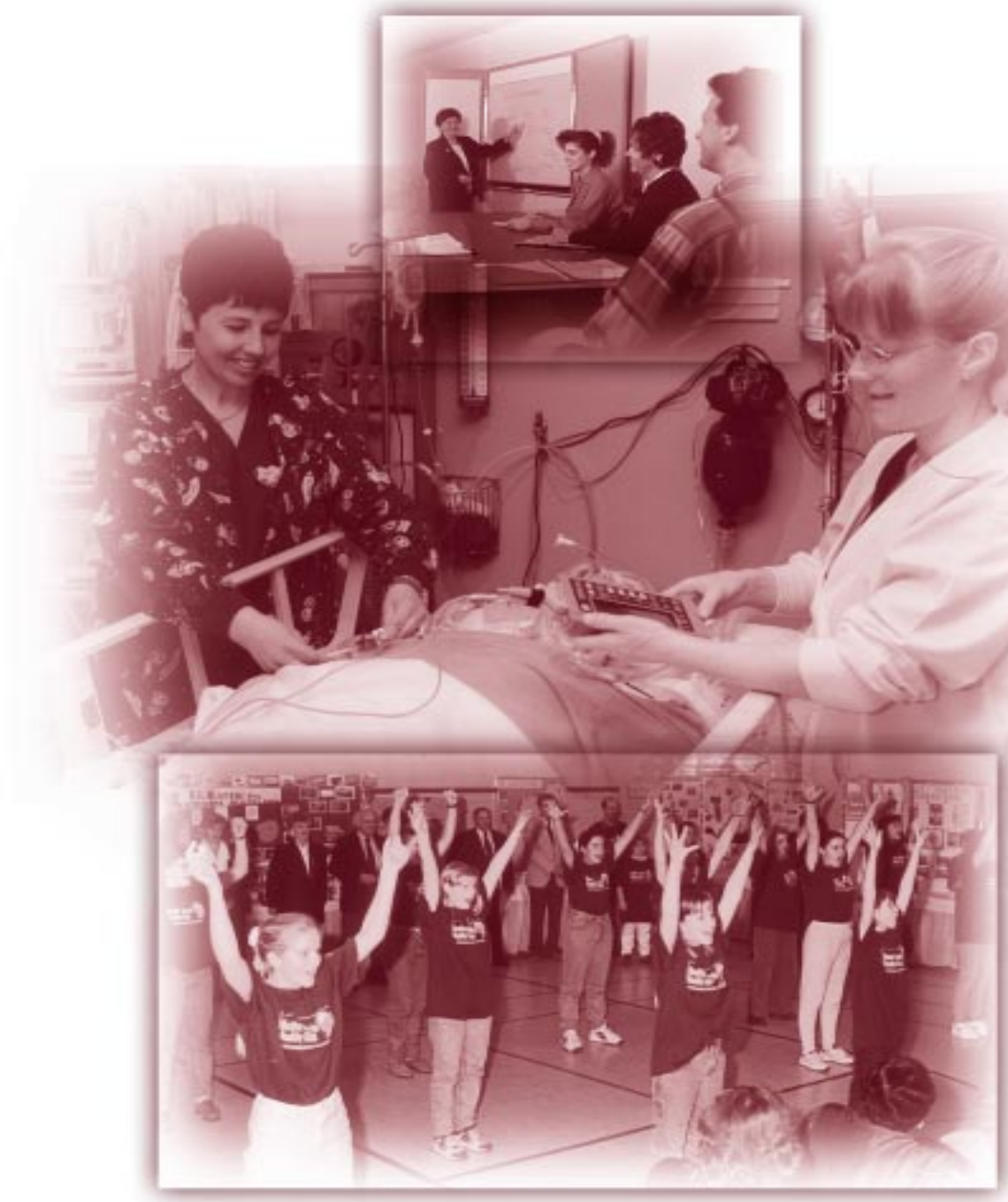
Canadian Journal of
Cardiovascular Nursing
Revue canadienne de
nursing cardiovasculaire

Volume 12 ▪ No.2 2001



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Volume 12 ▪ No. 2 ISSN 0843-6098 2001

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This is a refereed journal concerned with health care issues related to cardiovascular health and illness. All manuscripts are reviewed by the editorial board and selected reviewers. Opinions expressed in articles published are those of the author(s) and do not necessarily reflect the view of the editor or publisher.

Yearly Subscription Rates:

	Canada	International
Individual	$ 40.00	
Institution	$ 65.00	$ 75.00
Student	$ 25.00	

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Address questions to:
Charlene Kennett, Administrative Assistant
Canadian Council of Cardiovascular Nursing
c/o Heart & Stroke Foundation Canada
Suite 1402, 222 Queen Street
Ottawa, Ontario K1P 5V9 Canada
Tel: (613) 569-4361 Fax: (613) 569-3278 ckennett@hsf.ca

Canadian Publications Mail Product Sales Agreement No. 0465879

Editorial

Theresa Mirka
RN, BScN, MHSc
Editor-in-chief

Once again, we at the Journal are happy to bring you the Abstracts of the Scientific sessions of the Canadian Council of Cardiovascular Nurses. These sessions, held in Halifax, Nova Scotia bring together nurses from across North America. As in previous abstract editions, we are happy to profile a prominent Canadian Nurse Researcher. This year, we would like to highlight the career of Dr. Louise Jensen.

