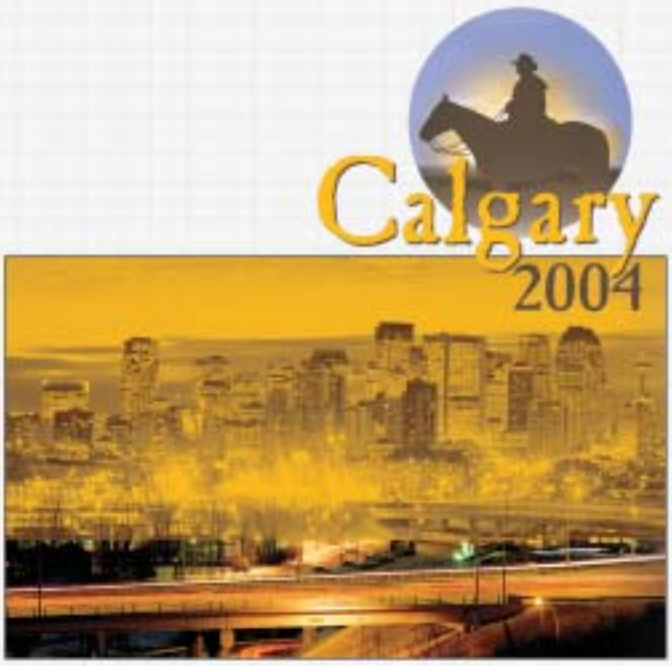
Canadian Journal of
Cardiovascular Nursing
Revue canadienne de
Nursing cardiovasculaire



In this issue:

The 2004 CCCN Annual Conference

- *Schedule*
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Volume 14 ▪ No. 4 ▪ 2004

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Volume 14 ▪ No.4 ISSN 0843-6096 2004

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Editorial Board

Canadian Journal of Cardiovascular Nursing is published by the Canadian Council of Cardiovascular Nurses (CCCN).

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Editorial

Getting published (...or how to make it faster for you and easier on reviewers)

There is a fine balance between worrying over minute details of your manuscript such that you never send it, and sending it before it is ready. If one had to choose one of these extremes, the latter would be better since at least an editor sees it but, in the long run, I would advise something in between. Have you ever been asked to read a paper that was full of grammar errors, spelling errors and meaningless sentences? How about one with even a few of them? When I am sent these types of papers to review, I sometimes wonder why I should spend a lot of time reviewing them and giving constructive feedback, because the author clearly hasn't spent the time. "Therein lies the rub". If a manuscript rubs the reviewer the wrong way, I suspect she/he is far more likely to identify other problems with the article and the chances of getting published on the 'first go-round' sink somewhat.

Many writers finish a draft and send the manuscript off to a journal thinking they can clean up anything they missed after they receive the acceptance letter. Occasionally this works, but, more often, the journal will require the author to make major changes, delaying the acceptance process or, in the worst case, won't accept it at all. After you finish that final draft, take the time to recheck a few things before e-mailing it to the journal. Recheck the journal's guidelines for authors. Many journals will reject an article purely on the basis that these guidelines have not been followed. Guidelines appear in many journal issues and on the websites of most journals. The **CJCN's** updated guidelines appear in this issue, and are also posted on the website at www.cardiovascularnurse.ca. Be sure your article conforms to the journal's guidelines on length; in the case of **CJCN** this is a maximum of 20 pages including tables, figures, illustrations and references.

Reread your article from the readers' perspective. Do the title and introduction grab the readers' interest and make them want to go to the effort of reading the rest of the article? Most readers want to read articles that impose on them as little unnecessary difficulty as possible. They want to understand the point or thesis of the paper and how you reached it, and they want to know how you think your research and conclusions will or should change their thinking and beliefs. Review both your introductory and concluding paragraphs to be sure that the former gets the readers' attention and the latter reinforces the main point of the manuscript. These are probably the most important and most difficult parts of your manuscript.

Finally, before you send that manuscript, check your references carefully. As an editor, this is the most consistent problem with manuscripts that I have seen. Check that you have spelled all authors' names correctly, both in the body of the manuscript and in the reference list. Use of reference manager software reduces the likelihood of inconsistencies here. Check for consistency between the references listed in the body of the manuscript and in the reference list. Ensure that your references follow the reference style requested by the journal. Manuscripts can and are returned for lack of conformation to a requested referencing style. The **CJCN** and many other nursing journals use the American Psychological Association (APA) style. I recommend that you use the manual itself as a guide (APA, 2001), but you can also find information on the website at www.apastyle.org. Older editions of the APA manual do not include style guides for electronic references and information about this can be found on their website. We are at present using the fifth edition of the APA manual, and Russell and Aid (2002) have written an article on the changes in style requirements which you might find a helpful guide. If worse comes to worse, at least check the latest issue of the journal and replicate the style used there.

All of this is not to discourage you from writing, but rather to make the process of submitting a manuscript faster and less frustrating for you. Almost 80 peer-reviewed papers will be presented at the CCCN's Annual Meetings and Scientific Session this year, either in oral or in poster format. Many of those should also be shared with the larger world of nursing through journal publication. Congratulations to all of you who are presenting and to all of you who are attending the conference to learn more from your colleagues. I hope we will see some of this work in print! ♥

Kirsten Woodend, Editor, CJCN

References

American Psychological Association. (2001). *Publication Manual of the American Psychological Association* (5th ed.). Washington, DC: American Psychological Association.

Russell, C.L., & Aid, M.A. (2002). Methods. Publication manual of the American Psychological Association - 5th Edition: A review of additions and changes in style requirements. *Nursing Research, 51*(5), 332-5.

President's message

Man's mind stretched to a new idea never goes back to its original dimensions.

– Oliver Wendell Holmes, Jr. 1841-1935

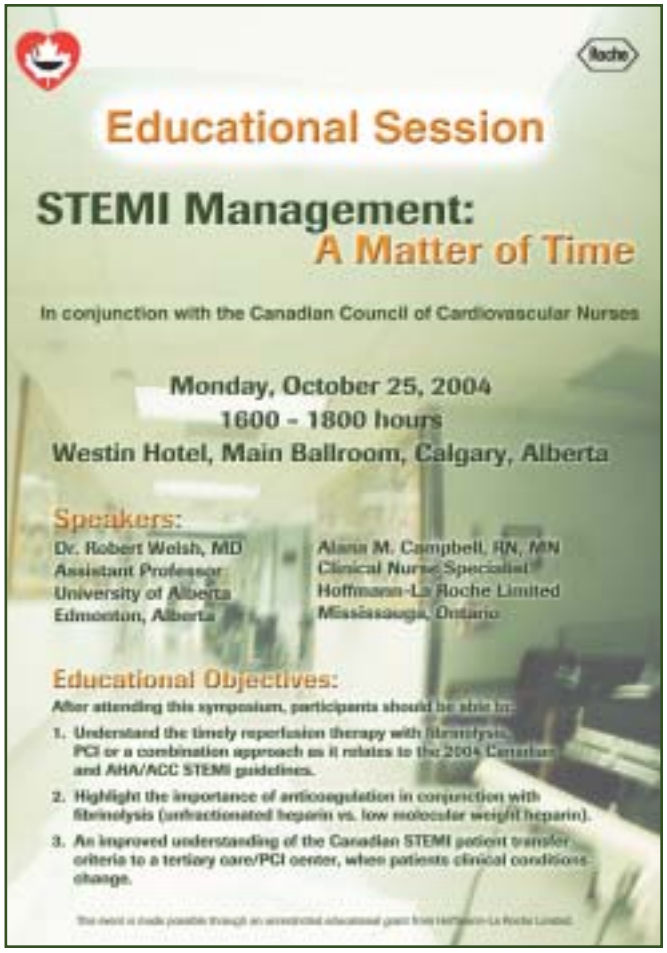
Welcome to Calgary and to the Canadian Council of Cardiovascular Nurses' 2004 Scientific Sessions and 11th Annual General Meeting. The CCCN has been hosting conferences across Canada in larger urban centres for more than 20 years. The innovative nursing research presented in the past two-and-a-half decades has driven new standards of practice within cardiovascular nursing. Imagine how many cardiovascular nursing minds at these conferences have been stretched and shaped to new concepts, ideas and skills, further enhancing cardiovascular nursing practice. I challenge you, as a delegate during this meeting in Calgary, to stretch your mind and keep your mind open to new and innovative ideas. Search for novel concepts and approaches to cardiovascular patient care, and consider implementing new best practice ideas and skills guided by the vast array of research that will be presented during this conference.

I would like to acknowledge and congratulate Karen Parker, the chair for the local planning committee, and her passionate volunteer group for their tremendous effort in the planning and organization of this event. Their commitment to you is to deliver the highest quality academic and scientific program for cardiovascular nurses. The challenge of offering a national cardiovascular nursing program of this calibre is no small feat. In the background of the academic and scientific sessions planning are many national board members and support staff committed to ensuring an outstanding conference. I would like to acknowledge the time and dedication of the National Professional Education Chair, Anna Svendsen, the National Research Chair, Dianne Tapp, the CCCN Administrative Assistant, Charlene Kennett and the National Health Promotion Chair, Sandra Matheson. Thank you to all the volunteers for their commitment to improving cardiovascular nursing.

As a native Calgarian, I hope you also take the opportunity to enjoy the warm western hospitality for which this province and city are famous. You may, on occasion, hear one too many "Yahoos" or "Yee Haws" (who can ever hear too many Yahoos?), and may see one too many white Stetsons, but these are just reflections of our Calgarian enthusiasm. Enjoy the spirit of inquiry that this conference holds, the scenery of the autumn within the Rocky Mountain foothills, and the western hospitality of Calgary; all the while allowing your mind to stretch and never go back to its original dimensions.

Yahoo, and enjoy the congress! ♥

Lorna Estabrooks



CCCN's leaders and award winners 1973-2005

Presidents

Year	President	AGM Location
2004 / 2005	Lorna Estabrooks (Calgary, AB)	Calgary, ON
2003 / 2004	Lorna Estabrooks (Calgary, AB)	Toronto, ON
2002 / 2003	Sandy Barabé (Port Coquitlam, BC)	Edmonton, AB
2001 / 2002	Sandy Barabé (Port Coquitlam, BC)	Halifax, NS
2000 / 2001	Darlene Dawson (Calgary, AB)	Vancouver, BC
1999 / 2000	Darlene Dawson (Calgary, AB)	Quebec, PQ
1998 / 1999	Howard Brunt (Victoria, BC)	Ottawa, ON
1997 / 1998	Howard Brunt (Victoria, BC)	Winnipeg, MN
1996 / 1997	Lynne Young (Vancouver, BC)	Montreal, PQ
1995 / 1996	Lynne Young (Vancouver, BC)	Toronto, ON
1994 / 1995	Carol Szarga (Toronto, ON)	Edmonton, AB
1993 / 1994	Carol Szarga (Toronto, ON)	Vancouver, BC
1992 / 1993	Carol Jillings (Vancouver, BC)	Ottawa, ON
1991 / 1992	Carol Jillings (Vancouver, BC)	Calgary, AB
1990 / 1991	Ellen Rukholm (Sudbury, ON)	Halifax, NS
1989 / 1990	Ellen Rukholm (Sudbury, ON)	Vancouver, BC
1988 / 1989	Carole Earle (Woodstock, NB)	Montreal, PQ
1987 / 1988	Carole Earle (Woodstock, NB)	Edmonton, AB
1986 / 1987	Connie Cloutier (Montreal, PQ)	Ottawa, ON
1985 / 1986	Connie Cloutier (Montreal, PQ)	Halifax, NS
1984 / 1985	Marcia Mason (Vancouver, BC)	Quebec, PQ
1983 / 1984	Marcia Mason (Vancouver, BC)	Toronto, ON
1982 / 1983	Lee Doryk (Regina, SK)	Calgary, AB
1981 / 1982	Lee Doryk (Regina, SK)	Montreal, PQ
1980 / 1981	Glenys Whelan (St. John's, NF)	Winnipeg, MN
1979 / 1980	Glenys Whelan (St. John's, NF)	Quebec, PQ
1978 / 1979	Glenys Whelan (St. John's, NF)	Vancouver, BC
1977 / 1978	Jean Petrie (Halifax, NS)	Toronto, ON
1976 / 1977	Carolyn Stockwell (Windsor, ON)	Edmonton, AB
1975 / 1976	Carolyn Stockwell (Windsor, ON)	Montreal, PQ
1974 / 1975	Joan Breakey (Toronto, ON)	Winnipeg, MN
1973 / 1974	Valerie Shannon (Montreal, PQ)	Halifax, NS

Clinical excellence award

Year	Name	City/Province
2004 / 2005	Jocelyn Cooper	Vancouver, BC
2003 / 2004	Jocelyn Reimer-Kent	Vancouver, BC
2002 / 2003	Susan Bengivingo	Calgary, AB
2001 / 2002	Anna Svendsen	Halifax, NS
2000 / 2001	Francine Girard	Calgary, AB
1999 / 2000	Francine Daigle	Saint John, NB
1998 / 1999	Wendy Vlasic	London, ON
1997 / 1998	Cleo Cyr	Saint John, NB
1996 / 1997	Marlene Adam	Ottawa, ON
1995 / 1996	Moya Taylor	Brandon, MN
1994 / 1995	Karen Then	Calgary, AB
1993 / 1994	Jean Petrie	Halifax, NS

Baxter Leadership Award

Year	Name	City/Province
2004 / 2005	Janice Stewart	Calgary, AB
2003 / 2004	No nominee	
2002 / 2003	Heather Sherrard	Ottawa, ON
2001 / 2002	Francine Girard	Calgary, AB

Cardiovascular research excellence award

Year	Name	City/Province
2004 / 2004	Karen Then	Victoria, BC
2003 / 2004	Kathryn King	Calgary, AB

CCCN 2004 Award Recipients

Clinical excellence award – Jocelyn Cooper

Jocelyn has demonstrated an extensive and ongoing commitment to cardiovascular nursing, high standards of clinical practice, outstanding ability to share her cardiovascular knowledge with passion, to nurses and other allied health professionals, not to mention her longevity in clinical practice. Jocelyn Cooper is currently the clinical services and educational specialist for St. Jude Medical Canada based in Vancouver, British Columbia. Over her extensive cardiovascular nursing career, other positions she has held include: charge nurse, manager, supervisor, research associate, clinical pacing specialist, educator and consultant. She continues to work extensively within the clinical cardiovascular domain as a clinician, as well as educator.

Jocelyn has inspired and motivated cardiovascular nurses to attain clinical excellence in practice, thereby having a direct impact on the quality of care provided to clients. She has displayed exceptional commitment to clinical nursing throughout her career. For example, she has recently presented hospital-based workshops at St. Paul's Hospital in Vancouver, Surrey Memorial Hospital, Royal Inland Hospital in Kamloops, Vancouver General Hospital, Foothills Hospital in Calgary and University of Alberta in Edmonton. In addition, she regularly addresses groups of cardiac nurses at cardiac nursing meetings throughout the province (e.g., Okanagan Cardiac Nurses Workshops, St. Paul's Cardiac Nursing Day).

In 1982, Jocelyn became a member of the Canadian Council of Cardiovascular Nurses (CCCN). Jocelyn has been an active participant in CCCN activities over the years and has worked on behalf of the organization in a number of capacities. Involvement in CCCN has included: past CCCN provincial director - British Columbia (1983-1984), past editor provincial newsletter, past member CCCN national board of management and past member of the board of directors of the British Columbia Heart Foundation. She has been an invited speaker at the CCCN national annual meeting on three occasions. It is clear that Jocelyn has contributed to the evolution of the CCCN organization in British Columbia and nationally. She continues to further the goals of CCCN daily in her work and relationships. ♥

Baxter Leadership Award – Janice Stewart, RN, BN, MSA

Janice began her career in cardiovascular nursing while in her senior year at the University of Manitoba, School of Nursing. As her senior elective, Janice travelled back home to Calgary to complete a two-month practical in cardiac surgery. She graduated in the spring of 1984 with her baccalaureate in nursing and worked for a short period of time in nephrology and urology in Winnipeg before moving back to Calgary permanently.

In the fall of 1984, Janice started to work on "Fifth Floor" at the Holy Cross Hospital in Calgary. The unit was a 52-bed cardiology and cardiac surgery unit where staff rotated between the two 26-bed sides. This experience provided the foundation for her ongoing love of cardiovascular nursing, both medical and surgical.

Between 1986 and 1989, Janice worked as a peripheral vascular outpatient clinic nurse at the Holy Cross and then an instructor for inpatient cardiology at the Rockyview Hospital before beginning her career in management. Between 1989 and 1995, Janice worked as assistant nursing unit director and then director of the unit on which she began her cardiovascular nursing career.

The Holy Cross Hospital was merged with the tertiary cardiovascular services at the Foothills Hospital and Janice moved into an administrative leader position to plan the merger of the services and develop a fully integrated, regional cardiovascular program. This included planning for redeveloped space to accommodate all the tertiary surgical, diagnostic and interventional services at one site, as well as bringing all the services regionally together under the leadership of a single administrative director and medical director partnership. During this time, Janice also pursued her Master's of Science in Administration. She assumed the newly created

role of director of Heart Health in 1997. By 2003, the program had grown to $60 million with a staff of more than 500 FTE over three hospital sites and included contracted cardiac rehabilitation services. Today, the Heart Health program in Calgary provides services for all of southern Alberta, southeastern British Columbia and parts of Saskatchewan.

In the fall of 2003, Janice took an 18-month leave from Heart Health to become director of Home Care for the Calgary Health Region. The Home Care program provides early discharge services for post-cardiac surgery patients and is making headway in developing physician partnership services for clients with chronic diseases of which CHF will be a major focus. ♥

Cardiovascular nursing research excellence award – Karen Then

Dr. Then has been a contributing CCCN member since 1989. As a CCCN member, Dr. Then's contributions to council are numerous with both a provincial and national focus over the past 15 years. Dr. Then's contributions to cardiovascular nursing research are also numerous. Her cardiovascular research has focused on tobacco and tobacco use issues, smoke-free spaces and public policy. In 2000, Dr. Then was the recipient of the C Leadership Award for Tobacco Reduction for ongoing dedication and work in tobacco reduction.

Currently, Dr. Then has funding from ADDAC for policy development as the principal investigator and has also received funding for smoking research initiatives as a principal investigator. As a co-investigator, and with involvement with outside agencies, Dr. Then has also been awarded over peer reviewed research grant money related to cardiovascular research.

