its CLI rates to 1.55%. Our CLI rate continues to be lower than the National Healthcare Safety Network benchmark of 2.0. To move forward with this quality improvement initiative, our team plans to trial devices that have been shown to result in lower incidences of BSIs, such as split septum and chlorhexidine-impregnated dressing and provide education on central line maintenance bundle. Given limited research and costs associated with trialing new products, the implementation of best practices to improve CLI BSI has proven to be a slow process. Our work has, however, resulted in nurses becoming more aware of this costly and deadly problem and may have contributed to our dropped CLI rates.

References

Jarvis, W.R., Murphy, C., Hall, K.K., Fogle, P.J., Karchmer, T.B., Harrington, G., Salgado, C., … Sherertz, R.J. (2000.) Health care-associated bloodstream infections associated with negative or positive pressure or displacement mechanical valve needle less connectors. *Clinical Infectious Diseases, 9*, 1821–1827.

Safer Healthcare Now. (2009). *Getting started kit: Prevent central line infections*. Retrieved from http://www.patientsafetyinstitute.ca

Share the Passion, Share the Commitment: Nursing Influence and Contribution to Critical Care Strategic Planning at St. Michael's Hospital

Orla Smith, RN, MN, CNCC(C), Elizabeth Butorac, BScN, MN, Cecilia Santiago, RN, MN, CNCC(C), Patrick Thomsen, MBA, Andrew Baker, MD, FRCPC, St. Michael's Hospital, and Sandy Richardson, BSc, MEd, JETrichardson, Toronto, ON

In 2010, an inter-professional group from the intensive care units within the Critical Care Department at St. Michael's, an academic health sciences centre in downtown Toronto, convened at regular intervals to collectively define and formalize a shared mission and vision for our critical care services and to articulate a clear, measurable plan for vision achievement (1). Nurses from a variety of positions in the department including front-line staff, charge nurses, managers, and advanced practice nurses, played a central role in the development of our strategic plan and in the articulation of our mission statement: To provide excellence in critical care through our shared passion and commitment. Organized with clear stakeholder, internal process, capability, and resource objectives, our values-based plan provides a map by which we can track progress towards our vision for 2014: To be an exemplary resource for the art, science, and practice of critical care.

Nurses within the department are pivotal to the success of the plan as front-line caregivers and formally accountable to the plan as strategic objective owners for: optimizing the learning and professional experience for our staff; attracting, developing, and retaining excellent health care professionals; building strong relationships and partnerships; and optimizing the care experience and clinical care results for patients and families. In order to trend our progress, we have developed a scorecard for the department which colour codes each objective based on measurable indicators. Indicators include: infection rates, adverse events, readmission rates, staff satisfaction, staff turnover, staff education, publications and presentations by staff, budget performance, receipt of evidence-based therapies by patients, and patient and family compliments and complaints. Objectives coded in green are on target; objectives in red and yellow are off target and flagged for further team conversation and/or corrective action plans. The scorecard is reviewed every three months at an open staff meeting. It is also shared through our intranet Webhub to encourage a sense of collective ownership and to foster strategic thinking and questioning on our current and future states by all team members. The intent of this presentation is to share our strategy journey, our resultant strategic plan and scorecard, and demonstrate the important role of nursing in our strategy-oriented culture shift. Our process and plan provide a framework for effective inter-professional engagement and collaboration in the strategic design and delivery of quality, evidence-based care to the critically ill that may be useful to other departments and hospitals.

References

Baker, A., et al. (2010). *Share the passion, share the commitment: St. Michael's Critical Care Department Strategic Plan 2010–2014*. Toronto, ON: St. Michael's Hospital.

Preferences and Outcomes of Surrogate Decision-Making in the ICU: A Review of the Literature

Orla Smith, RN, MN, CNCC(C),
St. Michael's Hospital, Toronto, ON

Acute illness, mechanical ventilation (MV), and consciousness-altering medications render most ICU patients unable to meaningfully participate in decision-making (DM). DM responsibility, thus, falls to surrogates, usually family members or close friends, who may be asked to make decisions about commencing, withholding or withdrawing life-sustaining therapy, administering blood products, authorizing surgery, or consenting to research participation. The role of surrogate decision-maker will become increasingly important as the baby boomer population ages and demands for critical care services in Canada burgeon. Surrogate decision-makers (SDMs) may not have the same preference for DM involvement across decision scenarios and may experience differential levels of certainty and comfort depending on decision type, knowledge and understanding of benefits and risks, personal values and beliefs, and the degree of advice and support they receive from the medical team and others. Heyland et al. (2003) and Gries et al. (2010) in Canada and the United States (U.S.) respective-