Louise began her nursing career by attaining a Bachelor of Science degree in Nursing from the Univesity of Alberta. She began her clinical career as a staff nurse at the Royal Alexandra hospital in Edmonton. Within a few years, she was working in their School of Nursing as an Instructor and eventually moved over to the School of Nursing at the University Hospital. Louise continued her teaching career at the University of Alberta and in 1982, completed her Master's degree in Nursing. Louise was never far from clinical practice. She worked as a casual part- time staff nurse from 1979 to 1988 in the Cardiovascular Surgical Intensive Care Unit at the University of Albertal Hospital. In addition, from 1986 toz1998, Louise worked as an Associate in Nursing (Cardiac Sciences) at the Capital Health Region in Alberta. She completed her Doctoral work in Educational Psychology (Measurement) in 1989 and is currently a full professor at the Univerisity of Alberta in the School of Nursing.

Louise's publication and presentation record is very impressive. To date, she has 30 articles published in peer reviewed journals. In addition, she has presented over thirty times at local, national and international conferences. She published a book chapter in 1995. She has numerous published reports, workshops and educational programs to her credit. Since early in her career, she has been actively involved in a wide variety of committees and always at the local, provincial, national and international levels. In particular, her involvement and participation in committees at the University of Alberta has been described by her colleagues as outstanding. Dr. Jensen's tireless commitment to the creation and dissemination of knowledge in Cardiovacular nursing is noteworthy. Louise has been an active member and avid supporter of CCCN since the beginning of her nursing career.

Louise's research in cardiovascular nursing has examined a variety of conditions and age groups. There is an evaluative theme in her work. She is well regarded and respected in publishing circles. At the Journal, we are always happy to receive and review Louise's work as it is thoughtful, organized and always very well written. From an Editor's point of view, she is an absolute pleasure to work with.

Louise's involvement in the Educational forum has helped many students further their pursuits. Along with her role as a teacher, this remarkable woman has developed courses for nurses studying at various levels including College, Generic Baccalaureate and Post-RN levels. She has also been actively involved in developing and teaching courses in the Graduate program at the University of Alberta. Louise has supervised and mentored numerous graduate students at both the masters and doctoroal levels.

Dr. Louise Jensen has been the recipient of a number of awards including a Provincial Graduate student Fellowship in 1988, The Ruth McClure Prize for Nursing in 1982, the Alberta Foundation for Medical Research Studenship award in 1981 and the Helen McArthur Prize in Nursing in 1968. In 1997, Louise was the recipient of the Canadian Council of Cardiovascular Nurses award for Research Excellence.

We are proud to profile Dr. Jensen and encourage our readers to seek out her work in Journal and many other national and international publications. Canadian Cardiovasuclar nurses are indeed fortunate to have a role model of Louise's caliber researching and publishing in Nursing.

Theresa Mirka, RN, BScN, MHSc
Editor-In-Chief

Call for Abstracts

Canadian Council of Cardiovascular Nurses

Annual Meeting and Scientific Sessions

October 27 - 31, 2002
Edmonton, Alberta

Submission Deadline: February 15, 2002

Abstracts related to any aspect of cardiovascular and/or cerebrovascular nursing are invited for presentation at the Annual Meeting and Scientific Session of the Canadian Council of Cardiovascular Nurses. Abstracts will be reviewed for oral or poster presentation.

Submission will be peer-reviewed in one of two broad categories:

Research:

An abstract submission will be reviewed in the research category if it describes some aspect of an original piece of research.

Non-research:

The non-research category includes theoretical, clinical application, literature reviews, etc. (i.e. submission that do not describe an original piece of research).

Copies of the guidelines and forms may be obtained by contacting:

Charlene Kennett, Administrative Assistant
Canadian Council of Cardiovascular Nursing
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Concurrent Sessions

Monday, October 22, 2001

0940 - 1025: Patient Education

0940 - 1000: EVALUATION OF PATIENT SATISFACTION AND EDUCATION IN POST-OPERATIVE OPEN HEART SURGERY PATIENTS

Schwartz L. Vancouver General Hospital, Vancouver, B.C.

Background: Advancements in cardiac surgery have shortened length of stay in hospital. Early discharge is placing emphasis on the provision of standardized, current information at a time appropriate for the learning needs of cardiac surgery patients and families. With education on their abilities and areas of limitations post surgery, patients and their families are encouraged to anticipate and plan early for their discharge needs, thereby preventing delays in discharge.

Objectives: The objectives of the study are to examine and evaluate patient satisfaction with regards to inpatient stay and the efficacy of an education tool introduced to promote and assist in the early discharge planning of cardiac surgery patients. The education tool introduced consisted of written material outlining postoperative course and expectations.

Method: A descriptive design will be used to study 150 cardiac surgery patients. A follow-up survey will be conducted via telephone at 1 week and 4 weeks post surgery. The information collected will be analyzed and provide insight into areas of patient needs and subsequent areas for improvement.