Dr. Then has published widely in respected refereed journals such as the **Canadian Journal of Cardiovascular Nursing**, **Heart and Lung: The Journal of Critical Care**, and **Journal of Orthopaedic Nursing**. As a nurse researcher, she has served as a role model and mentor for many fellow cardiovascular nurses. Her activities include nursing research with the Faculty of Nursing at the University of Calgary and the Calgary Health Region. She currently supervises and sits on the supervisory committee of Master's level and advanced practitioner nursing students. As an advisor and mentor, Dr. Then assists graduate students in their research endeavours through supervision, support and guidance. ♥

Recognize your CCCN colleagues at the 2005 CCCN annual meeting and conference

2005 Call for Nominations

- *Clinical Cardiovascular Nursing Excellence Award*
- *Baxter Award of Excellence for Leadership in Cardiovascular Nursing*
- *Cardiovascular Nursing Research Excellence Award*

These awards have been established to recognize exceptional CCCN members in good standing. Visit the CCCN web site at www.cccn.ca or contact the CCCN national office for further information and a nomination form.

Charlene Kennett, Administrative Assistant,
Canadian Council of Cardiovascular Nurses
222 Queen Street, Suite 1402, Ottawa, Ontario K1P 5V9
Tel: (613) 569-4361 x 340, e-mail: ckennett@hsf.ca

- **Nominations should be received no later than March 31, 2005**

CCCN 2004 Conference Schedule

All events will be held at the Westin Hotel, unless otherwise indicated

Sunday October 24, 2004

0800-1000 **Committee and Journal Meetings:** Health Promotion Committee, Research Committee, CJCN Journal Committee, Professional Education Committee, Local Planning Committee
1030-1230 **Provincial Directors Meeting**
1230-1330 **CCCN Board of Directors Meeting**
1400-1600 **CCC Opening Ceremonies; Heart and Stroke Lecture – Telus Convention Centre**
1630-1800 **CCCN Annual General Meeting**

Monday October 25, 2004

0800-0920 Opening Ceremonies and Keynote Address
Francine Girard - **Research and Education in Cardiovascular Nursing**
0920-0935 Coffee

Workshop I

0935-1020	1	2	3	4	5
	Kathryn King **Choices around career progression (Cardiovascular Nurse Scientist)**	*Karen Then* **Pearls of wisdom: CV assessment**	*Karen Giese* **Heart and soil**	*Cynthia Mannion* **Diet and heart disease**	*Brenda Paton* **Preceptorship in nursing**

Workshop II

1030-1115	1	2	3	4	5
	Kathryn King **Choices around career progression (Cardiovascular Nurse Scientist)**	*Francine Girard* **Professional practice in cardiovascular nursing**	*Doreen Fotonoff & Jeanine Allen-Brunt* **Adult congenital heart disease: An emerging population**	*Annette Robertson* **CRP and CAD (role of inflammatory process in heart disease**	*Karen Then* **Pearls of wisdom: CV assessment**

Concurrent Sessions: 1120-1240

	Arrhythmias	Technology	Interventional Cardiology	Issues and Trends	Cardiac Surgery
1120-1140	**The teaching challenges with ICD**	**The impact on communication**	**Percutaneous repair of paravalvular leak**	**Sailing uncharted waters**	**Fast tracking cardiac surgery patients**
1145-1205	**The epicardial approach for mapping and ablation**	**Challenges of care for VAD patients**	**Nursing education recommendations for nurses**	**Decision-making outside the limits of practice**	**Hemodynamic and O_2 effects of dangling**
1210-1230	**Radio-frequency ablation**	**Interactive voice response - a patient safety net**	**Recovery after PCI**	**Confidentiality within cardiac transplantation**	**Postoperative cardiac surgery delirium guideline**

1230-1400 Lunch in Telus Convention Centre Exhibit Hall & Posters

Concurrent Sessions: 1420-1540

	Risk Reduction	Heart Failure	Family	Best Practice	Acute Coronary Syndrome
1420-1440	**Smokers with cardiac disease**	**Septal alcohol ablation**	**Over-involved wives and distant husbands**	**The evidence in evidence-based practice**	**Atypical presentation of AMI**
1445-1505	**Insight in-site: Barriers in counselling patients**	**WITHDRAWN**	**Understanding the experience of diabetes and CAD**	**Using point prevalence for CQI**	**The chest pain myth - presenting symptoms in ACS**
1510-1530	**Understanding patients' understanding of cardiac risk factors**	**A self-education management program for patients with COPD and HF**	**Everyday practice of family nursing on cardiac med-surg units**	**Populating the ACS pathway**	**Relationship of hypoglycemic events to IITP**
1535-1555	**Chronic disease management in cardiovascular risk reduction**	**Palliation in end-stage heart disease**	**A telephone lifeline for cardiac surgery patients and families**	**Developing best practice guidelines for cardiac surgery**	**Providing emergency PCI**

1600-1800 **Reception and Presentation - Hoffman La Roche Educational Seminar: STEMI Trends and Treatment** - Dr. Welsh and Alana Campbell
1900-2300 **Calgary Night – TBA**

Tuesday October 26, 2004

0730 – 0830 **Health Promotion Session:** Dr. D. Lau, **Obesity is a cardiac risk factor**
0900-1030 **Morning Keynote Address:** Judith McFetridge
Cardiovascular risk reduction in women: What is the evidence?"
1030 - 1050 **Coffee at Westin**

Concurrent Sessions: 1045-1220

	Congenital Heart Disease	Cornucopia	Coronary Artery Disease	Management	Nursing Education
1050-1110	**Parenting a child with HLHS**	**Laughter and humour, a serious affair**	**Adults presenting to an ER with CP**	**Models of cath lab staffing and the expanding role of nursing**	**Educating outside the box**
1115-1135	**Review of management of chylothorax in pediatric patients**	**Change in practice patterns in management of diabetic cardiac surgical patients**	**Women's quest for treatment of cardiac symptoms**	**Building people places: Strategies to build capacity for cardiac care delivery**	**Continuing education: Videoconferencing the distance**
1140-1200	**Effectiveness of a RSV immuno-prophylaxis program in children**	**Sepsis in the cardiovascular ICU**	**Feeling unsure in patients living with CAD**	**A survey of Canadian chronic heart failure clinics**	**Hospital-based e-learning for cardiac nurses**

1230-1400 **Lunch in Telus Convention Exhibit Hall & Posters**
1430-1600 **Closing Ceremonies –Keynote: CV Nursing and the Determinants of Health** – Lynne Young

Wednesday October 27, 2004

0800-1600 **CCCN Board of Directors' Meeting**

CCCN Annual Scientific Sessions

Westin Hotel, Calgary Alberta
Sunday, October 24 to Wednesday, October 27, 2004

The information contained within this section of the journal is current as of August 20, 2004. All changes since publication of the preliminary program are noted. Changes occurring after August 20 will be announced at the beginning of the meeting.

The content of each abstract submission has been prepared for inclusion, as submitted by the author(s), without editing by CCCN. A standard format has been adopted by the editor to facilitate presentation.

Sunday, October 24, 2004

CCCN Committee Meetings

0800-1000	Health Promotion Committee	*Aberhart Room*
0800-1000	Research Committee	*Manning Room*
0800-1000	Canadian Journal of Cardiovascular Nursing Editorial Board	*Reid Room*
0800-1000	Professional Education Committee	*Brownlee Room*
0800-1000	Local Planning Committee	*Lougheed Room*
1030-1230	Provincial Directors' Meeting	*Aberhart Room*
1230-1330	CCCN Board of Directors' Meeting	*Aberhart Room*

1400-1600	**CCC Opening Ceremonies and Heart and Stroke Lecture**	*Telus Convention Centre*
1630-1800	**CCCN Annual General Meeting**	*Mayfair, Belaire, Britannia Room*

Monday, October 25, 2004

0800-0920 **Opening Ceremonies and Keynote Address** *Mayfair, Belaire, Britannia Room*
Developing an Evidence-Based Environment in Cardiovascular Nursing – Francine Girard

In December 2000, Dr. Francine Girard was appointed Calgary Health Region's first vice-president and chief nursing officer. As CNO, she has been promoting the development and implementation of policy, practice models, and quality of worklife measures that contribute to the retention of nursing staff, as well as supporting research projects and dissemination of research to promote best practice and optimal health outcomes. Her leadership and passion for excellence in cardiovascular nursing have been cultivated from her experiences spanning two decades in the role of both critical care nurse and patient care manager for the Coronary Intensive Care Unit at the Foothills Hospital, Calgary, Alberta. Dr. Girard was the recipient of the Canadian Council of Cardiovascular Nurses Baxter Award of Excellence for Leadership in Cardiovascular Nursing (2001) and the Alberta Association of Registered Nurses Heritage of Service Award (1999) for her lifelong commitment and dedication to the registered nursing profession and to the health and well-being of others. Dr. Girard holds a bachelor of nursing, a Master's of nursing and a PhD in nursing from the University of Calgary. She is currently a clinical associate professor for the University of Calgary's Faculty of Medicine, Department of Community Health Sciences, as well as adjunct assistant professor in the Faculty of Nursing, University of Alberta.

0920-0935 **Break**

0935-1020 **Concurrent Workshops I**

I. Choices Around Career Progression
(Cardiovascular Nurse Scientist) *MC Strand/Tivoli*
Speaker: Kathryn King, University of Calgary, Calgary, Alberta

II. Pearls of Wisdom: CV Assessment *Rideau/MtRoyal/Lakeview*
Speaker: Karen Then, University of Calgary, Calgary, Alberta

III. Heart and Soil *Eau Claire*
Speaker: Karen Giese, Calgary Health Region, Calgary, Alberta

IV. Dietary Debates: Fads and Fats *Mayfair/Belaire/Britannia*
Speaker: Cynthia Mannion, University of Calgary, Calgary, Alberta

V. Preceptorship in Acute Care Nursing – Panel Discussion *Bonavista*
Moderator: Brenda Paton, University of Calgary, Calgary, Alberta
Panelists: Jeanne Besner, President, Alberta Association of Registered Nurses;
Katherine Stansfield, Director of Nursing, Calgary Health Region;
Lorna Estabrooks, President, CCCN; Anna Svendsen,
Professional Education Chair, CCCN

1030-1115 **Concurrent Workshops II**

I. Choices Around Career Progression
(Cardiovascular Nurse Scientist) *MC Strand/Tivoli*
Speaker: Kathryn King, University of Calgary, Calgary, Alberta

II. Professional Practice in Cardiovascular Nursing *Bonavista*
Speaker: Francine Girard, Calgary Health Region, Calgary, Alberta

III. Adult Congenital Heart Disease: An Emerging Population *Eau Claire*
Speakers: Doreen Fotonoff, and Jeanine Allen-Brunt,
St. Paul's Hospital, Vancouver, British Columbia

IV. CRP and CAD
(Role of Inflammatory Process in Heart Disease) *Mayfair/Belaire/Britannia*
Speaker: Annette Robertson, University of Calgary, Calgary, Alberta

V. Pearls of Wisdom: CV Assessment *Rideau/MtRoyal/Lakeview*
Speaker: Karen Then, University of Calgary, Calgary, Alberta

1120-1240 **Concurrent Sessions I**

• **Arrhythmias**	*MCStrand/Tivoli*
• **Technology**	*Rideau/MtRoyal/Lakeview*
• **Interventional Cardiology**	*Eau Claire*
• **Issues and Trends**	*Mayfair/Belaire/Britannia*
• **Cardiac Surgery**	*Bonavista*

(abstracts below)

ARRHYTHMIAS

1120-1140

The Teaching Challenges of Patients with Implantable Cardioverter Defibrillators (ICD): A Review of the Literature

Pugliese, Carolyn, Adam, Marlene, Taylor, Adrienne, & Momtahan, Kathy, University of Ottawa Heart Institute, Ottawa, Ontario

The number of ICDs implanted at our institution has nearly doubled over the past two years and this number is increasing. This increase has resulted from evidence that patients with left ventricular ejection fraction (LVEF) <35% should be protected from future sudden cardiac death via an ICD implant. The majority of these patients admitted for an elective ICD implant have an average hospital stay of less than three days. This timeframe challenges nurses when assisting patients with the anxiety this intervention brings. It is well-recognized that anxiety in this patient population is common, especially during the first six to 12 months. Many life changes, both real and perceived, occur once an ICD is implanted, adding to the complexity of the teaching needs. In reviewing the literature, searching Medline, Journals@Ovid, PsychInfo, CINAHL and ProQuest, and using the search words implantable defibrillator, ICD combined with anxiety, depression and quality of life, we retrieved qualitative and quantitative studies from 1995-2003 which were both observational and randomized studies. We found little new information to assist us with our current teaching practices.

The challenge for nurses is to tailor their teaching to meet safe nursing practice while identifying those patients whose anxiety is overwhelming. Recent studies have identified a profile of patients most likely to need more intensive teaching and this will be presented for consideration.

1145-1205

The Epicardial Approach for Mapping and Ablation: A New Technique

Wayne, Rita, & Dougall, Heather, University of Ottawa Heart Institute, Ottawa, Ontario

Our tertiary care hospital is participating in a new technique designed to enhance the diagnosis and treatment of atrial fibrillation. Traditional ablation has been directed at foci in the pulmonary veins (PV) to interrupt the electrical conduction responsible for atrial fibrillation. Due to the complex and numerous focal triggers, this approach has been difficult and the outcome has been inconsistent, requiring the patient to return for a second procedure. It has also been reported that the approach produces PV stenosis and that other foci may exist epicardially.

We are currently determining the benefit of an epicardial approach. Twenty procedures will be performed on patients who meet the criterion of a failed endocardial approach to alleviate supraventricular tachycardias.

It is anticipated that the value of the epicardial approach in atrial fibrillation may include facilitated isolation of the foci and decreased patient lab time. In this presentation, we will discuss the criteria for determining the best candidates, advantages and disadvantages of the epicardial approach and describe our patient experience.

1210-1230

Radiofrequency Ablation – Surgical Management of Atrial Fibrillation

Holland, Marg, & Maitland, Andrew, Foothills Medical Centre, Libin Cardiovascular Institute of Alberta, Calgary, Alberta

The incidence of atrial fibrillation (AF) increases with advancing age from approximately one per cent in patients under 60 to an estimated 10% in those over 80 years. This supraventricular tachyarrhythmia has long been considered a benign condition. Evidence shows that AF has a significant impact on quality of life, morbidity and mortality, including a five to seven per cent per year increase in the risk of stroke due to embolization of thrombus formed in the left atrium (in patients who are not anti-coagulated). Treatment has traditionally been medical (rhythm control versus rate control), or surgical using the Cox-Maze operation, a highly successful but long and technically difficult procedure with an associated increased risk of bleeding post-operatively.

Thirty patients with AF associated with mitral valve disease have been surgically treated using a technique called radiofrequency ablation (RFA) – the application

(to the inside of the left atrium) of alternating electrical current to heat target cells, causing irreversible cell damage and permanently ablating the pathways associated with AF. This presentation will include: 1) a brief discussion of AF, 2) a description of the Cox-Maze procedure and its implications, 3) how RFA creates a mechanical barrier to disrupt the electrical activity that initiates and maintains AF, and 4) the surgical procedure and nursing implications for the RFA procedure. Intra-operative video clips and digital photographs will be used to demonstrate to cardiovascular nurses this highly successful procedure which carries significantly less operative risk than the Cox-Maze and, possibly, greater rate of conversion to and maintenance of normal sinus rhythm.

TECHNOLOGY

1120-1140

The Impact of Technology on Communication Between Cardiovascular Nurses and Patients with Heart Failure and Angina

Woodend, A. Kirsten, Momtahan, Kathy, Struthers, Christine, Fraser, Margaret, Stuewe, Lyne, Cheung, Tim, & Sherrard, Heather, University of Ottawa Heart Institute, Ottawa, Ontario

Despite concerns that older patients have difficulty using telehome equipment, most studies have found high levels of patient satisfaction with this approach to care. This analysis uses data from a study of the impact of telehome monitoring on hospital re-admission and was done to determine the acceptability of telehome technology of patients. One hundred and twenty-four (of 249) patients with heart failure or angina were randomized to receive three months of telehome monitoring after hospital discharge. Video conferences were held at least weekly and patients transmitted weight, blood pressure and ECGs to the monitoring centre at scheduled intervals. Electronic nurses' notes were maintained and patients completed satisfaction questionnaires at one and three months post-discharge. Atlas TI was used to conduct a textual analysis of the electronic nursing notes, coding for themes related to the interactions with and reactions of patients and nurses to the use of the telehome technology.

Overall, patients found the equipment was easy to use and reported that obtaining their electrocardiogram was the most difficult. There was a slight trend for more older patients than younger patients to report more difficulty using the equipment. Patients made no comments about the technology as a barrier to care or increasing the depersonalization of care. They were more likely to make comments such as: "It helped me to feel more at ease after leaving the hospital", "There is someone close at hand to answer any questions and offer advice", "It took away a lot of my worries and gave me confidence that I would have answers to my questions". The few negative comments that patients made about the equipment included concerns about scheduling video-conferences and remembering how to use the equipment.

Despite concerns that this older patient population would find the telehome equipment difficult to use and learn, most found it "easy to use" and patients were also extremely satisfied with the care they received using these technologies. Telehealth technologies are a viable means of providing home monitoring to older patients with heart disease at high risk of hospital re-admission in order to improve their self-care abilities.

1145-1205

Challenges in the Care and Discharge of the Ventricular Assist Device Patient: Lessons Learned

Rivers, Leah, Hearty, Sheila, Fulford, Kathy, Clark, Lorraine, & Struthers, Christine, University of Ottawa Heart Institute, Ottawa, Ontario

Ventricular assist devices (VADs) are recognized as a successful surgical option for supporting end stage heart failure patients as they wait for transplantation. Since 1989, the University of Ottawa Heart Institute has implanted a total of 65 VAD implantations (51 Thoratec and 14 Novacor). Beginning in 1997, these patients have been transferred out of critical care to a post-operative cardiac unit. In May 2001, the first patient was discharged home on a Novacor to await transplantation. Now, the ultimate goal is to discharge all patients on devices to their local community while they await transplant. To date, 13 patients (six Thoratec and seven Novacor) have been discharged home.

Promoting quality of life during the transition from hospital to home presents major challenges to nursing care. It is well-known that medical complications such as bleeding, neurological events and infection can occur with these devices. In addition to monitoring for potential complications, numerous other challenges have been encountered such as training spouses and medical professionals who care for the VAD patient in remote locations, educating teenagers, caring for a first-time postpartum mother on a VAD, and helping patients cope with a new body image.