ly have shown that DM preferences vary along a continuum from passive to active and that SDMs of the critically ill do not consistently achieve their preferred role in DM (1, 2). A recent analysis of audio-taped recordings of family conferences in the U.S. demonstrated that clinicians routinely miss opportunities to probe patient and surrogate preferences and to explain the process of DM to surrogates (3, 4). Furthermore, ICU clinicians are not always clear on who is assuming the DM role (5). Importantly, recent literature has highlighted interesting associations between ICU DM processes and intra- and post-ICU psychological morbidities including anxiety, depression, and post-traumatic stress symptoms for SDMs of the critically ill (6, 7). The purpose of this presentation is to review the literature on decision-making preferences and outcomes amongst surrogate decision-makers in the ICU and highlight research and practice gaps for further study.

References

Anderson, W.G., Arnold, R.M., Angus, D.C., & Bryce, C.L. (2008). Posttraumatic stress and complicated grief in family members of patients in the intensive care unit. *J Gen Int Med, 23*, 1871–6.

Anderson, W.G., Arnold, R.M., Angus, D.C., & Bryce, C.L. (2009). Passive decision-making preference is associated with anxiety and depression in relatives of patients in the intensive care unit. *J Crit Care, 24*, 249–54.

Curtis, J.R., Engelberg, R.A., Wenrich, M.D., Shannon, S.E., Treece, P.D., & Rubenfeld, G.D. (2005). Missed opportunities during family conferences about end-of-life care in the intensive care unit. *Am J Respir Crit Care Med, 171*, 844–9.

Gries, C.J., Engelberg, R.A., Kross, E.K., et al. (2010). Predictors of symptoms of posttraumatic stress and depression in family members after patient death in the ICU. *Chest, 137*, 280–287.

Heyland, D.K. (2003). Decision-making in the ICU: Perspectives of the substitute decision-maker. *Intensive Care Med, 29*, 75–82.

Ratnapalan, M., Cooper, A.B., Scales, D.C., & Pinto, R. (2010). Documentation of best interest by intensivists: A retrospective study in an Ontario critical care unit. *BMC Medical Ethics, 11*, 1–7.

White, D.B., Braddock, C.H., Bereknyei, S., & Curtis, J.R. (2007). Toward shared decision making at the end of life in intensive care units: Opportunities for improvement. *Arch Intern Med, 167*, 461–7.

End-of-Life Care a Kaleidoscope: Improving Communication and Practice

Suzanne Vanderlip, RN, BScN, CNCC(C), Lisa Huk, RN, BScN, and Karen Pesce, RN, Markham Stouffville Hospital, Markham, ON

End-of-life care is part of our role, as nurses in the critical care setting. Every day somewhere a person dies in an intensive care unit. End-of-life care is an emotionally charged topic and discussions have become increasingly challenging. We identified a need to improve the quality of care at this time, as well as the communication, documentation, coordination and collaboration within our interprofessional team. We examined how to maintain a balance between the technology we offer in the ICU setting and the ethical impact for our patients and their families.

As in a kaleidoscope, colours and shapes intertwine like the roles of critical care nurses. We realized that to deliver better care it required a dynamic team approach that recognized the diversity, complexity and needs of an evolving community. Looking into our kaleidoscope, we could see how each critical care nurse shines, illuminates and brings a unique perspective to end-of-life care. In addition, our kaleidoscope includes our ongoing collaboration and relationship with the interprofessional team.

We continually examined our strengths and challenges. We developed strategies, policies and programs to help improve and excel in the end-of-life care that we provide for our patients. This work has brought the team closer together and helped all of us to reflect on our own end-of-life decisions.

References

Canadian Association of Critical Care Nurses. (2009). *Standards for Critical Care Nursing Practice* (4th ed.). Retrieved from http://www.caccn.ca

College of Nurses of Ontario. (2009). *Guiding Decisions about End-of-Life Care: CNO Practice Guidelines Revised December 2009*. Retrieved from http://www.cno.org/learn-about-standards-guidelines/publications-list/standards-and-guidelines

Consent and Capacity Board of Ontario. (2005). *Legislation: Substitute Decisions Act*. Retrieved from http://www.ccboard.on.ca/scripts/english/legal/legislation.asp

Runde, M. (2009). *End-of-life decision making: Sault Area Hospitals of Ontario*. Retrieved from http://www.health.gov.on.ca/english/providers/program/critical_care/ccs_resources/res_mn.html

ABSTRACTS

AWARD INFORMATION

The Sorin Group "Chapter of the Year" Award

The Sorin Group "Chapter of the Year" Award is presented to recognize the effort, contributions and dedication of a CACCN Chapter in carrying out the purposes and goals of the association.