1005 - 1025: YOU ARE NOT5 ALONE: WOMEN CENTRED DISCHARGE TEACHING FOR CARDIAC PATIENTS

Harper L, Harkness C, Caves W, Kerr E, Fraser M, Woodend AK for the Nursing Working Group on Heart Health for Women, University of Ottawa Heart Institute, Ottawa, Ontario

The purpose is to present the process of developing a woman centred discharge teaching programme. This programme (content and tools) was specifically designed to target women and to supplement the current discharge teaching done for medical and surgical cardiac patients. This will enable us to conduct a randomized controlled trial to determine whether discharge teaching and follow-up for women will improve their post-discharge quality of life and decrease their health care resource use.

We conducted a series of focus groups to determine the post discharge experience and needs of women with heart disease. Themes of the experience which emerged from these groups were support, uncertainty & disbelief, things you have to go through, fear & loss, and formal and informal information needs. The needs identified from the focus groups included the need to maintain independence while receiving needed assistance, assistance with coping with change and loss, having their fears taken seriously, a forum for "sharing and comparing", not feeling that you are alone, and better communication between health care professionals,

Based on these themes, needs and the published literature on women with heart disease a pamphlet was developed. The topics were divided into feelings, role changes, physical changes, and taking charge and included information on what women may experience, what they can do to help themselves, and where they can find help if needed. The pamphlet was reviewed for feedback by 15 members from the focus groups.

If shown to be effective, this programme will be integrated with the present discharge classes and teaching books for both cardiac surgery and cardiology patients. Anticipating women's needs early on in their interaction with the cardiac care system may lead to more appropriate and therefore efficient health care as well as to an improved quality of life.

0940 - 1025: CV Surgery

0940 - 1000: MEETING FAMILIES NEEDS IN THE CARDIAC SURGERY WAITING ROOM: ROLES THAT MAKE A DIFFERENCE!

Matheson, Sandra., & Hay, Cheryl., & Russell, Tanda., & Kirby, Judy., QEII Health Sciences Centre, Halifax, Nova Scotia

The family of the cardiac surgery patient is in the waiting room they are anxious, crying and upset. Is this experience of the family unusual? Is this situation too dramatic? For our cardiovascular critical care unit the answer to both questions is no, the situation is very real. Families experience emotional outbursts and can feel vulnerable and helpless. Families are affected dramatically by a critical illness, sometimes to a greater degree than the patient. In addition to the cardiac surgery patient the family also require special attention and consideration from nursing staff.

This presentation will present two roles within our health care team that work collaboratively to provide communication, support and a comfort link with cardiac surgery families. Specifically the development, implementation and evaluation of the surgical liaison nurse role and family support volunteer program over the past two years will be shared. Formal evaluations have demonstrated that the surgical liaison nurse role and family support volunteer program are viewed as valuable members of the health care team. The initial objectives of establishing communication between the health care team and families and providing a valuable and recognized support mechanism for families under stress continue to be achieved.

These roles have truly made a difference for the families of cardiac surgery patients as they spend time in the waiting room of our critical care unit. As well, feedback from all concerned has assisted the team to incorporate changes that help promote a positive image as a family focused critical care unit.

1000 - 1025: GLYCOPROTEIN (GP) IIb/IIIa INHIBITORS: EFFECTS FOLLOWING CARDIAC SURGERY

Stoop, Jacqueline, Foster, Barbara, & Estabrooks, Lorna, Foothills Medical Centre, Calgary, Alberta

GP IIb/IIIa receptor inhibitors are platelet-blocking agents. These drugs are the newest therapy for acute coronary syndrome and are routinely given during coronary revascularization interventions. GP IIb/IIIa Inhibitors are not administered to preoperative cardiac surgery patients. On occasion, complications arise from invasive coronary revascularization and adjunct administration of GP IIb/IIIa Inhibitors. There is no reversal agent for GP IIb/IIIa Inhibitors should a patient require emergent coronary artery bypass surgery.

This presentation will include: an overview of the pharmacological actions of GP IIb/IIIa Inhibitors; a review of the literature related to post-operative cardiac surgery complications in relation to GP IIb/IIIa Inhibitors; and nursing considerations required for post-operative management. A case study will examine the complications and subsequent interventions used to correct coagulation dysfunction in a post-operative cardiac surgery patient.

0940 - 1025: Technology

0940 - 1000: WHAT CAN YOUR GENES DO FOR YOU?

Kathy L. Hildebrand, Heather E. Conradson, Annette C. Robertson, Todd J. Anderson, University of Calgary, Calgary, Alberta

The United States Human Genome Project is a 15 year endeavor whose goal is to identify the approximate 30,000 genes in human deoxyribonucleic acid (DNA) and to analyze the three billion pairs of chemical bases of which DNA is made. A genome is a map of all the DNA in an organism. Genome research is also underway seeking to correlate the relationship to disease processes. DNA can be extracted from the lymphocytes in whole blood. From blood samples it is possible to identify genes that are thought to be linked to certain cardiovascular disease processes. A current multi centered study, Firefighters and Their Endothelium (FATE), is examining the genes related to hypertension, lipid and folate metabolism. This information may enhance primary prevention by identifying patients at increased risk for cardiovascular disease.