This presentation will focus on the innovative and creative nursing interventions that were trialed and developed in response to the challenges of caring for these patients. In addition, a detailed description of

each device, complications and patient outcomes will be discussed. Tailoring and adapting patient teaching to the unique characteristics of each patient has proven to be critical in decreasing stress and anxiety during the transition to discharge.

1210-1230

Interactive Voice Response: A Patient Safety Net

Kearns, Sharon Ann, Sherrard, Heather, Stolarik, Anne, & Momtahan, Kathryn, University of Ottawa Heart Institute, Ottawa, Ontario

As part of our institution's commitment to continuity of patient care, patients discharged after cardiac surgery have access to immediate professional advice through a 24-hour, one-number-to-call telephone connection, and 90% of them are contacted in follow-up by the cardiac nursing coordinator three to five days after discharge from hospital. Shortened length of stay, increasing acuity, and research indicating that one in five patients experiences complications after discharge have prompted us to enhance this follow-up in an effort to provide standardized and consistent follow-up for all patients discharged from our institute.

Interactive voice response (IVR) autodials patients at scheduled intervals and delivers a list of questions to determine how patients are coping at home. IVR allows us to improve continuity of care by following up on all patients more frequently and identifying those patients who need immediate attention. It also allows us to add to our existing rich database of patient outcomes post-discharge. IVR has been used extensively in marketing research and, to some extent, in the care of patients with chronic disease such as hypertension and psychiatry. This presentation will describe our experience with a pilot project of 100 patients to evaluate its efficacy in the cardiac surgery patient population. It will describe the cost, technical issues experienced and resolved, and patient outcomes and satisfaction with the process. Development and testing of the algorithm (list of questions) used in the automated call-out will also be discussed. After the initial 50 patients were enrolled, modifications were made to the algorithm and some of the project processes.

INTERVENTIONAL CARDIOLOGY

1120-1140

Percutaneous Repair of Paravalvular Leak: Implications for Cardiac Nurses

Lauck, Sandra, Mackay, Martha, & Wilson, Margot, St. Paul's Hospital, Vancouver, British Columbia

Valve replacement surgery is the second most common type of cardiac surgery after coronary artery bypass grafting. One of the complications of valve replacement is the development of paravalvular leaks which may result as a consequence of suture dehiscence or endocarditis. Recently, percutaneous closure has emerged as a non-surgical option for patients with mitral or aortic paravalvular leaks. The benefits of this technique are promising. Patients in this group would otherwise face the prospect of re-operation which is associated with significant mortality. The percutaneous procedure involves placement of an occlusive device in the cardiac catheterization laboratory and is reflective of the rapidly expanding scope of interventional cardiology.

Cardiac nurses in many settings care for patients experiencing paravalvular leaks and they require an in-depth understanding. This presentation will describe the pathophysiology, hemodynamic consequences, symptoms and clinical implications of this complication, as well as the procedure for percutaneous closure. Improved knowledge may lead to improvements in patient teaching, intra- and post-procedure nursing care and anticipation of hemodynamic improvements and complications. In addition, anticipation of potential complications and guidelines for post-procedure care will further guide cardiac nursing practice.

1145-1205

Nursing Education Recommendations for Nurses Caring for Patients during Cardiac Catheterization and Percutaneous Coronary Intervention

Harkness, Karen, & Quirk, Marion, Hamilton Health Sciences, McMaster University, Hamilton, Ontario

Nursing roles for patient care during cardiac catheterization (CATH) and percutaneous coronary intervention (PCI) procedures are expanding in response to increased consumer demand for these procedures, as well as newly published guidelines recommending primary PCI as the most effective treatment for acute myocardial infarction. Nurses must be competent and highly-skilled practitioners to care for these critically ill patients requiring complex technical interventions. Maintaining the provision of optimal patient care within this patient population demands our attention to ensure that nursing education programs keep pace with this rapidly evolving delivery of health care. The purpose of this project was to redesign current orientation and ongoing education programs to ensure they provide the requisite curriculum that is required for nurses to perform competently in this changing clinical

environment. Using a survey design, we conducted a learning needs assessment (LKA) of all nurses (n=36) currently working in the heart investigation unit (HIU) at the Hamilton Health Sciences, Ontario, Canada. More than 4,000 CATH and 2,500 PCI procedures / year are performed at this regional centre. Questions regarding the timing, method, and evaluation of knowledge and skill development for performance of the four key nursing roles (monitor; circulating, scrub; reception and recovery) were included. Valid and relevant curriculum recommendations for orientation and ongoing education programs for nurses caring for this patient population will be presented. The expansion of these nursing roles goes beyond our institution and these results will provide valuable insight for practitioners working in this dynamic clinical setting.

1210-1230

Recovery after PCI – A Descriptive Qualitative Study

Pittman, Lynette G. for ARIN Study Investigators, Calgary Health Region & University of Calgary

Although both physiologic and psychosocial outcomes appear to improve when a nurse follows percutaneous coronary intervention (PCI) patients for one year after their intervention, what elements of that relationship and experience contribute to these outcomes? In the Angioplasty Risk Intervention (ARIN) Study, a prospective randomized controlled trial in adults undergoing a PCI for either stable or unstable angina or non-ST elevation myocardial infarction, 100 patients were randomized to the nurse case-managed (NCM) treatment arm, and 100 patients to the UC control arm (Pittman, Stone, Jones et al., 2001). The one-year follow-up study was designed to compare the effectiveness of a NCM model that combined intensive risk reduction focusing on positive lifestyle change and optimal medical management to UC in the PCI population. The ARIN study comprised a quantitative and a qualitative component. Findings from the quantitative component will be reported elsewhere.

For the qualitative component of the ARIN study, a descriptive qualitative content analysis, based on Sandelsowski (2000), will be used as the analysis strategy to answer the question, "What impact did the NCM intervention have on the participants' emotional and physical recovery from the angioplasty procedure?". The sample included those individuals who responded to the open-ended questions posed in questionnaires mailed at one year and those who wrote more extensive notes or letters. From the data analysis, themes and patterns will be developed which will enable us to have a greater understanding of what aspects of that intervention and relationship in the NCM model best support recovering PCI individuals in making the required adjustments. This is of critical importance if NCM clinics are to exist as viable options in assisting in the recovery of the PCI patient. Final study results will be presented.

ISSUES AND TRENDS

1120-1140

Sailing Uncharted Waters - Navigating the Development of a Collaborative Practice Agreement

Nichols, Natalie L., Oldford, Debbie A., & Svendsen, Anna M., Capital District Health Authority, Halifax, Nova Scotia

At the Queen Elizabeth II Health Sciences Centre in Halifax (QE II), the expanded role nurse (ERN) model has been successfully implemented as an advanced practice role. Over the past decade, ERNs have filled a gap in the acute care setting using delegated medical acts to perform in an advanced nursing capacity. The current health care environment supports a role for nurse practitioners both in primary care (NP) and tertiary care (SNP). To that end, The College of Registered Nurses of Nova Scotia passed legislation in 2001 delineating advanced practice roles in a nurse practitioner framework.

The foundation for practice is a collaborative one and each nurse practitioner must develop his or her individual collaborative practice agreement (CPA) in association with the physicians who are part of the practice. This agreement acts as a contract to define the scope of the SNP's practice. Once this has been completed, approval from the employer and the provincial nursing licensing body must then be secured. At the QEII, three nurse practitioners in cardiology are currently in the process of developing this CPA with 29 cardiologists. This presentation will discuss the evolution of an advanced nursing practice role from an ERN model to an SNP model, the process and pitfalls of developing a CPA, the barriers encountered and the lessons learned in becoming a cardiology specialty nurse practitioner.

1145-1205

In the Grey Zone: Decision-Making Outside the Limits of Practice

Carleton, J.M., Maloney, A., & Mackay, M., Heart Centre, St. Paul's Hospital, Vancouver, British Columbia

Outside of what are considered to be the traditional boundaries of nursing, nurses "in charge" of a unit may make a wide variety of complex decisions that impact greatly on people and systems. In a high-acuity

coronary care unit with a rapidly changing environment, the roles and responsibilities may be ambiguous. Legally, nurses are responsible and accountable to function within a recognized scope of practice. However, in a time-critical situation when responsibility is not clearly defined, nurses may recognize unmet needs and move beyond those boundaries to meet those needs. What should the decision-making process be when faced with such situations of uncertainty?

Using a story-telling format, a scenario involving a missing body, an anxious family, an inquisitive funeral home and a hospital's need to resolve this dilemma quickly will be presented. Resolution of the dilemma was delegated to the charge nurse of the CCU because that was where the patient had expired several days earlier. This triggered a situation in which the responsibilities of the charge nurse fell into the grey zone. A review of literature related to scope of practice, expert nursing, decision-making, nurse and patient advocacy, and "rescuing" will be presented to guide and stimulate discussion. Through interactive facilitation, we will encourage exploration of what steps nurses follow when faced with a similar situation. The learning that occurs will be co-created, however, recommendations for dealing with this uncertainty in day-to-day practice will be offered.

1210-1230

Confidentiality within Cardiac Transplantation: Issues Surrounding the Sharing of Information with Donor and Recipient Families

Smith, Jill, Stevens, Mary, Wiseman, Vicki, Leahey, Michelle, & Murphy, Tami, QEII Health Sciences Centre, Capital District Health Authority, Halifax, Nova Scotia

The news media report the following stories: "A cardiac transplant patient shares their journey to locate the donor family" or "A donor's family locates the recipient of their loved one's heart". Confidentiality of patient information within a transplant program is paramount. Professional standards and code of ethics guide our nursing practice. Similar professional standards and code of ethics shape the policy and procedures for transplant programs. However, the media is motivated to run good human interest stories and many patient/family members are motivated to identify the donor/recipient families.

This presentation will explore the area of confidentiality of patient information in cardiac transplantation. The ethics surrounding privacy legislation, professional standards and consent will be explored as well as the role media and family have in information sharing. This presentation will debate the issue concerning what information should be shared with a donor family and the recipient family. Are we meeting the needs of all involved?

CARDIAC SURGERY

1120-1140

A Change in Practice: Fast-Tracking Cardiac Surgery Patients from the CVICU to the IMCU

Frew, Jackie, Coish, Marilyn, Chisholm, Karen, Harrietha, Carol, Robertson, Lorraine, Matheson, Sandra, & Stevens, Mary, QE II Health Sciences Centre, Capital District Health Authority, Halifax, Nova Scotia

Wait list data for patients awaiting cardiac surgery are maintained and reviewed on a regular basis by our cardiac surgery program. Variances in maintaining standard wait times in conjunction with increasing patient volumes provided the opportunity for our cardiac surgery program to respond to these service needs and re-evaluate how we provided post-operative cardiac care. It was identified that the cardiovascular intensive care unit (CVICU) length of stay post-CABG was remaining constant at approximately 24 hours, but the documented level of care required by these patients was not critical cardiovascular care however, intermediate cardiovascular care. Strategies to streamline patient flow from the CVICU to the intermediate care unit (IMCU) in a timely manner were initiated with the underlying principle that patients were to receive the appropriate care in the appropriate setting by the appropriate care provider. Specific modifications and practice changes were instituted changing our definition of CVICU and IMCU care within the cardiac surgery program.

This presentation will share data on how our program successfully achieved a change in practice of fast-tracking cardiac surgery patients from the CVICU to the IMCU. The education plan for staff as well as the documentation record and physician standing orders that were developed will be highlighted. Staff evaluation focusing on satisfaction and skill level and patient outcomes will be presented to reflect our change in practice.

1145-1205

Hemodynamic and Oxygenation Effects of First-Time Dangling Among Male Patients after Coronary Artery Bypass Surgery

Price, Paula M., Mount Royal College, Calgary, Alberta

A common nursing intervention is to dangle post-operative cardiac surgical patients once they are awake and hemodynamically stable. However, the physiological effects of this procedure are unknown. The purpose of this study was to determine the effects of first-time bedside dangling on mixed venous oxygen saturation (SvO2), heart rate (HR), blood pressure (BP), stroke volume (SV), and arterial oxygen saturation (SaO2) in post-operative coronary artery bypass graft surgery male patients. A prospective, repeated-measures non-experimental design was used. Baseline measurements were obtained on all subjects while supine in bed. Measurements were repeated immediately upon dangling, after five minutes, after resuming the supine position, and again after 10 minutes.

Fifty-five male subjects were recruited into the study. A repeated-measures ANOVA showed a significant time effect for HR ($p<0.001$), SBP ($p<0.001$), ($p<0.001$), MAP ($p<0.001$), SvO2 ($p<0.001$), and SV ($p<0.001$). When post-operative CABG male patients dangle for the first time, they experience orthostatic intolerance. Compensatory mechanisms respond quickly and attempt to maintain cardiac output through an increase in HR and BP. Dangling involves increased oxygen consumption. However, most patients recover to their baseline levels within 10 minutes of returning to the supine position. Nurses must be cognizant that this routine intervention may not be innocuous. Close monitoring is necessary and, with some, a graduated approach to dangling should be considered.

1210-1230

Post-Operative Cardiac Surgery Delirium Guideline

Prodan-Bhalla, N., Chiu, W., Harrigan, J., Sullivan, C., & Wilson, D., St. Paul's Hospital, Vancouver, British Columbia

Whitaker (2002) estimates that approximately 30% of patients undergoing cardiac surgery experience delirium post-operatively. As a result of their delirium, patients experience a longer length of stay and a substantial increase in morbidity and mortality (McKhann et al., 2002). Owing to this high incidence and its effect on post-operative recovery as well as its impact on nursing workload, it is essential that we understand how to recognize post-operative delirium early and offer the most effective treatment for this acute illness. Recognizing this, we did a thorough literature search looking at causes, diagnosis and treatment of post-cardiac surgery delirium. Based on this search, a guideline was developed that allows our team to readily recognize post-operative delirium and intervene as quickly as possible. We are currently performing a chart review to investigate the effectiveness of this guideline. We are tracking length of stay, the use of restraints and the use of narcotics for patients before and after the guideline implementation.

Early recognition of post-operative delirium is most often done by the nurse at the bedside who can see subtle changes in behaviour. The nurse also spends more time with the patient and family developing a therapeutic relationship which may facilitate a better understanding of pre-operative risk factors. It is therefore highly relevant to nursing practice and imperative that nurses are involved in every stage of the patient's care.

1230-1400 **Lunch and Posters** *Telus Convention Centre Exhibit Hall*

Poster abstracts begin on page 34

All posters will be on display in the south and west foyers of the Westin Hotel, adjacent to the lobby. Posters will remain on display all day October 24 and 25. Poster presenters will be available at their poster for questions on Monday, October 25 from 1600-1645.

1420-1555 **Concurrent Sessions II**

- **Risk Reduction** *MCStrand/Tivoli*
- **Heart Failure** *Rideau/MtRoyal/Lakeview*
- **Family** *Eau Claire*
- **Best Practice** *Mayfair/Belaire/Britannia*
- **Acute Coronary Syndrome** *Bonavista*

(abstracts below)

1420-1440

Smokers with Cardiac Disease: A Qualitative Study

Bradfield, Annette, Logan, Jo, Adam, Marlene, & Woodend, Kirsten, The University of Ottawa, Ontario

The purpose of this presentation is to report the findings of a study conducted to gain further insight into the experiences of individuals who continue to smoke following a myocardial infarction (MI). Among individuals who have survived an MI, smoking may be the greatest predictor of mortality, and smoking cessation can reduce the risk of recurrent MI and cardiovascular death by 50% or more. Despite this evidence, 50 to 75% of cardiac patients continue to smoke after a diagnosis of coronary artery disease (CAD). There are few in-depth studies that focus on persistent smoking from the perspective of the Canadian MI survivor. This qualitative study provides a beginning to understanding how these individuals conceptualize healthy or risky behaviour and accept the risks of smoking associated with CAD. From in-depth interviews, codes and significant statements were analyzed for patterns and meanings which were then clustered into themes that confirm and explain current findings from the literature.

Participants perceived stress to be the major cause of MI and smoking was found to play a significant role in coping with stress. Some patients believed the calming effects of smoking were actually beneficial in preventing further heart attacks. Patients who were told their heart attacks were mild did not perceive MI as a major threat and, thus, were not as motivated to make lifestyle changes. The majority of participants were misinformed regarding nicotine replacement therapy and did not believe it would be helpful. These findings highlight the need for nurses to address incongruent perceptions so that interventions can be provided that are meaningful to individuals. Risk must be communicated appropriately to inform individuals of the substantial difference that smoking cessation can have on their prognosis. Personal explanations of illness are embedded in people's belief systems, and interventions aimed at patient views will allow discussions about smoking to start with their concerns.

1445-1505

Insight In-site: What are the Barriers Nurses Perceive in Counselling their Patients about Cardiac Risk Factors?

Carleton, J., Carne, J., & Mackay, M., Heart Centre St. Paul's Hospital, Vancouver, British Columbia

As in any cardiac care program, nurses in our provincial referral centre observe and participate in the management of life-threatening cardiac events. A formal risk assessment and counselling program was introduced to inpatient areas over the past two years, and it is an expected nursing intervention. This entails assessing risk factors, verifying this with the history and laboratory data, and advising the patient about risk factor modification and community resources. The clinical nurse leaders in our CCU observed that risk assessment and counselling were often not initiated or were incomplete. When polled informally, CCU nurses expressed reluctance to counsel patients regarding cardiac risk factor modification.

This has led to the following question: What factors affect cardiac nurses' willingness to engage in risk factor counselling with their patients? A survey of all cardiac nurses employed in inpatient areas of a university-affiliated, quaternary cardiac centre is underway. The survey includes items to determine how often they perform risk assessment and counselling, and what factors they believe affect this. We will report the findings of this survey and provide implications for clinical nursing practice as well as recommendations for future staff programs and research.

1510-1530

Understanding Patients' Understanding of Cardiac Risk Factors

Momtahan, Kathryn, Berkman, Janet, Sellick, Judith, Kearns, Sharon Ann, & Lauzon, Nancy, University of Ottawa Heart Institute, Ottawa, Ontario

The clinical practice committee at our hospital, which is composed of nurses from all units, identified cardiac risk factors as being an area of cardiac nursing care that was not managed well. As a result of this identified need, we sought to: (a) determine what our patients and their families understood about cardiac risk factors, and (b) develop a better way to identify patients' cardiac risk factors to fulfil their needs for education and rehabilitation. A one-day point-prevalence study was conducted in order to determine our patients' and their significant others' level of understanding of cardiac risk factors in general and of the patients' personal cardiac risk factors. There were three parts to the study: patient interviews, significant other (SO) interviews, and an audit of the participating patients' charts. Of the 87 patients who were able to participate, 71 completed the interviews as did 53 significant others. From recall, only 14 patients and 11 significant others were able to define what a cardiac risk factor was and they were unable to identify many general risk factors. However, when given a recognition task where cardiac risk factors were

interspersed with sham factors, the overall mean general knowledge score was 13.6 for patients and 13.9 for significant others out of 16. The correlation between the patients' understanding of their cardiac risk factors and the significant others' understanding of them was reasonably good ($r=0.58$, $p<.0001$) as was the correlation between the SOs' understanding and the charts ($r=0.58$, $p<.0001$). There was less agreement between the patients' understanding and the chart documentation of cardiac risk factors ($r=0.36$, $p<.01$).