Award funds available: $500.00 plus a plaque

Criteria for the award program:

- All chapters of CACCN are eligible for consideration of the Chapter of the Year Award, provided all quarterly and annual financial/activity reports are on file with CACCN National Office for the qualifying period. If the above conditions are not met, the chapter will not be eligible for consideration
- The award program will be for the period of April 1 to March 31 of each year
- Chapters may win the award for one year followed by a two-year lapse before winning again.

Conditions for the award program:

- A point system has been developed to evaluate chapter activities during the year
- Chapters will be responsible for ensuring National Office receives all required documentation to validate accumulated points
- The chapter with the most points will be the successful recipient of the Chapter of the Year Award
- CACCN reserves the right to adjust points depending upon supporting materials submitted
- In the case of a tie, CACCN reserves the right to determine the recipient of the award
- The award winner will be announced at Chapter Connections Day and at the annual awards ceremony at Dynamics
- Announcement of the successful chapter will be published in CACCN publications
- The successful chapter will be profiled at Chapter Connections Day and Dynamics.

Categories and their corresponding points:

- Educational programming—please provide an accompanying brochure/advertisement of events that occurred in the award year:
  Programs between:
  1–3 hours: 25 points each
  3–8 hours: 50 points each
  > 8 hours: 100 points each

- Recruitment: points are calculated based on the percentage of new members recruited, as compared to the total membership of the previous year:
  01–10%: 10 points
  11–20%: 20 points
  21–30%: 30 points
  31–40%: 40 points
  41–50%: 50 points
  51–60%: 60 points
  61–70%: 70 points
  71–80%: 80 points
  81–90%: 90 points
  91–100%: 100 points

Points will be calculated for chapter members who have contributed presentations at local, provincial and national CACCN activities. Points will only be awarded once for a presentation, regardless of the number of times or venues at which it is presented.
Each Presentation: 25 points

Points will be calculated for chapter members who have contributed articles to either the chapter newsletter, or who have had a paper published in *Dynamics, Journal of the Canadian Association of Critical Care Nurses*. Please provide a copy of the associated chapter newsletter.
Each article or paper: 25 points

Projects that provide public education, community service and/or promote the image of critical care nursing or CACCN. These projects must be presented under the auspices of the CACCN chapter (i.e., participating in blood pressure clinics, teaching CPR to the public, participating in health fairs, recruitment booths, etc.).
Each project: 50 points

Good luck in your endeavours!

The CACCN Board of Directors retains the right to amend the award criteria as required.

CACCN Research Grant

The CACCN research grant has been established to provide funds to support the research activities of a CACCN member that is relevant to the practice of critical care nursing. A grant will be awarded yearly to the investigator of a research study that directly relates to the practice of critical care nursing.

Award funds available: $2,500.00

Deadline for submission: February 15

Send applications to CACCN National Office at **caccn@caccn.ca** or fax to 519-649-1458 or mail to: CACCN, PO Box 25322, London, ON N6C 6B1. Mailed applications must be postmarked on or before February 15.

Eligibility:
The principal investigator must:

- Be a member of CACCN in good standing for a minimum of one year
- Note: where a student is submitting the research grant application and is ineligible to act as the principal investigator, the student must be a member of CACCN in good standing for a minimum of one year
- Be licensed to practise nursing in Canada
- Conduct the research in Canada
- Publish an article related to the research study in *Dynamics, Journal of the Canadian Association of Critical Care Nurses*

- CACCN members enrolled in a graduate nursing program may also apply
- Members of the CACCN board of directors and the awards committee are not eligible.

Budget and financial administration:
- Funds are to be issued to support research expenses
- Funds must be utilized within 12 months from the date of award notification.

Review process:
- Each proposal will be reviewed by a research review committee
- Its recommendations are subject to approval by the board of directors of CACCN
- Proposals are reviewed for potential contribution to the practice of critical care nursing, feasibility, clarity and relevance
- The recipient of the research grant will be notified in writing.

Terms and conditions of the award:
- The research is to be initiated within six months of the receipt of the grant
- Any changes to the study timelines require notification in writing to the board of directors of CACCN
- All publications and presentations arising from the research study must acknowledge CACCN
- A final report is to be submitted to the board of directors of CACCN within three months of the termination date of the grant
- The research study is to be submitted to the *Dynamics, Journal of the Canadian Association of Critical Care Nurses* for review and possible publication.