Although exciting news in science, genome research creates apprehension with the general population. It is important for nurses to be knowledgeable about current genotypes being studied. Nurses can be vital in bridging the gap between science and medicine by ensuring patients receive adequate understanding of the impact of DNA testing and its future use in cardiovascular risk stratification. Through patient teaching and nursing education it will be possible to communicate information as it is discovered.

This presentation will review DNA composition, testing methods, utilization in risk stratification.

1005 - 1025: THE EVOLUTION OF GLYCOPROTEIN IIB/IIIA PLATELET INHIBITORS

Varga, Peter F., St. Mary's General Hospital, Kitchener, Ontario

One the newest evolving treatments for cardiac patients in the 21st century is the use of glycoprotein (GP) IIb/IIIa platelet aggregation inhibitors. GP IIb/IIIa inhibitors were first used in percutaneous cardiac intervention and are now commonly used in the treatment of unstable angina, acute coronary syndrome (ACS), and non-Q wave myocardial infarctions (NQWMI). The purpose of this project is to provide nursing a comprehensive review regarding the current and future use of GP IIb/IIIa inhibitors.

The presentation will begin with the pharmacological review surrounding GP IIb/IIIa platelet inhibitors. A brief discussion will review the three most common GP IIb/IIIa platelet inhibitors currently available. A literature review will demonstrate the efficacy of GP IIb/IIIa platelet inhibitors use in the treatment of ACS and NQWMI. A detailed review of Eptifibatide (Integrilin™) will focus on nursing administration, management and patient impact.

The summary of this presentation will focus on four major conclusions: the pharmacological actions of GP IIb/IIIa inhibitors; the current indications for GP IIb/IIIa inhibition; the anticipated benefits/side effects of GP IIb/IIIa inhibitors; and the illustration of potential future use.

The evolution of GP IIb/IIIa inhibitors will have a significant impact on the profession of nursing because it marks the ongoing revolutions in patient care. GP IIb/IIIa platelet inhibitors have the potential to be utilized in numerous settings beyond their current use. Nursing will need to develop a clear understanding of today's use of GP IIb/IIIa platelet inhibitors, in order to understand their evolving use.

0940 - 1025: General Cardiology

0940 - 1000: HEPARIN TO LOVENOXJ: CLINICAL TRIALS TO CLINICAL PRACTICE

Best, Donna & Grainger, Patricia. Memorial University of Newfoundland and Health Care Corporation, St. John's, Newfoundland

There has been an increase in knowledge related to the pathophysiology of acute coronary syndromes. A greater understanding of the cascade of events leading to thrombus formation has led to the development of new antithrombotics that improve the outcomes of patients with unstable angina and non Q-wave myocardial infarction. Treatment in the past has included unfractionated heparin intravenously to prevent progression of a subocclusive coronary thrombus to a complete occlusion. This has reduced the incidence of recurrent angina, myocardial infarction and death. Recent findings from the ESSENCE and TIMI IIb trials have shown that LovenoxJ, a low molecular weight heparin (LMWH) administered subcutaneously, is more effective in reducing these endpoints at both short and long term follow-up.

Unfractionated heparin and LMWH have different pharmacological properties in terms of half-life, bioavailability, molecular weight and bleeding tendencies. There are also differences among various LMWHs. This results in implications for nursing in terms of administration, monitoring, patient comfort and cost. Research is ongoing into the use of LMWH in other manifestations of acute coronary syndrome and in relation to interventional procedures.

1005 - 1025: A CHEST PAIN EVALUATION UNIT: RESULTS THAT WORK!

Janes, Sandra. & Grant, Lynn. & Robertson, Lorraine., QEII Health Sciences Centre, Halifax, Nova Scotia.

In October 1999 a joint project between the Division of Cardiology and Emergency Department was initiated to prevent unnecessary admissions to a busy, backlogged tertiary cardiology service. A two bed Chest Pain Evaluation Unit (CPEU) was opened within the existing environment of an Intermediate Care Unit (IMCU). The IMCU setting was selected because of the clinical expertise and decision-making skills of staff.

Admission criteria, physician orders, patient care standards and discharge guidelines were developed into a Chest Pain Not Yet Diagnosed (CP- NYD) care map. The admission criteria included low risk patients, which is different from many of the U.S. models. By preventing unnecessary admissions the goal of a financial recovery of $1665/day was set.

The presentation will focus on the implementation, positive results, as well as the challenges changing the environment in which care is provided created for members of the health care team. Ongoing outcome evaluation and monitoring processes that have been established to continually improve the service of CPEU will be presented and discussed.

0940 - 1025: Heart Failure

0940 - 1000: A NURSE MANAGED CONGESTIVE HEART FAILURE CLINIC: THE FIRST SIX MONTHS

Staples, P., Hotel Dieu Hospital, Kingston, Ontario

The care of congestive heart failure patients is a huge issue for health care in Canada today. Congestive heart failure is the most common cause of hospitalization of people over 65 years of age in Canada. Each hospitalization averages 8 days in length and is associated with a cost of over $1 billion annually. One percent of Canadians suffer from heart failure and 9% of deaths are attributed to heart failure. With the aging population it is estimated that the prevalence of heart failure will double by the year 2030.