This presentation will discuss the findings of the study as well as the change in nursing practice that resulted from the information received from the study. These changes included incorporating questions regarding cardiac risk factors in the nursing history and physical, and developing a 'guidelines applied in practice' audit tool to be completed before the patient is discharged from hospital.

1535-1555

Chronic Disease Management in Cardiovascular Risk Reduction: Incorporating the Chronic Care Model into Clinical Practice

Burns, Susanne, Galte, Carol, & Frohlich, Jiri, St. Paul's Hospital, Providence Health Care, Vancouver, British Columbia

Cardiovascular disease (CVD) is a chronic disease and a major health care burden in Canada. Treatment interventions from current delivery systems have been documented as inadequate. Frequently, risk-reduction interventions do not achieve targeted evidence-based guidelines and result in preventable morbidity, mortality and associated health care costs. Increasingly, it is being recognized that broad changes to health care delivery are necessary for effective guideline implementation. Improving prevention and chronic illness management requires complex, multifaceted approaches to care. Chronic disease management models have been applied to health prevention and promotion. The Chronic Care Model (CCM) is a chronic disease management model that addresses these disparities and facilitates quality improvement through a system-wide approach. The CCM provides a template and a set of organizing principles for instituting basic changes to support care that is evidence-based, population-based, and patient-centred. The components of the CCM include health system, clinical information systems, delivery system design, decision support, self-management, and community resources. We are proposing redesign of the lipid clinic to reflect a comprehensive risk-reduction program. This format of delivery system redesign will expand the role of interdisciplinary team members, incorporate planned visits and structure follow-up to focus on targeted outcomes. This comprehensive initiative targets reorganization to improve quality of care, produce activated patients and practice teams, and reduce overall system costs in CVD reduction.

HEART FAILURE

1420-1440

When Non-Invasive Treatment Fails – Septal Alcohol Ablation (SAA) for Hypertrophic Obstructive Cardiomyopathy (HOCM)

Ramsamujh, Rachael, RN, University Health Network, Toronto, Ontario

HOCM occurs in 1/500 births making it as common as cystic fibrosis. This disease is characterized by thickening of the left ventricle, often involving the septum. Typically, patients have normal systolic function with abnormal diastolic function. The most common symptoms are dyspnea, angina, arrhythmias causing palpitations, presyncope, fatigue and reduced exercise tolerance. If medical treatment fails, then the aim of interventional treatment is to reduce the volume of hypertrophied septal muscle along the left ventricular outflow tract. Until the late 1990s, standard care for failure of medical treatment was surgical myotomy-myomectomy. This is an invasive surgical procedure requiring a sternotomy and general anesthetic to physically thin the overly thickened septum, thus re-establishing a more normal outflow tract diameter. Septal alcohol ablation is performed in our cardiac catheterization lab under conscious sedation with the use of transthoracic echocardiography. The procedural approach is using a femoral vein and artery. The first septal branch supplying the septum is injected with 98% alcohol to cause a controlled infarct of the septal muscle. This dead muscle is replaced with thin scar tissue relieving the LVOT obstruction.

This presentation will give an overview of SAA, the nursing care required pre-, during and post-procedure, potential complications and anticipated benefits. Data from our institution will also be presented and compared with currently published data.

1445-1505

Palliation in End Stage Heart Disease

Svendsen, Anna M., Nichols, Natalie L., & Oldford, Debbie A., Capital District Health Authority, Halifax, Nova Scotia

Palliative nursing care is most often associated with cancer. However, with the changing demographics of our aging population, our approach to providing end-

of-life care for patients with end stage heart disease is rapidly becoming an issue that must be addressed. Nurses play a major role in the lives of patients and families as they deal with the complexities associated with end of life. While acute care settings often dictate aggressive management of cardiac conditions, patients with end stage heart disease require a treatment plan focused on symptom control and improved quality of life. Patients frequently experience fear of pain, suffocation or abandonment before dying. The illness trajectory is very difficult to predict and patients with heart disease often experience several exacerbations where they may be admitted to hospital, followed by periods of stabilization. This unpredictability makes it difficult to access palliative care resources.

End-of-life care also significantly impacts families and community members. In fact, inadequately prepared family members may experience prolonged depressions and somatic conditions. Bereavement care (which is integral to palliative care) enables families to cope more effectively after the death of a family member. Although inpatient end-of-life care may occupy a large part of a nurse's daily assignment, little time is spent on educating health care providers how to effectively manage the global process. This presentation will discuss the optimization of nursing care for patients and families using the Square of Care Model as a conceptual framework that organizes the various components required to provide effective end-of-life care.

1510-1530

A Self-Management Education Program for Patients with COPD and Heart Failure

Staples, Patti A., & Beatty, Gail E.,
Heart Failure Clinic, Hotel Dieu Hospital and Kingston General Hospital, Kingston, Ontario

Chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF) are two chronic conditions associated with high hospitalization rates and emergency room use. CHF is the second highest (Tsuyuki et al., 2003) and COPD is the seventh highest (O'Donnell et al., 2003) cause of hospitalization in Canada. COPD is often a co-morbid condition of patients with CHF and is associated with a greater risk of mortality (Lee et al., 2003). Patients with these two chronic diseases consume a huge proportion of health care dollars in our country and present a great opportunity for nursing intervention.

Self-management programs tailored to help patients monitor important symptoms, take appropriate actions, and avoid situations that will exacerbate their illness have been shown to be effective for increasing quality of life for both CHF and COPD patients. Emergency room visits and hospitalizations have been decreased when nurse-provided education and follow-up have been made available for patients with CHF (McAlister et al., 2001) and COPD (Bourbeau et al., 2003). However, to the authors' knowledge, no program exists that addresses self-management for patients who suffer from both CHF and COPD. The authors have developed a self-management education program for patients with both CHF and COPD that adapts information from established nurse-provided education programs for COPD and CHF. This education program targets the unique situation of patients who suffer from both COPD and CHF. The self-management education program will be highlighted and implications for nurses caring for patients with COPD and CHF will be outlined in our presentation.

1535-1555

Withdrawn

FAMILY

1420-1440

Over-Involved Wives and Distant Husbands: The Role of Patient Sex and Depression in Perceptions of Caregiving after Acute Coronary Syndromes

Purden, Margaret, Frasure-Smith, Nancy, & Lespérance, François
McGill, University, The Sir Mortimer B. Davis-Jewish General Hospital, Montreal, Quebec

Psychosocial trials to alleviate depression in cardiac patients have not been successful, but literature suggests that social support from family may be important. We examined the relationship between depression and within-couple differences in caregiving perceptions during the year following a cardiac event. We interviewed 205 couples (91 women patients) at two months and one year after an acute coronary syndrome (ACS). They completed the Beck Depression Inventory (BDI-II) and the Caregiving Involvement Questionnaire (CIQ), a measure of perceived frequency of specific caregiving behaviours.

Repeated measures ANOVA showed that patient-spouse differences in perception of caregiving involvement varied with the time of the interview, the sex of the patient, and the patient's depression status at

one year (p for three-way interaction adjusted for age, education, baseline BDI-II, and number of medications=0.042). Depressed male ACS patients perceived their wives as significantly more involved in caregiving than their wives reported and this difference increased over the year. In contrast, depressed female ACS patients perceived their husbands to be significantly less involved than their husbands reported and this difference remained constant over the year. Patient-spouse differences in caregiving involvement were significantly less in the couples in which the patient was not depressed. Depression in ACS patients is associated with marked patient-spouse differences in perceptions of caregiving involvement that are not seen in patients who are not depressed. These sex differences in caregiving perceptions underscore the need to develop sex-specific couple-based interventions for depressed cardiac patients.

1445-1505

Living Well – Understanding the Experience of Diabetes and Cardiovascular Disease in First Nations People

Sanguins, Julianne, University of Calgary, Faculty of Nursing, Calgary, Alberta

Diabetes and cardiovascular disease (CVD) are increasing in prevalence and in incidence in Canadian First Nation communities. The purpose of this research was to begin to understand the experience of living with diabetes and CVD for First Nations people. A sample of 15 First Nations people from the Opaskwayak Cree Nation engaged in several one-on-one interviews. Their responses were audiorecorded, transcribed, and then common themes were identified. Almost all participants were diabetic prior to developing CVD. Most participants had changed smoking and drinking behaviours many years prior to developing these chronic diseases. "Living well" was defined as having enough food and shelter, being able to do things for themselves and having the support of their family. Participants spoke of the importance of their relationship with their primary care provider and the role of their family as being important factors in enabling them to live well. Spirituality was also cited as an important factor in helping them to live well. Several participants expressed concern for their grandchildren and future generations in view of the increasing incidence of diabetes and CVD.

This study has identified strengths that enable people of the Opaskwayak Cree Nation to live well. Nurses will be able to use the findings in working with community members in the development of future programs to continue to build community capacity and culturally relevant services.

1510-1530

The Everyday Practice of Family Nursing on Cardiac Medical-Surgical Units

Tapp, D.M., Moules, N.J., Binding, L.L., Fraser, J., & Wong, M.K.P.

Family nursing practice on cardiac medical-surgical units has been greatly influenced by decreased length of hospital stay. Family presence during hospitalization is typically supported and encouraged as family members are recognized as influential providers of emotional support and follow-up care. This qualitative hermeneutic study explored the nature of family-nurse encounters on three cardiac medical-surgical units at two hospitals in a large urban health region. The purpose of the inquiry was to explore how nurses involve family members and address their concerns during hospitalization. Data were generated through participant-observation with 15 cardiac nurses to enable the researchers to witness routine family nursing care. Ten nurses were subsequently interviewed to elicit their impressions of family nursing practice in this setting. Ten families who had received care on the participating units were also interviewed following discharge to explore their experience of family-nurse encounters.

The findings illustrate both the simplicity and complexity of nursing practice with families. Nurses endorsed an ideology of family nursing practice that espoused family involvement in hospital care. However, they struggled to find language that accounted for their efforts to actualize family nursing practices in the context of a system of organized care that is predominantly patient-focused. When present, family engagement and involvement was an inherent thread in nurses' relational practices, significantly informed by nurses' personal experiences and by family efforts to reciprocally engage the nurse. Family perspectives of nursing care offered important understandings of the expectations and impact of nursing involvement with families. Application of these renewed understandings of family nursing practice in cardiac care will be discussed.

1535-1555

A Telephone Lifeline for Cardiac Surgery Patients and Families: An Analysis of their Problems and Concerns

Stolarik, Anne H., Harper, Linda, Kearns, Sharon Ann, & Momtahan, Kathy, University of Ottawa Heart Institute, Ottawa, Ontario

The University of Ottawa Heart Institute provides all patients and families with a 24-hour, one-number-to-call contact with the nursing coordinators should they

encounter any difficulties or have questions. All telephone discussions are documented on a telepractice record, reviewed and filed. With all the advances in cardiac care over the last decade, the patient population and its needs have changed. These changes include older patients with complex comorbidities, patients requiring re-operation, and an increasing complement of valve surgery patients. The purpose of this study was to analyze the telepractice records to identify current patient and family problems / needs as they recover from cardiac surgery. One thousand patient telephone calls received over the last 14 months were analyzed. The primary reasons for calling were information needs (20%), pain (16.9%), medication questions (16.2%), incision concerns (14.9%) and shortness of breath (10%). Eleven per cent of the patients who called were brought back to the institute for assessment.

Pain, difficulty sleeping, fatigue, constipation and incision problems were previously identified as major patient problems in work done by colleagues at the institute. At present, in addition to pain and incision issues, information needs, medication questions and shortness of breath are significant concerns for patients and families. The findings of this analysis will guide us in the enhancement of the education programs provided to patients and families.

BEST PRACTICE

1420-1440

The Evidence in Evidence-Based Nursing - What Do You Do When You Don't Have Any?

Momtahan, Kathryn,
University of Ottawa Heart Institute, Ottawa, Ontario

Historically, randomized control trials (RCTs) have been considered the highest level of evidence in health care. However, since RCTs take many years and a great deal of funding to achieve, they are most often produced in the form of clinical drug trials. In addition, there are many interventions that are unsuitable for testing with an RCT, for instance, when it would either be logistically impossible or unethical to randomize patients, or to have the researcher be blinded to the intervention assigned. Much of the evidence in health care is not based on RCTs, but rather on evidence described by the Canadian Cardiovascular Society (CCS) as evidence produced by "non-randomized contemporaneous controls, non-randomized historical controls, case series and expert opinion". CCS consensus panels are one model for developing best practice guidelines. These panels provide a forum for experts in cardiovascular medicine to meet and grade the evidence available and make recommendations for care.

Cardiovascular nurses have not, to date, had infrastructure for consensus panels and reports. We present a technology-supported solution to the problem of producing evidence for evidence-based cardiac nursing: a web-based survey tool that can be accessed by many centres and the aggregated data made available to the participants. Two survey tools for accumulating expert nursing opinion will be presented: one for best practices associated with the management of patients' cardiac risk factors and another for the care and support of the automatic implantable cardioverter defibrillator patient. This method could also be used to coordinate patient studies, including RCTs, from a variety of cardiac centres. In addition to presenting the two surveys that have been developed so far, this presentation will discuss the procedures required to coordinate studies across several cardiac centres.

1445-1505

Using Point Prevalence as an Effective Method to Accomplish CQI Projects

Kearns, Sharon Ann, Sellick, Judith, & Momtahan, Kathryn,
University of Ottawa Heart Institute, Ottawa, Ontario

Continuous quality improvement (CQI) work is an essential ingredient for achieving the vision and commitment to patient care excellence in a health care environment. Barriers to large-scale, unit-based CQI projects include time, monetary constraints and available personnel. In an effort to achieve our CQI goals and at the same time deal with the practicalities of the environment, our institute has engaged in a number of corporate point prevalence surveys to determine the requirements for the outcome of CQIs.

Point prevalence surveys evaluate outcomes in a population at a single point in time. The advantages of using this method include the development of a formalized data collection tool, inclusion / exclusion criteria, training to ensure inter-rater reliability, the availability of a relatively large random sample of subjects, and a standardized analysis plan. Once developed, these same tools are available for use in ongoing evaluation of interventions put in place after the initial survey.

We have performed four point prevalence surveys in the following four areas: pain, pressure ulcers, restraints, and cardiac risk factors. This presentation will focus on the two cardiac-specific studies, the pain study and the cardiac risk factor study. A survey of pain management in cardiology and cardiac surgery patients was undertaken to evaluate our pain protocols. The

survey results indicated that current practices were meeting the needs of both patient populations, but highlighted other issues such as inadequate documentation of interventions and outcomes. A survey of patients' understanding of cardiac risk factors identified the need to change how we identify and document patients' cardiac risk factors and how we teach patients. We will discuss the logistics required to run point prevalence studies, the results of the pain and cardiac risk factor studies, and discuss the changes in clinical practice that resulted from the findings.

1510-1530

Populating the Acute Coronary Syndrome Pathway with Strength-of-Evidence Ratings: A Framework for Evidence-Based Practice

Momtahan, Kathryn, Pugliese, Carolyn, Adam, Marlene, Frattini, Eileen, Frazer, Nancy, German, Sue, Park, Yang Ja, & Tee, Nancy, University of Ottawa Heart Institute, Ottawa, Ontario

Clinical pathways, sometimes referred to as critical pathways, are used to standardize care and to measure the outcomes of the care provided. Clinical pathways also provide the opportunity to embed evidence-based practice (EBP) into the usual care of patients. At our facility, we developed a framework to do this by computerizing the clinical pathway and linking the elements in the pathway to the evidence. The team that developed the new acute coronary syndrome (ACS) pathway based on evidence included four clinical managers and their nurses, our librarian, advanced practice nurses, our quality and performance manager, two clinical nurse educators and our nurse researcher. The pathway was reviewed by the nursing clinical practice committee and the division of cardiology staff and residents.

The elements on the clinical pathway were given a strength-of-evidence rating similar to the strength-of-evidence classifications adopted by the Canadian Cardiovascular Society and the American College of Cardiologists/American Heart Association. Many of the items in the clinical pathway are linked to the evidence assessed in the ACC/AHA Guidelines for the Management of Patients with Acute Myocardial Infarction and the ACC/AHA Guidelines for Acute Coronary Syndrome using hyperlinks. One of the advantages of using electronic links (hyperlinks) is that not only can links be made to summaries of the evidence, but they can also be made to original documents, algorithms or protocols that have been developed and patient discharge information. This presentation will discuss the infrastructure required for this approach to EBP, the development of the strength-of-evidence ratings, considerations for its implementation, and a demonstration of an ACS pathway with its electronic links to the evidence.

1535-1555

Developing Best Practice Guidelines for Cardiac Surgery

Sullivan, C., Abel, J.G., & Prodan-Bhalla, N., St. Paul's Hospital, Vancouver, British Columbia

Best practice guidelines are defined as "systematically developed statements (based on best available evidence) to assist practitioner and patient decisions about appropriate health care for specific clinical (practice) circumstances" (Field & Lohr, 1990). The goals of practice guidelines include: improved patient outcomes, reduced variation in care, assisting with clinical decision-making and transferring research into practice (RNAO Best Practice Guideline Workbook, 2002). As the tertiary referral centre for cardiac surgery in British Columbia, it is imperative that we provide consistent, up-to-date, evidence-based care for our patients. Nurses are often the coordinators of care and can facilitate use of these guidelines. Based upon the tool kit developed by the Registered Nurses Association of Ontario Best Practice Guidelines Project, we are in the process of developing guidelines for the post-operative management of atrial fibrillation, anticoagulation, pain, hypertension, heart failure and post-operative bleed. Literature reviews were undertaken to collate best practice information on the various topics. The process of developing and implementing these guidelines as well as the guidelines themselves will be presented.

ACUTE CORONARY SYNDROME

1420-1440

Atypical Presentation of Acute Myocardial Infarction: Is There a Difference Between Men and Women?