Application requirements:
- A completed application form
- A grant proposal not in excess of five single-spaced pages exclusive of appendices and application form
- Appendices should be limited to essential information, e.g., consent form, instruments, budget
- A letter of support from the sponsoring agency (hospital, clinical program) or thesis chairperson/advisor (university faculty of nursing)
- Evidence of approval from an established institutional ethical review board for research involving human subjects and/or access to confidential records. Refer to CNA publication *Ethical Guidelines for Nursing Research Involving Human Subjects*
- A brief curriculum vitae for the principal investigator and co-investigator(s) describing educational and critical care nursing background, CACCN participation, and research experience. An outline of their specific research responsibilities
- Proof of CACCN active membership and Canadian citizenship
- Facility approval for commencement of study

CACCN Research Grant Application located at **http://www.caccn.ca/en/awards/index.html** or via CACCN National Office at **caccn@caccn.ca.**

The CACCN Board of Directors retains the right to amend the award criteria.

Editorial Awards

Edwards

1st place award value: $750.00 Edwards

Runner-up award value: $500.00 CACCN

Deadline: None. Awards committee selection process.

The Editorial Awards will be presented to the authors of two written papers in **Dynamics,** which demonstrate the achievement of excellence in the area of critical care nursing. An award, provided by Edwards Lifesciences, will be given to the author(s) of the best article, and another award is given to the author(s) of the runner-up article. It is expected that the money will be used for professional development. More specifically, the recipient must use the funds:
1. Within 12 months following the announcement of the winners, or within a reasonable time
2. To cover and/or allay costs incurred while attending critical care nursing-related educational courses, seminars, workshops, conferences or special programs or projects approved by the CACCN, and
3. To further one's career development in the area of critical care nursing.

Eligibility:
1. The author is an active member of the Canadian Association of Critical Care Nurses (minimum of one year). Should there be more than one author, at least one has to be an active member of the Canadian Association of Critical Care Nurses (minimum of one year)
2 The author(s) is prepared to present the paper at Dynamics of Critical Care (optional)
3. The paper contains original work, not previously published by the author(s)
4. Members of the CACCN board of directors, awards committee or editorial committee of **Dynamics,** are excluded from participation in these awards.

Criteria for evaluation:
1. The topic is approached from a nursing perspective
2. The paper demonstrates relevance to critical care nursing
3. The content is readily applicable to critical care nursing
4. The topic contains information or ideas that are current, innovative, unique and/or visionary
5. The author was not the recipient of the award in the previous year.

Style:
The paper is written according to the established guidelines for writing a manuscript for **Dynamics.**

Selection:
1. The papers are selected by the awards committee in conjunction with the CACCN board of directors
2. The awards committee reserves the right to withhold the awards if no papers meet the criteria.

Presentation:
Representatives of the sponsoring company or companies will present the awards at the annual awards ceremony during the Dynamics conference. Their names will be published in **Dynamics.**

The Spacelabs Innovative Project Award

Award value: $ 1,500.00 (Total)

Deadline: June 1.

The award funds of $1,500.00 will be granted annually:

- $1,000.00 will be granted to the Award winner and $500.00 for the runner up.

Do you have a unique idea?

The Spacelabs Innovative Project Award will be presented to a group of critical care nurses who develop a project that will enhance their professional development.

The primary contact person for the project must be an active member of CACCN (for at least one year).

If the applicant(s) are previous winners of this award, there must be a one-year lapse before submitting again.

Applications will be judged according to the following criteria:

1. the number of nurses who will benefit from the project
2. the uniqueness of the project
3. the relevance to critical care nursing
4. consistency with current research/evidence
5. ethics
6. feasibility
7. timeliness
8. impact on quality improvement.

Within one year, the winning group of nurses is expected to publish a report that outlines their project in **Dynamics.**

Smiths Medical Canada Ltd. Educational Award

Award value: $1,000.00 each (two awards)

Deadlines: January 31 and September 1 of each year.

The CACCN Educational Awards have been established to provide funds ($1000.00 each) to assist critical care nurses to attend continuing education programs at the baccalaureate, master's and doctorate of nursing levels. All critical care nurses in Canada are eligible to apply, except members of the CACCN board of directors.

Criteria for application:

1. Be an active member of CACCN in good standing for a minimum of one (1) year
2. Demonstrate the equivalent of one (1) full year of recent critical care nursing experience in the year of the application
3. Submit a letter of reference from his/her current employer
4. Be accepted to an accredited school of nursing or recognized critical care program of direct relevance to the practice, administration, teaching and research of critical care nursing
5. Has not been the recipient of this award in the past two years
6. Incomplete applications will not be considered; quality of application will be a factor in selecting recipient.

Application process:

1. Submit a completed CACCN educational award application package to National Office (forms package online at www.caccn.ca)
2. Preference will be given to applicants with the highest number of merit points
3. Keep a record of merit points, dating back three (3) years
4. Submit all required documentation outlined in criteria—candidate will be disqualified if documentation is not submitted with application
5. Presentations considered for merit points are those that are not prepared as part of your regular role responsibilities
6. Oral and poster presentations will be considered.