Physician-directed, nurse-managed, congestive heart failure clinics have been reported to improve the care of patients with congestive heart failure. This improvement in care is realized by a greater proportion of patients receiving evidence-based medical therapy, a decrease in the number of hospitalizations caused by decompensated heart failure, and a decrease in emergency room visits for symptoms of heart failure. A cardiologist with a specific interest and expertise in heart failure typically directs these clinics. There are nurses available to provide patient education around self-management of heart failure. Nurses, through telephone management, intervene early when patients have symptoms of worsening heart failure. Thereby preventing trips to emergency rooms and hospitalizations.

In light of the scope of the problem of congestive heart failure on utilization of health care resources, a congestive heart failure clinic was established in a small city in Southeastern Ontario. The clinic is directed by a single cardiologist and managed by a Registered Nurse with an Acute Care Nurse Practitioner Diploma. Prior to the establishment of the clinic in the 1998-1999 fiscal year, there had been 709 patients discharged from hospital with heart failure listed as the primary reason for admission. Of the total 709 patients discharged, 277 (39%) returned to the emergency room in the first 28 days, 169 (22%) were readmitted within 28 days, and 365 (51%) were readmitted within six months. The average length of stay for the entire group was 10.7 days.

This talk will discuss the success of the heart failure clinic in the first six months of its operation on improving care for heart failure patients within the population of patients discharged from hospital with a primary diagnosis of heart failure. The clinic followed 50 patients with heart failure during this period of time. The number of patients followed by the heart failure clinic will be compared to the number of patients discharged from hospital with heart failure. The number of patients with heart failure who required community resources (nursing care, physiotherapy, etc.) as reflected by Community Care Access Centre caseloads will also be reviewed. The success of establishing evidence-based medical therapy within the clinic population, the mortality rate, along with emergency room visits and admission rates to hospital will be presented. Finally the role of the nurse in the congestive heart failure clinic will be highlighted along with goals to further improve care of heart failure patients.

1005 - 1025: SOCIAL REPRESENTATIONS OF HEALTH AND ILLNESS BOTH OF PERSONS LIVING WITH CONGESTIVE HEART FAILURE (CHF) AND OF THEIR NATURAL/FAMILY CAREGIVERS

Doyon, O.[1-2], Reidy, M.[2], Duhamel, F.[2], Campagna, L.[2], Dupuis, F.[2], & Patenaude, H.[3] 1/Université du Québec à Trois-Rivières; 2/Université de Montréal; 3/Université Laval.

The continued care and support of persons living with congestive heart failure (CHF) and of their natural/ family caregiver, has become all the more essential within the context of the switch to ambulatory care. The ensuing report presents the qualitative/contextual aspect of a quasi-experimental pilot project (n: exp. grp. = 15; ctl. grp. = 15) which evaluates the impact of a family systems nursing approach, within an ambulatory context, on the adaptation of the patient suffering from CHF and on that of his family caregiver. Family systems nursing focuses on the reciprocity between family dynamics and the evolution of health problems, supporting interventions that assist families in reducing their emotional distress as well as in enhancing their coping skills and their autonomy within the health system. This qualitative aspect explores the social representations (SR), related to living with CHF, in terms of health and illness, the role of patient and the role of his natural and professional caregivers. As phenomena, SR are socially elaborated and shared knowledge, which give a sense to those events, objects and acts which we have in common, and which help us to interpret the events our daily lives. The "act of representation" includes acts of construction and reconstruction, influencing both the behaviour and interaction of the patient and caregiver. The heuristic conceptual analyses has focussed on anchorage, objectification, interpretation, linking with matrixes incorporating quantitative & sociodemographic data and external transferability.

Preliminary results bear upon the unpredictable and progressive nature of disease, the heredity and stress related causes of disease; the feelings of uselessness and lack of autonomy while living with the disease, the needs of the patient to be understood, to be supported, to be informed and to be advised, the needs of the caregivers to be able to manage, to control their lives and to receive instrumental help and information, and the role of the nurse as professional caregiver to support, inform and explain.

0940 - 1025: Specific Issues in Cardiac Care

0940 - 1000: PSYCHOSOCIAL CARE WITH CARDIAC PATIENTS: MANAGING DIFFICULT BEHAVIOR

Linda Hunter, Lydia Ritchie, Eileen Frattini, Betty Organ, Lucia Brooks University of Ottawa Heart Institute

Pediatric patients are surviving longer after repairs for congenital heart malformations such that they are reaching adulthood and entering into the adult cardiac health care domain. This switch from a pediatric focus on health care, to an adult focus, may cause some consternation in the patient, family, and health care providers. This is sometimes displayed as negative behavior tendencies by the patient while in the hospital setting. To deal with such negative behavioral manifestations in a patient awaiting heart transplantation, we developed a collaborative educational program for staff and worked on a template for a Nursing Care Plan (NCP) by consensus. The purpose of such an endeavor was to allow clinical nursing staff the opportunity to ventilate their frustrations with the behaviors seen, to facilitate the development of a consensual NCP that was consistently followed by all team members, and to assist clinical nursing staff to become comfortable in setting limits for negative behaviors. Educational in-services were set up and taught by a psychiatric Clinical Nurse Educator. These in-services covered appropriate nursing tools and methods to deal with demanding and dysfunctional behaviors, manipulation, denial, and hostility. Through brain storming sessions, patient issues were identified and interventions were listed. A core team drafted a NCP by consensus and shared it with colleagues.