Rankin, James A., & Then, Karen, L., Faculty of Nursing, University of Calgary, Calgary, Alberta

Acute myocardial infraction (AMI) is a major cause of morbidity and mortality in the Canadian population. It is important that nurses and physicians working in the emergency department (ED) accurately assess patients with clinical manifestations of AMI. The literature is equivocal with respect to typical and atypical presentation of AMI. The aim of the research study was to compare the clinical presentation of AMI in three age groups and in both genders. A preliminary study revealed that atypical presentation increased with age in men (Then et al., 2001). Forty per cent of males in the

oldest age group (75 years +) presented atypically compared with men in younger age groups (p = 0.005). The same trend was not found in any age group with females. The results of the previous study were limited due to the small numbers of women in each group. Therefore, in the present study, the numbers in each age/gender category were increased to n=100 in each of the six groups (three age groups x two genders). A stratified random sample of 600 patient charts was selected and audited using a standardized chart audit tool developed by the investigators.

Preliminary results indicate an increase in atypical AMI presentation in women with age. The incidence of typical and atypical presentation will be presented. Data regarding the duration (time from symptom onset to presentation to ED), lag time (time from presentation to ED triage desk and to complete assessment) and presentation (either typical or atypical) were compared among age groups. The investigators conclude that a significant number of atypical presentations occur, but may be missed due to current questioning and assessment techniques. The implications for future research, professional and lay public health education will also be discussed.

1445-1505

The Chest Pain Myth? Presenting Symptoms in Acute Coronary Syndromes

Comeau, Ann, Jensen, Louise, & Burton, Jeffrey, University of Alberta Hospital, Edmonton, Alberta

The ability to recognize symptoms of acute coronary syndromes (ACS) on initial presentation is key to minimizing morbidity and mortality. The purpose of this prospective cohort study was to compare typical symptom presentation (classic description of angina) and atypical symptom presentation in 100 patients enrolled in an emergency department-based chest pain program. Overall, 14% met the predetermined classic description for typical presentation. Although patients with typical symptoms were more likely to have ACS than no ACS ((2 = 3.877, p = 0.031), presenting with atypical symptoms does not exclude ACS. In fact, of the 31 patients with ACS, a large majority (n = 23/31; 74.2%) had atypical presentations. Male gender, symptom location, and prior history of ischemic heart disease were significantly associated with a diagnosis of ACS. Although more men than women (76.2% versus 70.0%), and more young than old patients (77.8% versus 69.2%) with ACS had atypical presentations, these differences were not significant. There were no significant differences found in symptom presentation or final diagnosis due to age, BMI, ethnicity, or cardiovascular risk factors. Of interest, the nurse practitioner was able to accurately discern the likelihood of ACS based on impression of presenting symptoms (2 = 15.877, p < 0.001). Classic descriptions of ischemic pain did not encompass subtleties of symptom presentation among patients at moderate risk of ACS. Therefore, clinicians should not rely on classic descriptions of angina when evaluating patients with symptoms suspicious for ACS.

1510-1530

Relationship of Hypoglycemic Events to the Intensive Insulin Therapy Protocol

Foudy, Karen M., & Sanford, Kathryn M., Calgary Health Region, Calgary, Alberta

Diabetes mellitus is a significant predictor of mortality post-acute myocardial infarction. The DIGAMI study, using an intensive insulin therapy protocol (IITP) initiated in the CICU post-MI, showed a dramatic reduction in mortality at one year. A similar protocol was instituted in an 18-bed tertiary care cardiac intensive care unit in the year 2000. Anecdotally, nurses have reported a high rate of hypoglycemic events during the night for patients who were on IITP. In researching the validity of these reports, our strategy was to measure the frequency of hypoglycemic events for MI patients while on IITP, evaluate any circadian pattern in the timing of these events, and explore how we compare to other institutions that have implemented similar protocols. A retrospective chart review was done on 73 patients who received IITP over three years. The results showed that more than 30% of patients experienced hypoglycemia at various times of the day, a significantly higher occurrence than typically reported in the literature. It was noted that compliance to titration of insulin based on the protocol was only eight per cent. This review has generated additional questions which we are currently exploring. Why are nurses not following the protocol? Is the protocol clear, or does the protocol need to be adjusted? How long should we keep patients on the protocol? Follow-up measures that have been identified include clarifying the protocol order set, exploring whether further educational sessions are needed to increase nurses' adherence to the protocol, and planning for a repeat chart review in future to examine the impact of these changes.

1535-1555

Innovative Access Strategies: Providing Emergency Percutaneous Intervention for Community Hospital Patients

Wilson, Margot, Mackay, Martha, Lauck, Sandra, & Barr, Sandra, St. Paul's Hospital, Providence Health Care, Vancouver, British Columbia

Damage to the myocardium begins immediately with acute myocardial infarction (AMI), therefore, rapid re-opening of the affected artery is important to reduce

cardiac damage, morbidity, mortality and cost. Research has shown that direct PCI improves mortality rates of AMI patients if the treatment can be provided in a timely manner. Our hospital is a quaternary care referral facility providing specialized and unique cardiac services for several local community hospitals and the province of BC. Traditionally, due to resource and logistical factors, emergency PCI has not been readily accessible to patients at community hospitals. However, we have instituted an innovative, 24/7 emergency PCI program in which there is a "no refusal" policy for AMI patients. These patients are immediately transported to our cath lab and, if stable, transferred back to their base hospital immediately following the procedure. Establishing and maintaining this service has required the ongoing support of the referring hospitals, ambulance service, and coronary catheterization lab.

Descriptive data regarding proximity of referring hospital, timing of admission and return transport, door to balloon time, length of stay at PCI centre, staff and material resource utilization and patient outcomes will be presented from the first year of implementation. The challenges of establishing a service such as this and implications for nursing will be addressed.

Reception and Presentation:
Hoffmann-La Roche Educational Seminar: STEMI Trends and Treatment
Robert Welsh & Alana Campbell

1600-1645 Wine and Cheese Reception *Mayfair/Belaire/Britannia*
1645-1800 Presentation

1900-2300 **Calgary Night @ Cowboys**

Tuesday, October 26, 2004

0730–0830 **Health Promotion Session** *Mayfair/Belaire/Britannia*
Obesity is a Cardiac Risk Factor
David Lau, University of Calgary, Calgary, Alberta

Dr. Lau is a professor in the Departments of Medicine and Biochemistry & Molecular Biology at the University of Calgary, adjunct professor in the Faculty of Kinesiology, Director of the Julia McFarlane Diabetes Research Centre, chair of the Diabetes and Endocrine Research Group and the president of Obesity Canada. Dr. Lau's current basic and clinical research interests include the paracrine regulation of adipose tissue growth in health and obesity, development of insulin resistance in obesity and diabetes, and cellular mechanisms of diabetic vascular complications. His peer-reviewed research is supported by operating grants from peer-reviewed agencies, including the Heart and Stroke Foundation of Canada. Dr. Lau is also actively involved in several clinical drug trial programs on diabetes mellitus and obesity sponsored by the Canadian Institutes of Health Research and various pharmaceutical industry partners. Dr. Lau has published more than 100 scientific papers in peer-reviewed medical journals, periodicals and books. The recipient of awards for his teaching of undergraduate medical students, Dr. Lau continues to lecture widely to practicing physicians and health professionals across the country. He is also actively involved in giving public lectures and forums on obesity, lipids and diabetes.

0900-1030 **Keynote Address** *Mayfair/Belaire/Britannia*
Cardiovascular Risk Reduction in Women:
What is the Evidence?
Judith McFetridge, Dalhousie University, Halifax, Nova Scotia

Dr. Judy McFetridge, RN, PhD, is an associate pofessor at Dalhousie University. She has an extensive background in cardiovascular nursing and cardiovascular nurse practitioner education. Dr. McFetridge's research has involved testing and validation of instruments to accurately assess ambulatory hemodynamic variations, the cardiovascular changes associated with menopause, hemodynamics during stress in men and the impact of the luteal phase (high estrogen levels) and follicular phase (low estrogen levels) on hemodynamic and sympathetic nervous system responses. She has received funding from NIH to study estrogen effects on hemodynamic and endothelial function in women with ischemic heart disease and has published in **Nursing Research**, **Applied Journal of Physiology**, and **American Journal of Cardiology**. Following post-doctoral work, Dr. McFetridge received funding from the National Institute of Health for a four-year study of ambulatory hemodynamics in women with heart disease. Dr. McFetridge serves on the scientific review committee of the Heart and Stroke Foundation of Nova Scotia and she is a reviewer for the **American Journal of Health Behaviour** and the **Journal of Nursing Research**. Dr. McFetridge is also a mentor for FUTURE, the CIHR-funded research training program for cardiovascular nurse scientists.

1030–1050	**Break**	*Westin*
1050-1200	**Concurrent Sessions**	
	• **Congenital Heart Disease**	*MCStrand/Tivoli*
	• **Cornucopia**	*Rideau/MtRoyal/Lakeview*
	• **Coronary Artery Disease**	*Eau Claire*
	• **Management**	*Mayfair/Belaire/Britannia*
	• **Nursing Education**	*Bonavista*

(abstracts below)

CONGENITAL HEART DISEASE

1050-1110

Parenting a Child with HLHS Whose Treatment Includes the Norwood Surgical Approach

Rempel, Gwen R., Faculty of Nursing, University of Alberta, Edmonton, Alberta

Survival rates for children with hypoplastic left heart syndrome (HLHS) have improved over the past years as surgical treatments develop. The purpose of this research was to describe how fathers and mothers parent their child with HLHS in the face of multiple life-threatening surgeries and an uncertain future. Constructivist grounded-theory research methods were used with a sample of 19 parents to describe a process of parenting children who survive the Norwood surgical approach. In-depth interviews were conducted separately with each father and mother, and repeated six to 12 months later. The interviews were analyzed using open and selective coding, theoretical memoing and constant comparative analysis.

The key parenting process for parents was safeguarding precarious survival. Faced with the decision as to which treatment to choose, parents chose the Norwood surgery over heart transplantation or compassionate care as they saw this surgical approach as their child's best chance for survival. Survival was precarious with ongoing uncertainty about the future and periodic crises for immediate survival. Parents safeguarded their child's survival and their own survival as parents through a number of strategies including leaving nothing to chance. As health care professionals, we are in a position to support the parents of children who have "beaten the odds", and to advocate for additional home care and respite services for these families.

1115-1135

Review of the Management of Chylothorax in Pediatric Patients Following Cardiothoracic Surgery

Gelowitz, Tanya, Ray, Lynne, & Hawkins, Lois, Stollery Children's Hospital, Edmonton, Alberta

Chylothorax is a serious complication following cardiothoracic surgery. The purpose of this study was to evaluate the management of pediatric patients with congenital heart disease who were diagnosed with a chylothorax after cardiothoracic surgery at the Stollery Children's Hospital. A retrospective chart review was completed on 17 patients who ranged in age from four to 70 months with a mean of 26 months. Initial therapy for all patients included pleural drainage and nutritional support with either medium-chain triglyceride formulas (MCT) or total parenteral nutrition (TPN). The patients treated solely with a MCT diet (5/17) had complete resolution of chylothorax between four and 28 days with a median of 17 days. Those patients who were placed NPO and managed initially on TPN and then switched to an MCT diet (5/17) had a chylothorax ranging from six to 75 days with a median of eight days. Despite efforts to maintain a reasonable nutrition status, six patients had a weight loss of between 1.5 and 10% during hospitalization. Only two patients had age-appropriate weight gain. Octreotide was used with 8/17 patients. Two of the eight patients received therapeutic dosing of octreotide: that is 20 to 40 mcg/kg/day divided over three doses. These two patients experienced a significant decrease (38% and 68%) in the volume of pleural drainage the day after octreotide was started.

Implications for practice include the need to initiate and monitor a standardized approach to diagnosing chylothorax, dietary management and octreotide dosing. A follow-up study is being planned that will prospectively evaluate the use of octreotide in pediatric patients following cardiothoracic surgery.

1140-1200

Effectiveness of an RSV Immunoprophylaxis Program in Children with Congenital Heart Disease

Merten, Patricia I., Cender, Laurie M., & Human, Derek G., British Columbia's Children's Hospital, Vancouver, British Columbia

Children with congenital heart disease (CHD) hospitalized with respiratory syncytical virus (RSV) have a mortality rate that is two to six times more than those without CHD. Studies have shown infants with CHD benefit from RSV immunoprophylaxis

with a 45% relative reduction in hospitalizations due to RSV compared to the placebo group. Provincial guidelines for the use of Palivizumab in children with CHD were established for the first time for the 2003-2004 RSV season. The groups identified for immunoprophylaxis are those with: congestive heart failure, pulmonary artery hypertension and cyanotic heart disease. BCCH Heart Centre is committed to ongoing research to describe the population and determine the outcomes in children who have received RSV immunoprophylaxis with Palivizumab during the 2003-2004 RSV season. The results of an eight-month prospective descriptive study initiated in November 2003 to evaluate the outcomes associated with Palivizumab will be presented. Preliminary results of this research will be described including: the inter-relationships amongst the RSV risk factors, child and family demographics, cardiac intervention, and patient morbidity and mortality related to RSV immunoprophylaxis. The inter-relationships between parent perception of change in RSV risk factors and parent satisfaction with a newly established RSV immunoprophylaxis clinic will also be addressed. Nursing and parental perceptions of this innovative prevention-based program will be highlighted. Considerations for cardiac nursing practice will be explored.

CORNUCOPIA

1050-1110

Laughter and Humour, a Serious Affair

McElroy, Johneen, Galang, Reina, & Peng, Pearl, St. Paul's Hospital Heart Centre, Vancouver, British Columbia

Humour is difficult to evaluate. However, humour resulting in laughter can produce many physiological manifestations. This presentation will discuss research on the beneficial physiological effects of laughter on the cardiovascular and respiratory systems. The authors' anecdotal experiences on a cardiac surgical ward are supported by the research findings. We will enlist the personal experiences of some cardiac surgical nurses at St. Paul's Hospital who practice using humour during their interactions with patients and with members of the health care team.

Psychologically, humour may provide a strong foundation to help the healing process by alleviating stress. In the cardiac surgery population, an inability to react to humour may be indicative of post-op depression or other social disorders. The literature shows that laughter increases catecholamines and endorphin levels, decreases cortisol secretion and the sedimentation rate which stimulates the immune response (Adams & Mylander, 1998). Laughter increases oxygenation and decreases residual lung volumes (Adams & Mylander, 1998). We have anecdotally experienced a decrease in stress and anxiety of both patients and staff in a highly complex and unpredictable environment on the cardiac surgical ward. It is our belief that the art of using humour in nursing practice may result in positive patient outcomes and improvement in staff morale.

1115-1135

Change in Practice Patterns in the Management of Diabetic Cardiac Surgery Patients

Kee, Cheryl, Tomalty, Julia, & Cline, Jennifer, London Health Sciences Centre, University Campus, London, Ontario

Diabetes and elevated blood glucose (BG) levels in the acute post-operative period have been identified as risk factors for surgical site infections (SSI) and nosocomial infections (Furnary et al., 1999). Consensus guidelines for glycemic control (2002) described by the American College of Endocrinology cite studies reporting BG levels > 11.1 mmol/L within 48 hours of surgery are associated with increased SSI. The literature suggests the use of an insulin nomogram may more effectively control BG levels and reduce the incidence of SSI in cardiac surgical patients.

The purpose of this before-after cohort study was to evaluate the implementation of a standardized insulin infusion protocol on glucose control. Enrolment (n=103) included all known diabetic, post-operative cardiac surgical patients admitted to the intensive care unit (ICU) of an urban tertiary care teaching hospital between October 2002 and April 2003. The protocol was initiated by the ICU nurses to achieve a target BG of 6.1-10 mmol/L. Infusions were discontinued when this was achieved or patients were transferred to the ward.

Results demonstrated target glucose control was improved by 20% in the ICU ($p < .001$) and mean BG was lower in the intervention group ($p < .001$). Blood glucose control remained sub-optimal in 57.5% of ward patients suggesting more aggressive measures be implemented to improve patient outcomes. Consideration should be given to continuation of this infusion on the ward if unable to maintain target range achieved in the ICU.

1140-1200

Sepsis in the Cardiovascular Intensive Care Unit: A Case Study Approach

Knechtel, Leasa, Bussolaro, Patricia, & Sergent, Deborah, Sunnybrook and Women's College Health Sciences Centre, Toronto, Ontario

This presentation will use a case study approach to describe the pathophysiology and management of sepsis in the cardiovascular intensive care unit. Sepsis is defined as a systemic inflammatory response syndrome in the presence of a confirmed or suspected infectious process. Profound clinical manifestations are the result of excessive coagulation, enhanced inflammation, and impaired fibrinolysis. Unabated, these physiologic processes rapidly lead to multi-organ dysfunction and death. Current management strategies focus on supportive measures and the restoration of normal homeostasis, including the recent use of activated protein C (Xigris™).

Patients undergoing cardiac surgery are at risk of developing intra-/post-operative infection. Predisposing risk factors include diabetes, obesity, type of cardiac procedure performed and length of cardiopulmonary bypass pump time. When infections lead to severe sepsis and septic shock, prompt identification and complex intensive management are required to prevent serious morbidity and mortality. This presentation will review risk factors for infection as well as the pathophysiology and management of sepsis in the cardiac surgical setting. In order to enhance understanding, a patient case study from our cardiovascular intensive care unit will be utilized, highlighting the patient's clinical deterioration, management and dramatic positive outcome.

CORONARY ARTERY DISEASE

1050-1110

Adults Presenting to an Emergency Department with Non-Traumatic Chest Pain: A Case Series

Marple, Beth, Jensen, Louise, & Tymchak, Wayne, Faculty of Nursing, University of Alberta and University of Alberta Hospital, Edmonton, Alberta

Non-traumatic chest pain is one of the most common complaints of adults presenting to the emergency department (ED). Most of the data available on non-traumatic chest pain and the variables that affect its diagnosis and management are from the United States and, therefore, may not accurately reflect the Canadian scene. The purpose of the retrospective health record review was to describe the characteristics, diagnostic evaluation, management strategies, and outcomes of adults with non-traumatic chest pain presenting to the emergency department of the University of Alberta Hospital. Included in the sample were 522 patients (57.5% men), and differences on the basis of gender, age (>65 years versus ≤ 65 years) and final diagnosis (MI versus non-MI) were examined. Findings consistent with the literature included the proportion of patients presenting to the ED with chest pain diagnosed with MI (14.8%), a history of diabetes or angina associated with presentation delay, and gender-specific symptoms associated with a chief complaint of chest pain. In contrast to the literature, female gender was associated with a decrease in presentation time, although it took longer for women than men to have an electrocardiogram (ECG) and to be seen by a physician. Mortality rate for women in the MI subgroup was nearly double that of men. Patient outcomes, specifically those involving the length of time spent in the ED and patient disposition are specific to this cohort, but serve as a baseline for further investigation with the goal of improving patient satisfaction and patient care.