Post-application process:

1. All applications will be acknowledged in writing from the awards committee
2. Unsuccessful applicants will be notified individually by the awards committee
3. Recipients will be acknowledged at the Dynamics of Critical Care Conference and be published in the journal.

Chapter Recruitment and Retention Awards

This CACCN initiative was established to recognize the chapters for their outstanding achievements with respect to recruitment and retention.

Recruitment Initiative:

This initiative will benefit the chapter if the following requirements are met:

- Minimum of 25% of membership is **new** between April 1 to March 31, the chapter will receive one (1) full Dynamics tuition
- Minimum of 33% of membership is **new** between April 1 to March 31, the chapter will receive one (1) full Dynamics tuition and one (1) $100.00 Dynamics tuition coupon.

Retention Initiative:

This initiative will benefit the chapter if the following requirements are met:

- If the chapter has greater than 80% renewal of its previous year's members, the chapter will receive three $100.00 coupons to Dynamics of that year
- If the chapter has greater than 70% renewal of its previous year's members, the chapter will receive two $100.00 coupons to Dynamics of that year
- If the chapter has greater than 60% renewal of its previous year's members, the chapter will receive one $100.00 coupon to Dynamics of that year.

BBraun Sharing Expertise Award

Award value: $1,000.00

Deadline for nominations: June 1 each year.

The **BBraun Sharing Expertise Award** will be presented to an individual who exhibits stellar leadership and mentoring abilities in critical care.

The candidate is an individual who supports, encourages, and teaches colleagues. The candidate must demonstrate a strong commitment to the practice of critical care nursing and the nursing profession. These qualities **may be** demonstrated by continuous learning, professional involvement, and a commitment to guiding novice nurses in critical care.

Each nomination must have the support of another colleague and the individual's manager. It is not necessary for the candidate to be in a formal leadership or education role to qualify for this award.

Criteria:

- Nominee must be a CACCN member
- The nominee must have at least three (3) years of critical care nursing experience
- At least one nomination letter must be written by a CACCN member
- Preference is given to a mentor who has CNA certification
- The nominee must demonstrate an awareness of, and adherence to the standards of nursing practice as determined by the provincial nursing body, and the Standards of Critical Care Nursing (2009)
- Members of the CACCN board of directors are not eligible.

Three (3) letters of support are required:

- The nominator must outline the qualities of the candidate, and reasons the candidate should be chosen to receive the award
- Two additional letters must testify to the eligibility of the candidate, as well as outline his/her attributes (one must be written by the nominee's manager)
- All three letters must be sent by electronic mail by each person on the same day with the subject matter: "BBraun Sharing Expertise Award—Candidate's Name" to the director responsible for awards at National Office (**caccn@caccn.ca**).

Selection process:

- Each nomination will be reviewed by the awards committee in conjunction with the CACCN director of awards and sponsors
- The successful candidate will be notified by email and regular mail
- The successful candidate will be recognized at the annual awards ceremony at the Dynamics conference and her/his name will be published in **Dynamics**
- The awards committee reserves the right to withhold the award if no candidate meets the criteria
- The funds may be used to attend educational programs or conferences related to critical care.

The Guardian Scholarship – Baxter Corporation Award for Excellence in Patient Safety

Award value: One award of $5,000.00 or two awards of $2,500.00 each

Deadline: June 1 of each year.

The Baxter Corporation Guardian Scholarship will be presented to an individual or an interdisciplinary team who proposes to make, or who has made, significant contributions toward patient and/or caregiver safety in the critical care environment. Recipients of this award will identify ideas that encompass safety and improve the quality of care in their practice area.

Eligibility:

The applicant must:

- Be an active member of CACCN in good standing for a minimum of one year
- Be licensed to practise nursing in Canada
- Members of the award review committee and/or the board of directors are not eligible.

Application Requirements:

- The project will describe an innovative approach, to develop new or revised processes, to encompass patient safety and improve the quality of care at the unit, hospital or health care system level
- The project/proposal will show evidence of collaboration among team members.

A complete application form that includes:

- A proposal of a project, or a description of a completed project, which makes a significant contribution toward patient and caregiver safety in critical care
- The proposal will include the background perspective, statement of the problem, and intended means to change practice. The proposal should include a timeline by which the project will occur
- Brief curriculum vitae for the principal applicant and team members describing educational and critical care nursing background and CACCN participation
- Proof of active CACCN membership
- If this project requires ethics approval, please submit evidence of approval with your application.