This presentation will use a case study to illustrate how to identify patient behavioral issues and discuss tools that may be used by all staff in order to allow the patient to maintain a level of control and to alleviate stresses experienced by clinical staff in dealing with these behaviors. The significance to the clinical nursing staff was an increased level of confidence in the ability to manage these behaviors.

1005 - 1025: AN INVESTIGATION TO IDENTIFY THE IMPORTANT RELEVANT FACTORS THAT AFFECT THE DETECTION AND RESPONSE TIME OF AN ARRHYTHMIA IN REMOTE TELEMETRY WHEN THERE IS NO DEDICATED MONITOR WATCHER.

Billinghurst, F., Arthur, H., & Morgan B. McMaster University, Hamilton, Ontario.

Remote telemetry offers the ability to monitor stable patients throughout the hospital by nurses skilled in arrhythmia detection from the central station in the Coronary Respiratory Care Unit (CRCU). Since the introduction of this system however, there have been isolated incidences and ongoing problems that have caused concern for patient safety. The purpose of this study is to identify the important relevant factors that effect the detection and response time of an arrhythmia in remote telemetry when there is no monitor watcher.

The study is designed to be a prospective and descriptive. The quantitative collection focuses on random pick up of the arrhythmia events that should be captured, those that are missed, and why this happened. Detection and response time will be explored considering nursing workload, pattern of communication and the follow-up treatment. The qualitative collection involves randomly selected nurses.

The study is presently underway. The significance of this study lies in connecting the nurse's work load and the demands of remote telemetry that fluctuate from insignificant repeated alarms to sudden malignant arrhythmias. More advanced technology will continue to improve the ability to detect an arrhythmia from a distance. Future investments however, must ensure that healthcare delivery systems are able to bridge the gap between technology and patient care systems.

1115 - 1225: Patient Education

1115 - 1135: PATIENT DISCHARGE TEACHING: CONTENT, TIMING AND APPROACH

Kearns SA, Sherrard H, Woodend AK. University of Ottawa Heart Institute, Ottawa, ON

The purpose of this study is to assess patient satisfaction with discharge teaching, the desired content, timing and approaches preferred. Our patient satisfaction program and our nursing co-ordinator call back database have been valuable tools in monitoring patient needs and satisfaction on an ongoing basis. Our satisfaction mail out survey conducted in 2000 highlighted patient concerns about information sharing and communication. Ten percent of call backs to nursing coordinators concern "health seeking behaviours" and 8% indicate patients have "knowledge deficits", with most of the questions being centered around medication, activity levels and symptoms. It was clear that we had to learn more about what our patients wanted included in their discharge education, when they wanted to hear it and how they would like it delivered.

We designed a quality improvement project that consists of three separate studies: 1) a cross-sectional mail-out survey of patients discharged at various time periods within the previous 6 months, 2) a longitudinal study of a cohort of patients done at one week, one month and three months and 3) an audit of the charts of all patients involved in the first two studies. The chart audit will provide information about completeness of documentation reporting on discharge teaching.

The population will include randomly selected patients admitted with MI, cardiac surgery, PTCA, CHF, angina, or arrhythmias in the 6 months prior to the survey who speak either English or French. The sample will be stratified by time since discharge and discharge diagnosis. The survey will include questions on overall satisfaction with discharge teaching, questions about whether their information needs were met and whether the timing and method of teaching were optimal for them. Demographic data collected will include: age, gender, race/ethnicity, diagnosis, co-morbidities, and length of stay in hospital. We anticipate the information provided to us during this project will permit us to improve our patient teaching program and improve patient satisfaction.

1140 - 1200: PSYCHOMETRIC EVALUATION OF TWO INSTRUMENTS MEASURING LEARNING NEEDS OF PATIENTS WITH CORONARY ARTERY DISEASE

Tanguay A. and Robichaud-Ekstrand, S. Université de Montréal, Montréal, Québec

The « Cardiac Patient Learning Needs Inventory » (CPLNI) from Gerard and Peterson (1984) as well as the « Everything You Ever Wanted to Know About Heart Disease » from Czar and Engler (1997) are two instruments developped to assess learning needs of coronary heart disease (CAD) patients. The purpose of this study was to translate into french these two instruments and to compare their psychometric properties (content validity, convergent validity and reliability) on 215 french-speaking quebecers suffering from angina or having had a recent myocardial infarction. The back-translation method has been used in translating the questionnaires. Questionnaires's items were rated congruent by the three experts. These were respectively, 0.98 and 0.99 for clarity and 0.94 for relevancy of both. The average proportions between 10 patients were evaluated for clarity of items and rated 0,94 and 0,92 respectively. The final Cronbach's alpha coefficients for the eight subscales of the CPLNI ranged from 0,62 to 0,99. Those of the « Everything You Ever Wanted to Know About Heart Disease » and its ten subscales ranged from 0,42 to 0,99. Pearson's correlations applied between subscales and statements of the two instruments showed a moderate correlation of 0,42. Factor analysis results differed from the original instruments, suggesting a new distribution of statements. Finally, the correlations between each instruments's statements and the social desirability scale were incongruent. In conclusion, the psychometric analyses were not effective in identifying the most appropriated clinical tool for the french-speaking quebecers population with CAD. The CPLNI and the « Everything You Ever Wanted to Know About Heart Disease » are considered useful instruments for research as they present good validity. However, before they can be used in nursing practice in the actual health care system, some modifications must be done. A new shorter version is then proposed.