1115-1135

Women's Quest for Treatment of Their Cardiac Symptoms: Exploring a Neglected Risk Factor

Russell, Heather E., Mount Royal College, Calgary, Alberta

Heart disease is a leading cause of death and disability for women. However, little is known about women's experience in seeking care for cardiac symptoms. An interpretive descriptive study using conversational interviews with five women on two occasions each was done to explore this experience. These experiences were complex, and were characterized by tenuous understandings of their symptoms and uncertainty in accessing and negotiating the health care system. Chief among these findings is the reciprocal nature of care-seeking encounters in which women and health care professionals are constrained by traditional patriarchal scientific thinking. Impeded care-seeking endeavours increased the risk to women's health by delaying the diagnosis and treatment of their cardiac disease. Three themes emerged: understanding their symptoms, avoiding humiliation and interacting with health care providers.

Findings suggest that, as health care providers, we should be vigilant in ensuring that in our encounters with women, we maintain a respect for women's experiences, a respect for women's expertise and insight into their illness, and a respect for the emotional

context of cardiac symptoms. Genuine dialogues in a non-hierarchical milieu between health care recipients and health care providers should be encouraged in care-seeking encounters through a mutual expectation of reciprocity and negotiation as well as respectful attention to women's experiences of cardiac symptoms.

1140-1200

Feeling Unsure in Patients Living with Cardiovascular Disease

Tuson, Wendy, Brubacher, Linda, Benson, Kaye, Qasim, Abdiqani, Thomson, Nadia, & Allen, Jeanine, University Health Network, Toronto, Ontario

Feeling unsure is a common experience in everyday life. Quantitative research has shown that patients living with cardiovascular illness experience high levels of feeling unsure and this can affect quality of life and coping methods. However, little qualitative research is available to further describe the experience of feeling unsure in the cardiovascular patient population. The purpose of this study is to discover the structure of (that is, to describe) the lived experience of feeling unsure for patients with cardiovascular disease. Forty-eight participants who are willing to speak about their experience of feeling unsure are being recruited from among patients who have either congenital or acquired cardiovascular disease, and who are either admitted to a cardiology ward or being seen in outpatient cardiac clinics at a large university-affiliated teaching hospital in Ontario. The phenomenological-hermeneutic Parse research method is being used to answer the research question: What is the structure of the lived experience of feeling unsure? The processes of the method are: dialogical engagement (data-gathering method), extraction-synthesis (analysis-synthesis process), and heuristic interpretation. Using stories and examples from the participants' descriptions, the findings will be discussed in relation to how they enhance understanding about nursing knowledge and inform the practice of nurses in the care of persons with cardiovascular disease. It is anticipated that the findings will improve nurses' understanding of patients' experiences of feeling unsure and will guide practice by increasing nurses' sensitivity to patients' perspectives, concerns, and priorities in relation to cardiac illness, thus supporting compassionate and respectful care.

MANAGEMENT

1050-1110

Models of Cath Lab Staffing and the Expanding Role of Nursing: A National Comparison and a Local Initiative

Lauck, Sandra, Mackay, Martha, Buller, Elizabeth, Wilson, Margot, & Barr, Sandra, St. Paul's Hospital, Vancouver, British Columbia

Rapidly changing technology, increased demand for percutaneous coronary interventions (PCI) and the advent of other innovative, highly specialized procedures in the cardiac catheterization laboratory (CCL) present a continuous demand for cardiac health providers. CCL staffing models, nursing education and competencies vary significantly across Canada. In an era of health care renewal, performance measurement and accountability, there is administrative pressure to justify resource utilization by assessing staffing mix, clinical productivity and ability to respond to change.

We will report findings from a detailed survey of Canadian CCLs undertaken to compare staffing models, complexity of work and orientation process. The findings provided a useful assessment of current trends and informed the next step in the improvement of our cardiac centre. Recently, we made changes to our quaternary CCL organization aimed at improving access to care and resource utilization. We expanded the scope of nursing practice to include responsibility for hemodynamic monitoring and case documentation traditionally done by cardiopulmonary (CP) technologists. This resulted in the elimination of the CP technologist position and allowed nurses to function to their full scope of practice. Concurrently, the staffing model was redesigned to form a common pool of nurses who work in both the short-stay bed area and the CCL itself. We will describe the process we used to implement this expanded role as well as nursing satisfaction with the redesign and perceived level of competency. This change has been positive, and we believe others may benefit from discussion of the successes and the lessons learned.

1115-1135

Building People Places: Strategies to Build Capacity for Cardiac Care Delivery at Trillium Health Centre

Rinaldi, Lina, & Pogue, Pam,
Trillium Health Centre, Mississauga, Ontario

As a result of the health services restructuring committee decision in 1998, Trillium Health Centre (THC) launched a successful advanced cardiac services (ACS) program by November 2000. This program has met increasing service demands and acuity challenges and has achieved established targets while becoming recognized nationally and internationally as a leader in myocardial revascularization, arrhythmia / heart failure management, and clinical cardiology. The success of this program is attributed to the energetic, passionate, and innovative team that came together to provide tertiary

level "world class" cardiac services in a community setting. Role clarity among formal leaders including engagement of physicians with shared values, purpose and principles is fundamental for this philosophy to be successful. The CNO/professional practice executive and people support team at THC work collaboratively with the cardiac services health system team to recruit and retain staff and ensure they are actively involved in creating a healthy, healing workplace. Since 2000, there has been minimal attrition of staff in specialty areas (<0.3%) including: the cardiac cath lab, cardiac operating room and cardiac intensive care units. Staff availability has not been problematic in meeting the challenges of increasing patient acuity and service needs for ACS in fully staffed units. This presentation addresses strategies and highlights stories to enable the vision including: advanced practice and expanded nursing roles (ACNP/CNS/RNFA), enhanced clinical support, front line leadership development, implementation of unit-based councils, and a variety of recognition strategies that foster a healthy, healing work culture and successfully build capacity at THC.

1140-1200

A Survey of Canadian Chronic Heart Failure Clinics: Is there Room for Improvement?

Kaan, A., Clark, C., & Edmonds, M., The Heart Centre, St Paul's Hospital, Vancouver, British Columbia

An interdisciplinary approach to the management of heart failure (HF) has become the standard of care in Canada. In response to the growing demand for such a service, new CHF clinics are forming across the country.

Well-established clinics are often asked about optimum staffing ratios, challenges encountered and lessons learned. This paper will present findings of a survey sent to nurses belonging to the Canadian CHF Clinics Network with e-mail access (n=23). The survey included 12 questions that examined models of care, staffing levels, clinic size, support networks, job descriptions and perceived ideal patient loads.

To date, a total of eight (33%) surveys have been returned. Most clinics utilize a physician-directed, nurse-managed approach, incorporating a chronic disease management (CDM) framework. Responses indicate that most clinics are staffed by highly experienced RNs functioning in an advanced practice-type role. The majority of clinics have support from allied health professions, however it appears that clerical support in most clinics is inadequate which is reflected in the amount of time nurses spend performing clerical duties (around 25%). Three of the eight respondents had no clerical support at all.

In Canada, most established HF clinics utilize an interdisciplinary approach, based on the CDM model. Most respondents would benefit from additional clerical support.

NURSING EDUCATION

1050-1110

Educating Outside the Box: Building Unique Partnerships to Optimize the Management of Pediatric Cardiac Patients

Cockett, Stella E., British Columbia's Children's Hospital, Vancouver, British Columbia

With advances in the medical and surgical treatment of congenital heart disease, more children with complex cardiac problems are being managed in their home communities than ever before. Nurses in primary and secondary health care settings are often unfamiliar with the specialized care needs of these children, especially following cardiac surgery. Moreover, nurses working in tertiary settings may be unaware of the challenges and obstacles to providing care when the context of care switches from a tertiary centre to a local hospital or home-based care. A merging of health care professional expertise improves the management of these complex patients and, ultimately, optimizes patient care.

Now, an exciting initiative within our partnership program addresses the educational needs of the community health care professionals, provides invaluable information for the advanced practice nurse, and transforms the relationship between them into one of an educator partnership within the community context. During regular community partnership (outreach) clinics, the cardiology nurse clinician from Children's Hospital and the pediatric nurse educator from the community hospital collaborate to present a case study on a child with a specific heart condition who lives in the local community. Both hospital and community-based health care professionals are invited to attend and take an active role in planning ongoing care for the specific patient, and for ongoing guidelines in general for other children with specific care needs.

1115-1135

Continuing Education: Videoconferencing the Distance

Elgie-Watson, Jeanne, & Boston, Janine,
University Health Network, Toronto, Ontario

The need to provide timely, effective and efficient continuing education programs continually challenges those responsible for education. In our tertiary and quaternary university-affiliated institution, cardiac nurse educators are responsible for providing education to nurses in the heart and circulation program. In 2000, quarterly half-day education symposia were initiated for nurses utilizing internal experts from our multidisciplinary health care team. Speakers are drawn from cardiology, cardiovascular surgery and vascular surgery.

Program objectives began as a method of providing continuing education to nurses, improving communication within our multi-site, multi-unit program, showcasing internal experts, and an opportunity for our educational and clinical teams to network. The symposia have been well-attended internally and feedback has been positive. Our objectives have evolved to include a broader mandate that contributes towards organizational global impact. This has been achieved by videoconferencing three symposia in 2003-2004 to up to 15 hospitals within the North Network, a health care network that stretches from Toronto to central and northern Ontario. This presentation will provide attendees an opportunity to learn about an innovative approach to continuing education. This presentation will highlight implementation, evaluation and future directions for the program. Major conclusions from this presentation include: 1) videoconferencing is a strategy for sharing resources and knowledge with organizations that are geographically remote and/or who may lack the opportunity to develop first-hand expertise, 2) this method of knowledge transfer does not detract from the local site experience, and 3) this method enhances local site learning through the natural exchange created by collegial dialogue.

1140-1200

Hospital-Based E-Learning for Cardiac Nurses: The Development of a Multi-Media Cardiac Physical Assessment Tutorial

Momtahan, Kathryn, Sellick, Judith, Frazer, Nancy,
Havey, Sheila, & Pugliese, Carolyn,
University of Ottawa Heart Institute, Ottawa, Ontario

E-learning can be defined as the use of electronic technology and media to deliver, support and enhance teaching and learning. The advantages for the learner are on-demand availability, self-pacing, and interactivity. Advantages of e-learning for the organization include flexibility in when and where the content is delivered and consistent delivery of material. However, these advantages have to be weighed against the challenges associated with hospital-based e-learning which include the hardware and software required to deliver the material, and the initial investment in e-learning products, or the resources required to develop in-house e-learning materials.

Over the course of a year-and-a-half, we have developed an e-learning tutorial on cardiac physical assessment. The purpose of developing an e-learning tutorial was to: (a) explore the ways in which e-learning could be developed and delivered to our nurses with portability and 24/7 access to it, and (b) provide the nurse educators with training in the development of e-learning materials. There is approximately 75 minutes of content. The tutorial was developed in html and it incorporates illustrations, Flash animations, text, voice-overs and video. The tutorial includes the following modules: cardiac physical assessment, cardiac cycle, heart sounds, lung sounds, assessing JVP, blood pressure, evaluating pulses, and abnormal findings. This presentation will describe our development experience with a web-based e-learning project, the partnerships with multi-media developers, recommendations for hospital-based e-learning for cardiac nurses and a demonstration of the e-learning tutorial.

1230-1400 **Lunch and Posters** *Telus Convention Centre Exhibit Hall*

Poster abstracts begin on page 34

All posters will be on display in the south and west foyers of the Westin Hotel, adjacent to the lobby. Posters will remain on display all day October 24 and 25. Poster presenters will be available at their poster for questions on Monday, October 25 from 1600-1645.

1430-1600 **Closing Ceremonies & Keynote Address** *Mayfair/Belaire/Britannia*
Cardiovascular Nursing and the Determinants of Health
Lynne Young, University of Victoria, Victoria, British Columbia

Dr. Young will discuss the social indicators that place individuals at risk for cardiovascular disease, with a particular focus on the interface between gender, education, race, and income, and explore the social determinants of heart health using case examples from research and inquiry on women and cardiovascular health toward formulating a potential causal pathway to cardiovascular disease from policy to death. She will then explore the questions: How is health defined in the cardiovascular field? How do dominant definitions of health in the CV field resonate with and differ from nursing's definition of health? What would be the implications of CV nurses' adopting a broader definition of health? To their caring work? To their relationships with other CV professionals? To CV nursing? The presentation will conclude with an exercise that invites participants to explore the question "What relevance do the social determinants of cardiovascular disease have for nurses who are in the trenches recovering patients from surgery?" Using McKinley and Marceau's (2000) Upstream, Midstream, and Downstream model as a guiding framework, we will envision how nurses using an expanded definition of health might shape their practice at multiple points along an upstream/downstream continuum of cardiovascular care using the exemplar of low income, lone mothers, and women and heart transplantation to catalyze thinking.

Wednesday, October 27, 2004

0800-1600 **CCCN Board of Directors' Meeting** *Barclay*

SOUTHLAKE
REGIONAL HEALTH CENTRE

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As we undertake a number of exciting initiatives, including the recent opening of our new six-storey building, we look forward to welcoming more Nurses to our Regional Cardiac Care Program team – a young team that is quickly earning widespread respect for its commitment to excellence. Opportunities are currently available in the following areas: **CVICU, Cardiac Operating Room, Cardiovascular Surgery Inpatient Unit, Medical Cardiology Unit** and **Coronary Care Unit.**

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Poster Abstracts

Please note that all posters will be on display for the entire CCCN program.

Quality of Life and Burden of Disease for Adults with Congenital Heart Disorders

Fofonoff, Doreen, Kirkham, Kyle, Sanatani, Shubhayan, Thordarson, Dana, & Kiess, Marla, Heart Centre, St. Paul's Hospital, Providence Health Care, Vancouver, British Columbia

Advances in surgical techniques and patient care have decreased mortality rates and increased the life expectancy of patients with serious congenital heart abnormalities. Most are living into adulthood following palliative surgeries such as the Fontan and Mustard procedures. As these patients live longer, it becomes important to understand the impact that increased life expectancy has on the quality of life (QOL) of these individuals. Investigation in this area remains limited and the majority of work to date has examined health status and health-related QOL in children and adolescents.

The purpose of this study was to investigate the self-perceived health status and quality of life (QOL) for adult patients followed in an adult congenital heart clinic who have undergone the Fontan and Mustard procedures, using a quantitative ex post facto research design. The patients were asked to complete a questionnaire package that included the Ferrans and Powers Quality of Life Index (QLI) questionnaire and a modified Short Form Health Status questionnaire (SF-36). These measures allow us to quantify patients' perceptions of their health and the impact of their conditions in several important areas. Data from the questionnaires returned will be analyzed to determine whether any significant differences exist between the groups. This research will provide insight for the cardiovascular nurse and other health care providers into the QOL of patients who have had the Fontan and Mustard procedures.

Angioplasty Competency Checklist: A Tool for Maintaining Competency in the Cath Lab

Graham, Cathy, Toronto General Hospital, University Health Network, Toronto, Ontario

The cath lab is an area that requires a specialized orientation, mainly in the area of angioplasty. Unlike orientation to CCU where a program can be incorporated with a local college, no program exists for a cath lab orientation. Upon completion of an orientation, the nurse is left to learn on the job, leaving her the responsibility of searching out further education to advance her skills in order to become competent. The nurse relies on her fellow co-workers to guide her in areas that remain weak. Realizing a gap in the monitoring of the nurse in her competency level, a competency checklist for angioplasty was formulated. Using Patricia Benner's theory of novice to expert and client-centred care, the angioplasty competency checklist was created.

This checklist is a tool to help guide a novice or expert in the areas that require further education in order to gain and/or maintain competency. This provides information for the clinical educator in areas the orientee/staff nurse lacks proficiency. Patricia Benner's theory provides the tool which will govern the nurse to reach the expert level. The theory has incorporated timelines which help the nurse understand at which level he/she should be functioning after a period of time. The client-centred care theory maintains a client focus. This focus is especially important in a procedure area setting and, for this reason, the focus on the assessment of the client in the checklist is important. The goal of this checklist is to provide a tool that can be used in the cath lab to help the nurse understand her areas of expertise and areas needing development.

Updating Cardiac Procedure Guidelines Using Evidence-Based Practice

Hoffman, Jan and the Cardiac Task Force, London Health Sciences Centre, London, Ontario

Restructuring within our city resulted in cardiac care services being administered by one institution. This created an opportunity to evaluate our current practices and compare the similarities and differences at both sites. A task force involving staff from the various cardiac areas was created. The purpose of the task force was to review current practices for patients undergoing cardiac catheterization and percutaneous coronary intervention (PCI), to review the evidence for our current practice

and to design new guidelines based on these data. As well, the mandate for the task force included creating standardized documentation and patient education booklets for the different procedures.

Several practice guidelines were changed to reflect current research including two hours of bedrest for all procedures, eliminating the majority of shave preps and providing oral fluids up to two hours prior to the procedure. Included in our documentation forms were better mechanisms to record complications related to the procedures, as well as areas to document patient teaching and telephone interviews. The purpose of this poster is to describe our experience in developing and implementing these changes. This process has assisted nurses to provide evidence-based practice and enhance the quality of patient care.

Making a Difference – The Registered Nurse First Assistant

McKenzie, Robyn L., St. Mary's General Hospital, Kitchener, Ontario

On July 7, 2003, the first cardiac surgery case was done at St. Mary's General Hospital in Kitchener, Ontario. Two registered nurse first assistants (RNFAs) were among the several health care professionals recruited to be a part of the cardiac surgical team. The purpose of this poster is to bring awareness to this relatively new nursing role in Canada. The RNFA is an experienced operating room nurse who has completed additional formal education. This role is not limited to the intra-operative phase, however spans throughout all areas of peri-operative care, establishing continuity of care for the patient. At St. Mary's General Hospital, the RNFA pre-operatively meets with the patient and family to answer any questions or concerns, is involved with pre-operative teaching and begins to build a rapport. The RNFA is a communication link between patients, nursing, perfusion, anaesthesia, surgeon and other members of the cardiac multidisciplinary team. Intra-operatively, the RNFA is a consistent and reliable assistant for the surgeon and a resource for nursing. The RNFA performs post-operative nursing assessment, wound surveillance and continued patient education.