Review process:

- Each proposal will be reviewed by the awards review committee and a representative of the Baxter Corporation
- Proposals are reviewed for their contribution to patient safety, evidence of transferability of the project, innovation, sustainability, and leadership within critical care practice areas
- Deadline for receipt of applications is **June 1** of each year
- The successful candidate will be chosen and notified in writing by **July 1.**

Terms and conditions of the award:

- A proposed project must be initiated within three months of the receipt of the scholarship
- Any changes to the timelines require written notification to the board of directors of CACCN
- All publications and presentations must recognize the Baxter Corporation and CACCN
- An article related to the project is to be submitted to **Dynamics** for publication.

Budget and Financial Administration

- One half of the awarded funds will be available to support the project expenses immediately
- The remaining funds will be awarded upon the publication of an article describing the project in **Dynamics.**

The total funds available are $5,000.00.

The award funds may be granted to a maximum of two applicants ($2,500.00 each).

NOTE: *The CACCN Board of Directors & Baxter Corporation retain the right to amend the award criteria.*

Revised March 24, 2010
Board of Directors

The Brenda Morgan Leadership Excellence Award

Award value: $1,000.00

Deadline: June 1 of each year

The Brenda Morgan Leadership Excellence Award was established in June 2007 by the CACCN Board of Directors to recognize and honour Brenda Morgan, who has made a significant contribution to CACCN and critical care nursing over many years. Brenda was the first recipient. Brenda is highly respected for her efforts in developing, maintaining and sustaining CACCN in past years.

This award for excellence in leadership will be presented to a nurse who, on a consistent basis, demonstrates outstanding performance in the area of leadership in critical care. This leadership may have been expressed as efforts toward clinical advances within an organization, or leadership in the profession of nursing in critical care. The results of this individual's leadership must have empowered people and/or organizations to significantly increase their performance capability in the field of critical care nursing.

This award has been generously sponsored by CACCN in order to recognize and honour a nurse who exemplifies excellence in leadership, in the specialty of critical care.

Eligibility criteria:
Persons who are nominated for this award will have consistently demonstrated qualities of leadership and are considered visionaries and innovators in order to advance the goals of critical care nursing.

The nominee must:

a) Have demonstrated a leadership role or have held a key leadership position in an organization related to the specialty of critical care
b) Demonstrated volunteerism and significant commitment to CACCN, i.e., have participated in CACCN activities at local or national levels (been a member of provincial executive or national board of directors, helped to plan a workshop or a conference), or indirectly provided support of CACCN activities through management activities—supporting staff to participate in CACCN projects or attend conferences
c) Have been a member of CACCN for a minimum of five years
d) Have a minimum of five years of critical care nursing experience
e) Be registered to practise nursing in Canada
f) Hold a valid adult or pediatric specialty in critical care certification—Certified Nurse in Critical Care, CNCC(C) or CNCCP(C) from the CNA (preferred)
g) Consistently conducts themselves in a leadership manner
h) Have effectively engaged others in the specialty of critical care nursing
i) Have role-modelled commitment to professional self-development and lifelong learning
j) Have inspired and mentored others to contribute to critical care nursing
k) On a consistent basis, exemplifies the following qualities/values:
   - pro-active/innovator/takes initiative
   - takes responsibility/accountability for actions
   - imagination/visionary
   - positive communication skills
   - interdependence
   - integrity
   - recognition of new opportunities
   - conflict resolution skills/problem-solving skills
   - committed/passionate/dedicated/motivator
   - advocates for patients and families.

Application process:
The application involves a nomination process. Please submit two letters describing how the nominee has demonstrated the items under the criteria section of this award. Please use as many examples as possible to highlight what this candidate does that makes her/him outstanding. The selection committee depends on the information provided in the nomination letters to select award winners from amongst many deserving candidates.

The winner will be awarded The Brenda Morgan Leadership Excellence Award and honoured during the awards ceremony at the annual Dynamics Conference. The winner's name will be published in **Dynamics.**

Terms and conditions of the award:
The award winner will be encouraged to write a reflective article for the **Dynamics,** sharing their accomplishments and describing their leadership experience. The article will reflect on their passion to move critical care nursing forward, their leadership qualities and how they used these effectively to achieve their outcome.

Selection process:
Each nomination will be reviewed by the award committee in conjunction with the CACCN Director of Awards and Sponsorship. The Brenda Morgan Leadership Excellence Awards committee will consist of two members of the board of directors and Brenda Morgan (when possible).

The awards committee reserves the right to withhold the award if no candidate meets the criteria outlined.

Chasing Excellence Award

CardinalHealthCanada

Award value: $1,000.00

Deadline: June 1 annually.

This award is presented annually to a **CACCN** member who consistently demonstrates excellence in critical care nursing practice. *The Cardinal Health Chasing Excellence Award* is $1,000 to be used by the recipient for continued professional or leadership development in critical care nursing.