1205 - 1225: EDUCATION PLAN FOR A NEW ADVANCED CARDIAC SERVICES PROGRAM: A PARTNERSHIP MODEL

Dibert, C., & Burlacoff, L., Trillium Health Centre, Mississauga Ontario

Trillium Health Centre's Cardiac Services recently expanded to include advanced cardiac services (cardiac catheterization laboratories, percutaneous transluminal coronary artery angioplasty (PTCA), and cardiac surgery). Highly skilled staff are required to establish such a specialized program. The goal was to attract 50-60% experienced staff to this new program. Integral to the recruitment plan was to draw the remaining 40-50% from within Trillium Health Centre (THC) and provide staff with an education program.

A partnership model was developed with 4 cardiac centres to provide clinical placements for more than 75 THC employees (e.g. nurses, respiratory therapists, and occupational therapists). Placements were staged over an 18-month time frame. Objectives and strategies to address learning needs were developed in partnership with the host sites and THC staff. Clinical placements were tailored to meet the needs of the host sites and THC staff.

Critical to the success of the program was the close collaboration with the managers and clinical educators from the host sites as well as frequent on-site follow-up by the THC educators. Additionally, the flexibility to integrate lessons learned from early placements as the plan unfolded was significant.

This partnership model offered staff at established cardiac centres the opportunity to contribute to the development of a new program while THC staff enjoyed the opportunity to gain new skills. Each THC cardiac team developed protocols drawing from the experiences of a variety of cardiac centres.

1115 - 1225: CV Surgery

1115 - 1135: PNEUMOTHORAX AFTER CARDIAC SURGERY : A CASE PRESENTATION

Suzette Turner, MN, FNP (Cardiovascular Surgery) and Tracey J. F. Patton, MScN(Ed), ACNP (Cardiovascular Surgery), Sunnybrook & Womens College Health Sciences Centre, Toronto, Ontario

A pneumothorax is the presence of air in the pleural space with secondary lung collapse thereby preventing lung inflation (Gallon, 1998). There are two types of pneumothorax; spontaneous and traumatic, either of which can result in a life threatening tension pneumothorax.. Most pneumothoraces after heart surgery fall into the category of traumatic as a result of iatrogenic injury secondary to invasive lines. It is one of the most common pleural complications in the acute care setting which may lead to serious respiratory consequences without early recognition and treatment.

This case presentation overviews the complex scenario of recurrent postoperative pneumothorax in a patient having undergone coronary artery bypass surgery. The discussion will focus on: 1) the pathophysiology of pneumothorax; 2) the clinical signs and symptoms; 3) investigations and medical management; 4) and nursing implications for patient management and care.

The goals of pneumothorax therapy are to eliminate intrapleural air collection, facilitate pleural healing and prevent recurrence. Nurses play a crucial role in the recognition of symptoms, collaborative management, and provision of supportive care in this highly anxious patient population.

1140 - 1200: PROPHYLACTIC PAIN MANAGEMENT FOLLOWING CARDIAC SURGERY

Reimer-Kent, J., Simon Fraser Health Region, Royal Columbian Hospital, New Westminster, BC

Few would argue that cardiac surgery is without pain. Traditionally, postoperative pain has been managed in a reactive rather than a proactive or prophylactic manner. Patients would wait to experience pain and the nurse would decide when and what analgesic to administer. Studies have shown that patients are often undermedicated in this standard nurse-based pain therapy. Patient controlled analgesia has addressed this issue to a degree, but because it is equipment dependent and opioid driven it is not available or appropriate for all cardiac surgery patients. Adequate pain management is essential to having a feeling of wellness and to enabling the patient to actively participate in their recovery. Supporting wellness is the framework upon which a "Rapid Recovery" program was created at one Canadian cardiac surgery centre. This program developed a prophylactic approach to pain and uses a regular dosing regime of non-opioids to address the root causes of postoperative pain, and an opioid to treat breakthrough pain.

This presentation will provide an overview of this treatment modality along with the results of a retrospective, descriptive, evaluation study (n=134). Data lent support for using this approach in this patient population and the findings will be discussed along with the implications for practice, education and research.

1205 - 1225: A CASE STUDY ON THORACOABDOMINAL ANEURYSM: A LEARNING CURVE: THE NURSES ROLE IN MANAGING THE PATIENT AND THE FAMILY.

Valois, K., Fulford, K., Blair, S., McEwen, S., Hearty, S.

The purpose of this presentation is to share information on the care of patient with thoracoabdominal aneurysms using one of our recent patients to illustrate the pathophysiology, the medical/surgical treatment and the nursing care of these patients.