Positive feedback on the RNFA position from patients, family and staff has assisted in evolving this nursing role. The RNFA is one of many health care professionals at St. Mary's General Hospital working collaboratively as part of a team to enhance patient care and improve outcomes of our cardiac patients.

Coronary Artery Bypass Graft Patients' Pain Perception During Epicardial Pacing Wire Removal

Roschkov, Sylvia, & Jensen, Louise, University of Alberta Hospital, Edmonton, Alberta

Coronary artery bypass graft (CABG) surgery remains a common method of revascularization, with about 24,000 cases performed across Canada in 2000 (Heart and Stroke Foundation of Canada, 2003). During cardiac surgery, surgical insertion of temporary epicardial pacing wires (EPWs) is standard practice. Currently, many cardiac surgical programs are developing policies that enable nurses to remove EPWs. Yet, little is known about patients' experiences during EPW removal. Specifically, procedural pain and sensations during EPW removal have not been well-studied. The purpose of this study was to determine the intensity and quality of pain and sensations experienced during the procedure of EPW removal for coronary artery bypass (CABG) patients. A descriptive study incorporating the McGill Pain Questionnaire-short form (MPQ-SF) and visual analogue scales were used with 100 CABG patients requiring EPW removal. The pain intensity was reported as mild (47%) while the main sensation experienced was pulling (70%). Age, gender, previous cardiac surgery and EPW removal experience, and use of analgesics did not influence the pain and sensations experienced. However, subjects who had EPWs removed on post-operative day five or less did present with higher MPQ-SF affective and combined scores ($t = 2.29$, $p = .024$; $t = 2.15$, $p = .034$, respectively). Nurses can assist the CABG patients in preparation for EPW removal by providing accurate information that the procedure is mildly painful with the sensation of pulling.

Cardiac Transplant Programs: A Canadian Perspective

Stevens, Mary, Wiseman, Vicki, Smith, Jill, Leahey, Michelle, & Murphy, Tami, QEII Health Sciences Centre, Capital District Health Authority, Halifax, Nova Scotia

The last decade has seen the waiting lists for human organs and tissues grow to proportions that mean many people will die before an organ can be found. These alarming statistics make the issue of the lack of organs for donation a pivotal concern for those involved in the area of organ transplantation. National standards and criteria guide the donation and transplant process. However, there is variability within each transplant program with respect to allocated resources to support transplantation. This presentation will provide a review of the Canadian Cardiac Transplant Programs with respect to resources available to support organ donation and cardiac transplantation. Specifically, the poster will summarize the resources that exist for donor families as well as the recipient and

their family members. Policy and procedures around the consent process, patient confidentiality in sharing of information between donor/recipient families and bereavement care will also be identified. Documented outcomes will be shared in an attempt to highlight initiatives that are making a difference in cardiac organ donation.

A Multidisciplinary Patient Education Pathway Post-Cardiac Surgery: Meeting the Needs of Diverse Patient Populations

Marville-Williams, Cecile, & Buchok, Slavka, Trillium Health Centre, Mississauga, Ontario

A multidisciplinary patient pathway was developed for our cardiac surgery patient unit (CSPU) to assist patients and families to understand and participate in their post-operative recovery. This quality initiative was developed in response to the CSPU decreasing its length of stay for coronary artery bypass grafting, with or without valve surgery, from five days to four days post-op. Patients and families indicated that they were not prepared for a fast-track approach to discharge.

The cardiac surgery patient pathway emphasizes a collaborative multidisciplinary approach to care. This tool allows patients and their families to monitor their progress and actively participate in their care in preparation for discharge. In addition, the patient pathway has been translated into several languages to meet the needs of our diverse ethnic patient population. This presentation will describe the collaborative process used by the multidisciplinary team to develop the patient pathway. Also, we will share details of the pathway which may be helpful for colleagues in other cardiac surgery centres.

Same-Day Transfer for Urgent Cardiac Surgery: One Year Later

Burlacoff, Lisa, Sammut, Lynn, & Walsh, Cathy, Trillium Health Centre, Mississauga, Ontario

Trillium Health Centre provides advanced cardiac services, including cardiac surgery, for patients in Halton and Peel regions of Ontario. Since its inception in November 2000, the cardiac program has been pressured to provide equal and timely access to cardiac surgery for patients within Trillium and from the regional hospitals. In February 2003, Trillium implemented the same-day transfer initiative to improve access to cardiac surgery for urgent regional patients. Initially launched as a pilot project with one of our partner hospitals, the same-day transfer process has now been expanded to include many of our regional partner hospitals.

This presentation will describe the development of our same-day transfer process. We will discuss how we were able to change practice at Trillium and also within our regional partner hospitals. We will provide data from our one-year follow-up evaluation, including patient and partner hospital satisfaction surveys. Lastly, we will present the lessons we learned, modifications we have made to Trillium's same-day transfer process and implications for other cardiac centres.

Evaluating the Potential for Vasoconstrictive Mediated Events with the Use of Exogenous Vasopressin in Post-Cardiac Surgery Patients

McFadden, Tammy, Cruickshank, Sophia, Wint, Carolyn, Kismatali, Norish, & Jarett, Euda, Sunnybrook & Women's College Health Sciences Centre, Toronto, Ontario

Exogenous vasopressin (anti-diuretic hormone) has been used in our CVICU for the past five years as an adjunctive treatment in select post-cardiac surgery patients. Vasopressin is used to treat hypotensive states resistant to traditional catecholamine pressors/inotropes, such as adrenalin and/or nor-adrenalin. This poster presentation will explore whether vasopressin, a potent vasoconstrictor, increases the incidence of vasoconstrictive mediated events such as myocardial, mesenteric, renal and distal limb ischemia/infarct. Current literature suggests that vasopressin can be administered safely and effectively without adverse effects. Results of a retrospective data analysis of patients from our cardiovascular intensive care unit will be discussed. The data analysis compares outcomes of patients treated with vasopressin to those treated with other vasoconstrictors.

Favourable data could encourage greater acceptance of the use of vasopressin as an effective means of treating patients with resistant hypotension.

The Modified Maze: An Alternative Approach to the Treatment of Atrial Fibrillation

Cruickshank, Sophia, Richards, Leslie, Kismatali, Norisha, & Wint, Carolyn, Sunnybrook & Women's College Health Sciences Centre, Toronto, Ontario

This presentation will describe the modified maze procedure as performed in our health care institution. Advantages of the procedure, potential complications, as well as post-operative care in our cardiovascular intensive care unit will be discussed. Implications for patient care and nursing practice will also be discussed. Atrial fibrillation, a dysrhythmia that affects thousands annually, can often lead to debilitating and sometimes lethal consequences. Patients with chronic atrial fibrillation risk a five-fold higher morbidity and a two-fold higher mortality than those in normal sinus rhythm. Traditional approaches in the treatment of atrial fibrillation, such as pharmacological therapy

and/or cardioversion, have not proven to be successful in maintaining permanent conversion. The maze procedure, an open surgical procedure, was originally developed in the late eighties to eliminate re-entry pathways which cause atrial fibrillation. Multiple incisions create a "maze effect" and scar tissue is generated. This scar tissue creates barriers to abnormal electrical signals, effectively ablating aberrant pathways. Electrical impulses are forced to travel via only one major route and the procedure causes no permanent damage to the sinus node. More recently, modified maze procedures have been developed. These procedures have proven to be up to 80% effective in converting and maintaining patients in normal sinus rhythm. The modified maze is a promising alternative in the treatment of atrial fibrillation that has been resistant to other modes of therapy.

Primary PCI: A Blessing or a Curse?

Voelzing, Lynn C., Bois, Mary-Lou, & Pierre, Jo Anne, St. Mary's General Hospital, Kitchener, Ontario

Primary percutaneous coronary intervention (PCI) is becoming the preferred treatment for acute coronary artery occlusion as favourable mortality and re-intervention rates are being reported. Similarly, clearly demonstrated benefits of patients' mortality, morbidity, and improved quality of life can be attributed to the provision of cardiac education. The purpose of this presentation is to describe the challenges faced by the coronary care unit (CCU) nurses and potential risk issues for the post-MI patient when these two valuable therapies need to be combined.

The presentation will begin with a detailed description of the issues as they relate to this patient who often does not appreciate the reality of his/her medical condition since "quick fix" primary PCI has been provided. Next, the challenges faced by the CCU nurses charged with providing the cardiac education will be discussed, including a review of the correlative literature. Finally, education strategies will be revealed that have been effective in providing retainable information in a less-than-ideal critical care environment and in a time of crisis for the patient. The presentation summary will review several major conclusions, including: that many patients who undergo primary PCI minimize the impact of their disease, that shorter stay in hospital, most spent in the CCU, provides less time for effective education, and that practical strategies, if implemented, may achieve the same outcomes for these patients as those who have had more conventional MI therapy and cardiac education. As cardiac care evolves, it remains absolutely essential to arm post-MI patients with the information they require to make the lifestyle choices that optimize their quality of life. Issues need to be identified and innovative strategies are required to ensure attainable outcomes for the cardiac patients of today.

Initiating Change with a Positive Outcome – Conscious Sedation for Radial PCI

Ridley, Brenda, University Health Network, Toronto General, Toronto, Ontario

Nurses face challenges in a rapidly changing environment with technological growth. The introduction of radial approach percutaneous coronary interventions (PCI) along with conscious sedation management necessitated development of policies, education and implementation of practice changes for nurses. Change in practice can be met with anger, resistance or non-compliance of new standards.

Nurses' initial feedback was negative, as the implementation of radial PCI coincided with the expanded practice of conscious sedation monitoring. Nursing care and monitoring pre-, intra- and post-procedure involved a more comprehensive assessment and Q15 min versus monitoring. A quality assurance program was set up to evaluate our practice at UHN.

The purpose of this presentation will be to reveal the benefits of conscious sedation management with adherence to professional and regulatory standards. Chart audits revealed non-compliance to standards for pre-/post-procedural sedation monitoring in all areas of our interventional program. Verbal orders were routinely taken in the cath lab, leaving the patient and nurse at risk for medication errors or discrepancy in treatment from what was ordered to what was given.

Chart audits were done pre-, during and post-introduction of conscious sedation management with a resultant increase in compliance to standards from 35% to 100%. A further benefit to the quality assurance program has been the heightened awareness of adherence to standards as determined by professional and regulatory bodies around documentation and verbal orders. Best practice guidelines can be used to guide the nurse's practice to be patient-focused, safe and compliant with professional expectations. Changing practice resulted in positive outcomes for the patient, nurse and a new way of documentation of conscious sedation.

Innovative Solutions for SARS Recovery

Dunham, Carol, & Ridley, Brenda, University Health Network, Toronto, Ontario

In April of 2003, the SARS crisis closed hospitals in downtown Toronto to the majority of patients. One type of care impacted was interventional cardiology. Cardiologists could not cross sites, patient transfers required lengthy administrative procedures, staff who weren't quarantined were forced to work in protective apparel and forced to deal with mask allergies,

discomfort related to the extra layers and the fears of getting SARS themselves. Patients were afraid to come to hospital and those who did come had to endure their hospital procedure and stay without the support of family and friends visiting. One tertiary referral hospital cath lab whose funding is directly related to the volume of patients treated had significant downtime, denying care to several patients during SARS. This jeopardized 2,100 angioplasty patients, 225 patients requiring congenital interventions in the cath lab, 600 cardiac transplant patients requiring cardiac biopsies, and 800 patients with electrophysiologic abnormalities.

The purpose of this presentation is to demonstrate how nurses facilitated the Toronto General Hospital, providing services to patients while recovering lost cath lab revenues once the SARS crisis was over. Several innovative strategies were implemented with the collaboration of nurses from the CICU, cath lab, cardiac short-stay unit and supported by nursing leadership, support staff and cardiologists. Eighty per cent of the patients denied interventional cardiac services during SARS were treated and the hospital minimized its lost revenue.

Hypertrophic Obstructive Cardiomyopathy: From Bench to Bedside Nursing – Understanding the Clinical Spectrum and Treatment Options

Jimeno, Socorro, University Health Network, Toronto, Ontario

Hypertrophic obstructive cardiomyopathy (HOCM) is a heterogeneous, congenital disorder characterized by variable genetic manifestations with different levels of severity of the disease and clinical presentation. It is regarded as a highly complex disease process capable of having important clinical consequences and causing premature death in some patients. However, it should also be recognized that other patients experience little or no disability and even lead normal lives. It is, then, very important to recognize this heterogeneity and to direct the medical management at the predominant abnormalities.

Increase in research studies and knowledge about the disease have led to the development of advance investigative techniques available to clinicians in the treatment of this complex disorder. More recently, the clinical findings of molecular genetic studies changed our basic knowledge and understanding of HOCM which made an impact on the clinical implications, management therapy of the disease and the prognosis of the patient. This knowledge base will be paramount to nurses in their role as an advocate for the patient in preparing them for their procedure, helping them maintain their disease and condition and giving them support in making an informed decision about their treatment.

This presentation will provide an overview of the latest clinical findings, diagnostic procedures and treatment options for the disease and, utilizing a case study, will discuss the specialized nursing care for this patient population during their cath lab admission.

Drug Eluting Stents without Plavix®: An MI Waiting to Happen

Genus, Uchenwa, Camacho, Yolanda, & Adarna, Eleanor, University Health Network, Toronto, Ontario

The cardiac short-stay unit at the Toronto General Hospital currently sees approximately 1,400 percutaneous coronary intervention (PCI) patients per year. Since the advent of drug eluting stents (DES), three patients were re-admitted with stent thrombosis in a one-month period. These patients were non-adherent to their clopidogrel (Plavix®) regimen because of the cost of the medication or lack of knowledge about its significance after DES implantation.

The purpose of this presentation is to describe a systematic interdisciplinary approach employed by nursing, pharmacist, social work and physicians to target non-adherence in PCI patients.

A screening tool was developed to identify potentially non-adherent patients. An action plan is implemented to aid patients with financial constraints. To curb the knowledge gap of the importance of Plavix®, patients undergo extensive medication teaching initiated in the pre-admission clinic by nurses, and are discharged with a medication schedule, with teaching reinforced by the pharmacist. PCI patients are prescribed Plavix® for durations of up to one year. This medication is crucial to prevent stent thrombosis and ensure the long-term clinical success of the procedure, especially for patients who have received a DES. The short stay associated with the PCI procedure, after which patients often perceive that the PCI procedure has 'fixed' them and are prepared to stop their medications, exaggerates non-adherence. Subsequent initiation of our interdisciplinary approach has reduced the occurrence of stent thrombosis requiring a repeat PCI procedure at our centre.

The Efficacy of Oral N-Acetylcysteine and Intravenous Hydration in Decreasing Contrast-Induced Renal Dysfunction in Patients with an Acute Coronary Syndrome Undergoing Coronary Angiography

Seyon, Rajamalar, Jensen, Louise A., Williams, Randall G., Ferguson, Ian A., & Hegadoren, Kathleen M., Royal Alexandra Hospital, Edmonton, Alberta

Oral N-Acetylcysteine (NAC) has shown a benefit in reducing the occurrence of contrast-induced

renal dysfunction (CIRD) in select populations with renal insufficiency undergoing coronary angiography, but has not been examined in patients with acute coronary syndromes (ACS). A double-blind, randomized controlled trial was performed to assess the efficacy of NAC in decreasing the incidence of CIRD in patients with ACS and renal insufficiency undergoing coronary angiography. With similar intravenous hydration protocols, 20 patients received NAC (experimental group) and 20 patients received placebo (control group). Renal function was evaluated through serum creatinine (Cr) and creatinine clearance (CrCl) at baseline, 24 and 48 hours following coronary angiography. The experimental and control groups were similar at baseline on demographic and clinical characteristics and pre-existing renal insufficiency (Cr = 132.63±42.49 (mol/L and Cr = 129.56±39.58 (mol/L respectively; CrCl = 34.89±10.65 ml/min and 36.44±12.73 ml/min respectively). CIRD (increase in Cr ≥ 44 (mol/L or >25% above baseline within 48 hours) occurred in 10%, with 2.5% in the experimental group and 7.5% in the control group for an absolute difference of 5% (p=0.30). There was no difference in Cr at 24 hours between the experimental and control groups (130.16±42.15 (mol/L and 129.89±36.29 (mol/L respectively) and at 48 hours (141.95±49.52 (mol/L and 139.50±43.83 (mol/L respectively); similarly with CrCl at 24 hours (35.50±10.31 ml/min and 36.25±11.68 ml/min respectively) and at 48 hours (32.79±11.06 ml/min and 34.00±11.84 ml/min respectively). These results suggest that this cohort gained no added protection to renal function with the use of NAC.

Reduction of Delay and Cancellation Time for Patients Waiting Cardiac Surgery in Community Hospitals

Rebeyka, Darlene M., Roschkov, Sylvia, & Hudson, Dianne, University of Alberta Hospital, Edmonton, Alberta

Substantial variability exists in the degree of comprehensive pre-operative assessments performed on patients in community hospitals awaiting cardiac surgery. Inconsistent pre-operative assessment frequently leads to cancellation of surgery at the time of transfer. Last minute cancellations and delay in timely surgery create a whole host of negative sequela including: undo physical and psychological stress for the patients and family members, increased financial burden, negative post-operative outcomes, and unnecessary scheduling changes. Cardiovascular nurse practitioners and physicians involved in patient care upon admission to the University of Alberta noted trends in incomplete data leading to cancellation or delay of timely surgery. Suspected carotid disease with no prior investigation, pre-operative respiratory dysfunction of unknown origin, limited vein conduit options due to severe varicose veins, and failing to discontinue select medications prior to surgery caused the greatest number of delays or cancellations.

This clinical paper will discuss the development and implementation of a community pre-operative assessment tool as part of a continuing quality of care project. An 11-item checklist was created to improve access and streamline the transfer process to a tertiary care setting. Since its inception, numerous community hospitals across Alberta have implemented the use of this tool. There has been a noticeable improvement in the flow of patient care from initial cardiac presentation to the day of surgery. Timely cardiac surgery through comprehensive assessment has been achieved, thus reducing the negative effects of postponed surgeries on patients, families and the health care system.