The *Cardinal Health Chasing Excellence Award* is given to a critical care nurse who:

- In critical care, has a primary role in direct patient care
- Has been a CACCN member in good standing for three or more years
- Holds a certificate from CNA in critical care CNCC(C) or CNCCP(C) (preferred)
- Note: Current members of national board of directors are not eligible.

The *Cardinal Health Chasing Excellence Award* recipient consistently practises at an expert level as described by Benner (1984). Expert practice is exemplified by most or all of the following criteria:

- Participates in quality improvement and risk management to ensure a safe patient care environment
- Acts as a change agent to improve the quality of patient care when required
- Provides high-quality patient care based on experience and evidence
- Effective clinical decision-making supported by thorough assessments
- Has developed a clinical knowledge base and readily integrates change and new learning to practice
- Is able to anticipate risks and changes in patient condition and intervene in a timely manner
- Sequences and manages rapid multiple therapies in response to a crisis (Benner, Hooper-Kyriakidis & Stannard, 1999)
- Integrates and coordinates daily patient care with other team members
- Advocates and develops a plan of care that consistently considers the patient and family and ensures they receive the best care possible
- Provides education, support and comfort to patients and their families to help them cope with the trajectory of illness and injury, to recovery, palliation or death
- Role models collaborative team skills within the inter-professional health care team
- Assumes a leadership role as dictated by the dynamically changing needs of the unit
- Is a role model to new staff and students
- Shares clinical wisdom as a preceptor to new staff and students
- Regularly participates in continuing education and professional development.

Nominations:
Two letters describing the nominee's clinical excellence and expertise are required, one of which must be from a CACCN member. The nomination letters need to include three concrete clinical examples outlining how the nominee meets the above criteria and demonstrates clinical excellence in practice. In addition, a supporting letter from a supervisor, such as a unit manager or team leader, is required.

Selection:
Each nomination will be reviewed by the awards committee in conjunction with the **CACCN** director of awards and sponsors. The successful recipient will be notified by mail, recognized at the annual awards ceremony at the Dynamics conference and her/his name will be published in **Dynamics.** The awards committee reserves the right to withhold the award if no candidate meets the criteria.

References:

Benner, P. (1984). *From novice to expert. Excellence and power in clinical nursing practice.* Menlo Park: Addison-Wesley.

Benner, P., Hooper-Kyriakidis, P., & Stannard, D. (1999). *Clinical Wisdom and Interventions in Critical Care: A Thinking-in-action Approach.* Philadelphia: Saunders.

DYNAMICS

Information for Authors

Dynamics is distributed to members of the CACCN, to individuals, and to institutions interested in critical care nursing. The editorial board invites submissions on any of the following: clinical, education, management, research and professional issues in critical care nursing. Critical care encompasses a diverse field of clinical situations, which are characterized by the nursing care of patients and their families with complex, acute and life-threatening biopsychosocial risk. While the patient's problems are primarily physiological in nature, the psychosocial impact of the health problem on the patient and family is of equal and sometimes lasting intensity. Articles on any aspect of critical care nursing are welcome.

The manuscripts are reviewed through a blind, peer review process.

Manuscripts submitted for publication must follow the following format:

1. Title page with the following information:

- Author(s) name and credentials, position
- Place of employment
- If there is more than one author, the names should be listed in the order that they should appear in the published article
- Indicate the primary person to contact and address for correspondence

2. A brief abstract of the article on a separate page.

3. Body of manuscript:

- Length: a maximum of 15 pages including tables, figures, and references
- Format: double spaced, one-inch margins on all sides. Pages should be numbered sequentially including tables, and figures. Prepare the manuscript in the style as outlined in the American Psychological Association's (APA) Publication Manual 6th Edition.
- Tables, figures, illustrations and photographs must be submitted each on a separate page after the references.
- References: the author is responsible for ensuring that the work of other individuals is acknowledged accordingly. Direct or indirect quotes must be acknowledged according to APA guidelines
- Permission to use copyrighted material must be obtained by the author and included as a letter from the original publisher when used in the manuscript

4. Copyright:

- Manuscripts submitted and published in Dynamics become the property of CACCN. Authors submitting to Dynamics are asked to enclose a letter stating that the article has not been previously published and is not under consideration by another journal.

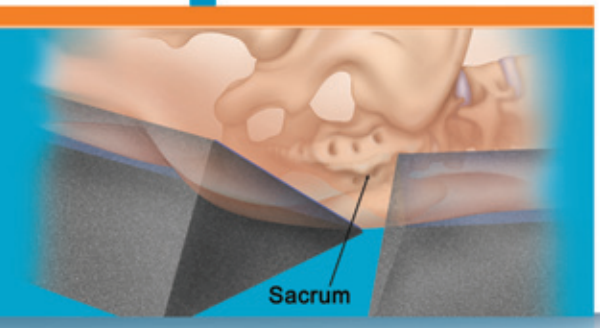
5. Submission:

- Please submit the manuscript electronically as a Word attachment to the editorial office as printed in the journal. Hard copy manuscripts may also be submitted through the national office. Accepted manuscripts are subject to copy editing.