Chylothorax Following Cardiothoracic Surgery: A Review of the Literature

Gelowitz, Tanya, Ray, Lynne, & Hawkins, Lois, Stollery Children's Hospital, Edmonton, Alberta

The purpose of this literature review was to examine current evidence related to the etiology, optimal management and clinical outcomes of chylothorax, with particular emphasis on children receiving cardiothoracic surgery for congenital heart disease. Chylothorax is a serious complication following cardiothoracic surgery. The accumulation of chyle in the pleural space can result in numerous complications such as metabolic disturbances, nutritional deficiencies, malnutrition, respiratory dysfunction, dehydration, immunosuppression and, consequently, increased susceptibility for infections. As a result, children with chylothoraces require prolonged hospital stays for pleural drainage and maintenance on a low-fat diet or total parenteral nutrition. Etiology of chylothorax in children following surgery for congenital heart disease cannot be simply explained by injury to the main thoracic duct as most procedures are done through a median sternotomy. Chylothorax can also occur secondary to systemic venous hypertension as a result of increased right-sided cardiac pressure. Conservative management currently includes the use of pleural drainage along with a low-fat diet with medium-chain triglycerides, or keeping the child NPO with total parenteral

nutrition. If attempts at conservative management fail, surgical repair is often considered.

Implications for practice include the need for nurses to have an understanding about chylothorax, its adverse effects, and the conservative and surgical management. This understanding is necessary in order to initiate and monitor a standardized approach to managing chylothorax in order to provide the best care possible to children and their families.

Expanding the Role of the Bedside Nurse: Removal of Epicardial Pacer Wires

Clark, Lorraine, University of Ottawa Heart Institute, Ottawa, Ontario

Epicardial pacer wires are routinely inserted during cardiac surgery in order to facilitate temporary pacing. The medical staff removes these wires at our facility. Traditionally, the schedule of removal was the morning of discharge, which often resulted in an unnecessary discharge delay and some unease for the patient. In an attempt to improve discharge planning, it was felt that nurses could assume this role. There is limited literature available to direct us in making this practice change, however one regulating body in the U.S. suggests that it is within the scope of practice for nurses to remove epicardial pacer wires. The only articles available indicate that this practice is limited to advanced practice nurses or to nurses in expanded roles. A cross-country survey indicates that, in Canada, a similar pattern exists. In preparing for this practice change, it was decided to add this skill to nursing for all cardiovascular nurses on our unit. Through collaboration, a medical directive was developed and successfully implemented. This presentation will highlight the results of the literature review and the findings of our cross-Canada survey as well as the elements comprising the medical directive. An evaluation of the implementation will also be presented.

Glycemic Control in ACS: Digging Through the Digami Protocol

Mackay, Martha, The Heart Centre, St. Paul's Hospital, Vancouver, British Columbia

Since its publication in 1996, the DIGAMI study protocol for maintaining glycemic control in patients with acute myocardial infarction (MI) has garnered considerable interest. In-hospital and one-year mortality benefit was demonstrated in diabetic patients whose blood glucose levels were tightly controlled with an intravenous insulin infusion during the acute stages after MI and subcutaneous insulin for at least three months after MI. In all respects, these findings were very compelling. First, it is known that diabetic patients have a poorer prognosis following AMI than do non-diabetic patients, primarily due to the higher incidence of fatal reinfarction. Therefore, it is desirable to try to reduce this rate. Also, being relatively easy and inexpensive, such an intervention seemed particularly elegant.

As is often the case, the reality of clinical practice has not necessarily mirrored the unreal world of the research environment. A DIGAMI-like protocol for glycemic control in ACS patients has been implemented in our quaternary-level coronary care unit (CCU), but this has not been without some difficulty. We will report on the implementation of this protocol in terms of measures of efficiency (time to target glucose, frequency of calls for medical input), safety (incidence of hypo- and hyperglycemia) and feasibility (system and other barriers encountered in implementation). It is hoped that recommendations stemming from this experience will assist others in designing an effective protocol for this much-needed intervention.

Intravenous Nitroglycerine Weaning Protocol: A Coronary Care Unit Initiative

Dowers, Sandra, Foggett, Ruth, Gaterell, Sue, Lisle, Marjorie, & Wallace, Sheila, Trillium Health Centre, Mississauga, Ontario

Nitroglycerine intravenous weaning practices varied in our coronary care unit (CCU). This resulted in an inconsistent standard of practice, delays in patient transfer out of the CCU and a potential inability to respond to and accommodate critically ill cardiac patients. The purpose of the initiative was to develop a nurse-initiated best practice protocol, which standardized unit practice and facilitated early transfer of appropriate patients out of the CCU to improve access to advanced cardiac services for community and regional patients. The method included a telephone survey of nitroglycerine weaning practices at other hospitals, a literature review, as well as a survey and time study of present weaning practices in our CCU. In collaboration with pharmacy and physicians, a standardized protocol was developed, and the pre-printed physician order sheet was revised to support the nurse-initiated protocol. Staff education was important to ensure consistent patient assessment, safe practice and integration of the protocol into unit routines. The standardized unit protocol decreased delays in the cycle of decision-making, improved patient outcomes, increased staff satisfaction, decreased admission and transfer wait time, and improved access to advanced cardiac services for acutely ill patients.

A Surprising Collaboration! Cardiology and Health Records Achieve Quality Patient Care Outcomes

Foggett, Ruth, Sookras, Ancy, & Rizvi, Rukhsana, Trillium Health Centre, Mississauga, Ontario

Patient volumes and acuity increased dramatically on the cardiology telemetry units when our community hospital became a regional advanced cardiac centre. Surprisingly, this was not reflected in the documentation and health records coding of patient acuity. As a result, it was difficult to justify requirements for increased clinical resources. It was identified that the clinical cardiology team need to work more closely with health records to improve the accurate documentation of patient diagnosis and co-morbidities. This would also assist the multidisciplinary team to accurately identify patient discharge dates and better anticipate and improve the discharge planning process. To achieve these goals, the cardiology and the health records teams collaborated on a pilot project. A health records coder worked on the unity with the clinical leader, multidisciplinary team and physician. The team utilized new documentation tools, daily patient care rounds, and chart reviews, to communicate relevant clinical data to the health records coder. This enabled the coder to communicate current, accurate data on patient diagnosis, co-morbidities and expected length of stay to all team members utilizing an updated coding summary sheet on each patient chart.

The pilot project provided the opportunity for cardiology and health records to work together and learn from each other to benefit patient care. It facilitated best practice in timely patient education and discharge planning. The pilot project demonstrated increased complexity as reflected by health records data and enhancement of potential funding credits for each patient enhanced by $405. Improved patient throughput also improved access for the community and region to advanced cardiac services. The success of the pilot resulted in the addition of a health records coder to the cardiology team enabling sustained clinical outcomes.

Discovering Subaortic Stenosis During Pregnancy: The Challenges

Havey, Sheila, Kealey, Marysue, Mcabe, Linda, & Lacelle, Marsha, University of Ottawa Heart Institute, Ottawa, Ontario

Subaortic stenosis is a congenital heart defect that, while present at birth, may not be diagnosed at that time. More typically, it is discovered during early childhood or during adolescent growth. The stenosis involves a narrowing below the aortic valve causing resistance to forward ejection of blood from the left ventricle. Other defects such as bicuspid aortic valve, coarctation of aorta, and ventricular septal defect can be associated with subaortic stenosis. Patient complaints such as light-headedness and dyspnoea or detection of a murmur can precipitate diagnosis. Management of these patients requires lifelong monitoring of exercise limitations, endocarditis prophylaxis, pregnancy planning and employment challenges.

Initial diagnosis determined during the course of pregnancy presents both fetal and maternal care challenges. The decision to correct aortic stenosis with a planned surgical intervention or to wait to intervene when deterioration occurs is complex involving multidisciplinary input of cardiologist, cardiac surgeon, neonatologist, obstetrician and nursing. Timing of the surgical intervention is the most critical decision. Coordination of cardiac and obstetrical nursing support is key to the provision of care within the cardiac operating room. This case presentation will outline the maternal and fetal health history, rehearsal for potential outcomes during the operative phase, and the course of events that ensued for a patient with a pregnancy of 28 weeks gestation scheduled for cardiac surgical repair of aortic stenosis. The issue faced at our institution and the resolution that occurred will be discussed.

Clinical Pathways: Too Standard for All Cardiac Surgery Patients?

Bolton, Tammy, & Batterink, Marie, Heart Centre, St. Paul's Hospital, Vancouver, British Columbia

Clinical pathways boast the ability to enhance patient care, reduce length of stay, foster clinical teamwork, improve patient satisfaction and continuity of care. However, it could be argued that the focus on the typical pathway patient leaves the complex patient without the same attention.

In our experience, the clinical pathway has proved to be a useful tool to provide standardized evidence-based practice for the average cardiac surgery patient. Unfortunately, cardiac surgery patients frequently have complex health issues, i.e., heart failure, diabetes and renal failure, predisposing them to increased risk for such problems as infection, post-operative confusion or CVA. These patients, undoubtedly, are not on the pathway. In today's world of specialty medicine, these complex patients have several health care providers overseeing their care resulting in different opinions and, at times, treatment recommendations. Compounding the issue is the nursing shortage that has left nurses without the time to provide holistic care. Novice nurses do not yet have the confidence to advocate with

physicians. Coordination of care diminishes, length of stay increases, communication breaks down, patient satisfaction declines and, ultimately, quality of care suffers. Now that we have established the clinical pathway tool as the standard of care for our typical open-heart patients, it is time to focus on our complex patients. Our plan is to increase communication and coordination of care for complex patients through the use of methods that can provide individualized care. For example, multidisciplinary patient rounds or care plans. These approaches will hopefully provide a base for increasing communication, learning and networking. A literature review, in addition to our own experiences, will provide the basis for our presentation.

So your CHF Clinic is Full? Strategies for Building Capacity with Limited Resources

Kaan, Annemarie, Clark, Catherine, & Edmonds, Margaret, Heart Centre, St Paul's Hospital, Vancouver, British Columbia

Heart failure (HF) clinics provide patients with the dual benefits of receiving evidence-based care as well as building self-management skills.

The HF clinic at our centre was established in 1999 with the primary goal of reducing mortality and morbidity in HF patients. Since then, the HF clinic has become a provincial centre for complex HF management. Patients actively attending the HF clinic increased from 122 in 1999 to 893 at the end of 2003. This has occurred in the setting of a limited budget and minimal increase in staffing, allocated space and time.

Innovative strategies needed to be developed to provide the best possible care while working within the described constraints. The HF team identified areas where efficiencies could be found. Referral patterns were reviewed and the criteria adjusted to include primarily local patients and patients from outside our local area with unstable heart failure. Visit schedules were reviewed and a nurse-run clinic was implemented to perform uptitration of medications and triage of selected patients. Finally, it was noted that patients continued to attend clinic after they had been optimized on therapy. A formal discharge plan is to be implemented at the first visit. For those who have no follow-up support, a Dr only maintenance clinic was implemented. This paper will further describe these strategies and present an initial evaluation.

Evaluation of Cardiac Surgery in Individuals with Heart Failure: A Continuous Quality Improvement Project

Werry, Terina, Kaan, Annemarie, Prodan-Bhalla, Natasha, McGladrey, Janis, & Rankin, Diane, The Heart Centre, St. Paul's Hospital, Vancouver, British Columbia

As part of a continuous quality improvement (CQI) initiative, an evaluation of care of patients with heart failure (HF) undergoing cardiac surgery was performed. Objectives: to identify gaps in preparation of HF patients added to the surgical wait list, to ascertain whether HF patients are discharged on appropriate medical therapy and, finally, to determine if follow-up plans have been clearly communicated to the patient. Sample: individuals with an ejection fraction (EF) of less than or equal to 40% who had undergone cardiac surgery between April and September 2003. Methods: retrieval of aggregate demographic data from the BC Cardiac Registry as well as retrospective chart review. Findings: 457 patients underwent cardiac surgery during the defined time period, of which 94 (21%) had a documented EF of ≤40% (mean 29.95% ± 7.93%). Of these, 32 individuals were randomly selected for more detailed chart review and 15 of these patients underwent subsequent phone interview. Pre- and post-operative medication utilization showed above-average utilization of beta-blockers and ACE inhibitors, and below-average utilization of digoxin and diuretics. Sixty-six per cent of patients (10/15) reported receiving pre-operative information, 73.3% (11/15) reported receiving discharge instructions and 93.3% (14/15) reported receiving information about discharge medications. Forty per cent (6/15) of patients reported receiving heart failure self-management education at discharge and only 20% (3/15) reported receiving information on signs of HF decompensation. Conclusion: this evaluation confirms that, overall, patients are well-prepared for their surgery and subsequent discharge, however, improvements can be sought in the area of HF education as a next step in this CQI project.

Patient Learning Checklists: Moving Away from a "One Size Fits All" Approach to Patient Education

Ytsma, Anita, Lester, Charlene, Michaud, Susan, & Cooper, Nancy, Sunnybrook and Women's College Health Sciences Centre, Toronto, Ontario

In the current era of early revascularization, the average length of stay for patients with acute coronary syndromes (ACS) has decreased, yet their learning needs have not changed. As well, there is a multitude of educational resources available to assist with patient education while there is less time for nurses to match resources appropriately with patients' learning needs. How can educational programs offer information consistently throughout this shorter hospital stay according to a patient's individual learning needs? At the Schulich Heart Centre, the answer is a "patient learning checklist".

This poster presentation will outline the purpose of a patient learning checklist that was developed for patients with ACS. The poster presentation will include a brief literature review on patient learning checklists, the theoretical framework of patient-focused care and adult learning theory. The design of the learning checklist incorporates these theoretical principles by giving patients the opportunity to identify their preferred learning needs and learning styles. The choice of learning resources available in the patient checklist reflects a continuum of learning aid preferences such as videos, written material, group sessions and one-to-one discussion. Implementation of the patient checklist and implications to nursing practice will also be presented. The creation and implementation of the patient learning checklist is a new approach to providing patient education. A pilot study conducted on this checklist (n=18) generated extremely positive feedback. Patients stated the checklist helped them address areas they would not have thought of and patients felt prepared for discharge. This checklist has helped to create an environment of learning within our program that is patient-driven rather than health care provider driven.

Paraplegia in the Coronary Artery Bypass Graft Surgical Patient: A Case Report of a Rare Event

Scherr, Kimberly D., Urquhart, Gayle L., Eichorst, Christina M., Bulbuc, Cate F., & Modry, Dennis L., University of Alberta Hospital, Edmonton, Alberta

Paraplegia is a rare, but devastating complication following cardiac surgery. Few published case reports have documented spinal cord ischemia, haematoma, embolism, aortic dissection, counterpulsation with an intra-aortic balloon catheter, use of internal mammary conduits, and long cardiopulmonary bypass times as contributing factors to post-operative paraplegia. Though elderly post-operative cardiac surgery patients who have peripheral vascular disease and/or hypertension appear to be particularly vulnerable to this problem, clinical research in support of this remains scarce.

The purpose of this presentation is to discuss the pathophysiology of paraplegia following coronary artery bypass grafting (CABG) including spinal cord anatomy, incorporate a case study approach in understanding this phenomenon, and describe nursing intervention in the paraplegic post-CABG patient. In doing so, hopefully, cardiovascular nurses will improve their knowledge and understanding of this potential complication and become more astute in early recognition of its signs and symptoms and appropriate nursing intervention. Understanding this concept is important to nursing practice because, as patient advocates, nurses are in an excellent position to ensure that patients and their families are aware of this risk and have realistic expectations of cardiac surgery and associated long-term outcomes. In turn, this may help to facilitate the acceptance of post-operative paraplegia and its devastating, life-altering consequences.

Does Controlling the Temperature of Fluid Intake Affect Nausea in Post-Operative Cardiac Surgery Patients? A Pilot Study

Donahue, M., Dowey, H., Korol , N., Bayes, A., & King, K.M., Foothills Hospital, Heart Health Program, Calgary Health Region, Calgary, Alberta

Up to 50% of cardiac surgery (CS) patients can experience post-operative nausea. The etiologies of post-operative nausea in CS patients are many. We hypothesized a potential contributor may rest in a common practice: encouraging intake of ice chips at extubation. Our purposes in undertaking pilot work were to examine: (1) the feasibility of administering a randomly assigned, temperature-controlled fluid intake protocol over the first three post-operative days, (2) the utility of specified outcome measures (e.g., index of nausea, vomiting, and retching) over a six-week follow-up, and (3) preliminary descriptive data upon which to refine sample size calculations for a clinical trial. A sample of 60 consenting cardiac surgery patients (30/30 usual care/temperature-controlled intake) will be enrolled. Recruitment has been readily accomplished, but there have been significant challenges to the patients as well as nursing and dietary staff in enacting the protocol. A number of intervention patients have opted out of the study — especially when seeing their counterparts receiving ice water and, most importantly, popsicles. Once the pre-specified number of patients has completed the protocol, data analyses will include describing the sample, as well as examining potential covariates and outcomes data.

It is imperative that those working at the front line with CS patients are making practical care decisions based on evidence. No studies have been undertaken to specifically evaluate the effect of ingested fluid temperature on patients' experience of nausea. This is an important opportunity to provide empirical evidence for practice.

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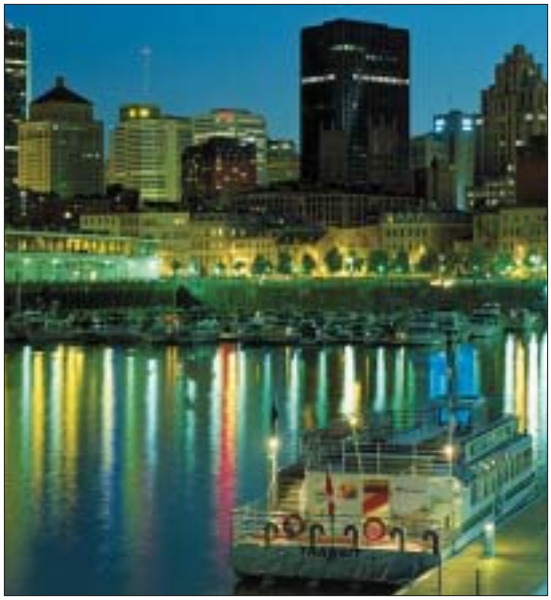

Assemblée annuelle et séances scientifiques du CCINC

Montréal, Québec: du 22 au 26 octobre 2005

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Nous invitons la soumission de communications traitant de n'importe quel aspect des soins infirmiers cardiovasculaires ou cérébrovasculaires, lesquelles seront présentées dans le cadre de l'assemblée annuelle et des séances scientifiques du Conseil canadien des infirmière(iers) en nursing cardiovasculaire sous la forme d'un exposé oral ou d'affiches. Les communications feront l'objet d'une évaluation par les pairs avant d'être réparties en deux grandes catégories : recherche et autre que la recherche. Une communication sera incluse dans la catégorie « recherche » si elle décrit un aspect quelconque de travaux de recherche originaux. La catégorie « autre que la recherche » comprend les sujets théoriques, les applications cliniques, les analyses d'articles, etc. (autrement dit, les communications qui ne décrivent pas des travaux de recherche originaux).

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