October 2009

FREE TRIAL!

Reduce your patients' risk of **pressure ulcers.**



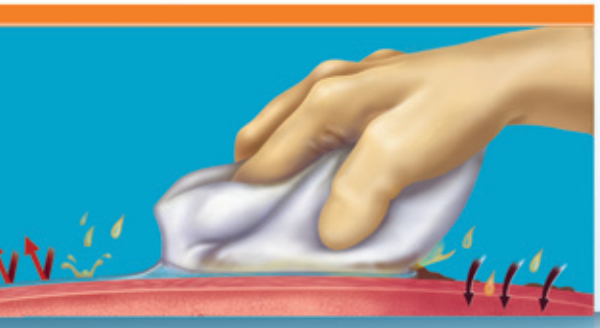
Prevent Sacral Pressure Ulcers & Staff Injury Risk

Prevalon® Turn and Position System is the new, innovative way to offload the sacrum and help reduce risk of sacral pressure ulcers. It conveniently stays under the patient at all times, improving q2° turning compliance. And it makes it easier to turn patients, lowering the risk of staff injury.

NEW!

Prevent Heel Ulcers

Prevalon® Pressure-Relieving Heel Protector delivers total pressure relief for your patients' heels. The most advanced heel ulcer protection available completely floats the heel, plus it's comfortable, easy to apply and stays on the foot.



Prevent Incontinence-Associated Dermatitis (IAD)

Comfort Shield® Barrier Cream Cloths guarantee barrier application with every incontinence cleanup. Each premoistened cloth cleans & protects against IAD, a major pressure ulcer risk factor. Bring it bedside to maximize compliance.

Try our simple Sage interventions free!

Call or log on for product samples & clinical outcomes:

www.sageproducts.ca/pressure | 1-800-323-2220

Promo Code: **PRESSURE**

Use your smartphone to scan the QR code to learn more about pressure ulcer prevention.

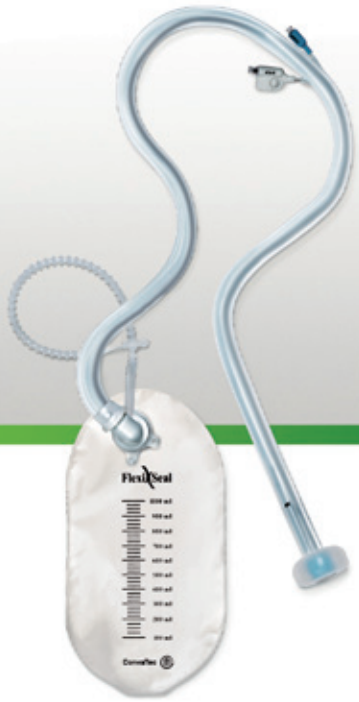
40 Years of Innovation

SAGE® PRODUCTS INC

Simple Interventions. Extraordinary Outcomes.

Flexi-Seal® SIGNAL™ FMS

A LEADING-EDGE SOLUTION FROM THE FLEXI-SEAL® FMS FAMILY OF FECAL MANAGEMENT SYSTEMS



Contain *C. difficile* before it strikes.

C. difficile **is a nosocomial infection that can cause diarrhea and life-threatening intestinal conditions such as pseudomembranous colitis, toxic megacolon, sepsis and death.[1] Flexi-Seal® is scientifically proven to contain *C. difficile*.[2]**

Flexi-Seal® SIGNAL™ FMS is a closed system that minimizes exposure to potentially infectious waste.

CRC Customer Relations Center / Centre des relations avec la clientèle

For more information, please call our Customer Relations Center (Registered Nurses on staff) at **1-800-465-6302**, Monday through Friday, 8:00 AM to 6:00 PM (EST), or visit our Web Site at **www.convatec.ca**

ConvaTec

Reference: 1. Jarvis WR, Schlosser JA, Jarvis AA, Chinn RY. National point prevalence study of *Clostridium difficile* in US health care facility inpatients, 2008. The Association for Professionals in Infection Control and Epidemiology, Inc. (APIC). Am J Infect Control 2009;37:263-70 **2.** Containment of *Clostridium difficile* by the Flexi-Seal® Faecal Management System: an In Vitro Study. WHRI3107 MA106. May 8 2008. Data on file, ConvaTec.