Thoracoabdominal aneurysm without surgical intervention can lead to aortic rupture resulting in death in 75% of patients. Innovative approaches teaming cardiac and vascular surgeons and using left heart bypass have decreased patient mortality. These new approaches also present new challenges to nurses caring for these patients. In addition, these patients represent a very small proportion of our population.

A review of the literature provides limited evidence to guide nursing practice in caring for and managing these complex patients and their families. Over the past few years, nurses at our institution have developed some expertise in their care. In a care situation which is sporadic it is difficult to develop care plans or specific expertise aimed at that particular population. We have been able to apply a broader knowledge of care of cardiac surgery patients to this unique population. Using this study, in addition to reviewing etiology, preoperative assessment, diagnostic work-up, intra-operative procedure, post surgical management and discharge planning, we will highlight how nurses can mobilize their knowledge of a varied cardiac surgical population and apply it to providing expert care in rare situations.

High-risk surgical implications can result in challenges for the health care team The challenge for nurses is to develop a consistent and structured approach to improve quality of patient care.

1115 - 1225: Technology

1115 - 1135: AN INTERACTIVE INTERNET SITE IMPROVES THE MANAGEMENT OF PATIENTS WITH CONGESTIVE HEART FAILURE

Costigan, Jeannine & Ross, Heather, The Toronto General Hospital, Toronto, Ontario

Congestive Heart Failure is one of the leading causes of hospitalization in Canada. The literature supports that patients with heart failure tend to have frequent hospitalizations and a poor quality of life. Traditional methods of managing these patients involve constant contact with health care providers including physicians and nurses.

This presentation will describe the development and implementation of an interactive Internet site designed to facilitate the management of patients with Heart Failure. The purpose of the site is to facilitate symptom management, reduce hospital admissions and improve the quality of life for heart failure patients. The impact of the site on the patients' quality of life will be reviewed.

The Internet site is run out of a Heart Failure Clinic at a large tertiary/quaternary teaching hospital in Toronto. The clinic manages a large number of complex patients with heart failure. These patients cross all generations and include a number who are listed for cardiac transplant. An Acute Care Nurse Practitioner (ACNP) who specializes in Heart Failure and Cardiac Transplant manages the site and interacts with patients on a daily basis. Daily weights, blood pressure and symptoms are monitored. The site also provides an excellent forum for patient education. Patients report significant levels of satisfaction with the site.

Our experience has shown that the Internet provides a powerful medium through which nurses can interact with their patients, improve patient education and quality of life. The results of our experience have broad implications for nurses working with all cardiac patients.

1140 - 1200: TELEHOME CARE FOR CARDIAC PATIENTS: NURSING CARE BECOMES E-NURSING CARE

Fraser M, Struthers C, Sherrard H, Smith S, Williams W, Cheung T, Woodend K. University of Ottawa Heart Institute, Ottawa, ON

The purpose of this presentation is to describe the establishment of a telehome-care programme for patients with heart failure or angina. Significant features of telehome care are that it focuses on primary care, is client centred, and has a broad service orientation including: primary care, monitoring, triage, decision support, information and knowledge sharing. It has been well demonstrated that multidisciplinary programmes of patient education, daily self-monitoring and physician notification of abnormal weight gains, signs and symptoms reduce readmissions and health care costs in heart failure patients. Telehome monitoring is a way of delivering these multidisciplinary programmes especially in patients with barriers to care access.

The programme consists of tele-home monitoring for three months after hospital discharge. A call-in centre links patients to the Institute through a home monitoring station to which patients transmit weight, vital signs, and ECGs depending on a predermined protocol (care plan) or patient need. Vital signs and ECGs are automatically recorded in each patient's electronic file and are reviewed daily or more frequently by the telehome care nurse. The telehome-care nurse has the "back-up" of a cardiologist at the site but communicates primarily with the patient's cardiologist or family practitioner. Video-conferences are held at least weekly with each patient and include an assessment of the patient's progress and self-care education by the telehome-care nurse. Electronic charts are maintained for each patient.

Using case studies, this presentation will highlight the following: clinical and technical aspects of telehome-care, care and teaching plans developed for monitored angina and heart failure patients, the development and use of the triage protocols, electronic charting, teaching patients to use the system, and results of the initial satisfaction and ease of use surveys completed by patients at one and three months.

1205 - 1225: CAROTID INTIMAL-MEDIAL THICKNESS: A PROMISING NEW MARKER

Heather E. Conradson, Annette C. Robertson, Kathy L. Hildebrand, Charlene Chambers, Sandra Smith, Todd J. Anderson, Eva Lonn, University of Calgary, Calgary, Alberta & McMaster University, Hamilton, Ontario

Evidence is compelling that atherosclerosis begins with intimal-medial arterial thickening and can be seen as early as in adolescence. A review of the literature supports a close histological relationship between carotid and coronary atherosclerosis. Carotid intimal-medial thickness (IMT) has been established as a good indicator of the presence and extent of coronary artery disease. An increase in carotid IMT has been shown to be a reliable predictor of stroke and myocardial infarction. Measurements of the intimal and medial layers of the carotid artery can now be assessed using a non-invasive ultrasound procedure. Based on current research there is growing consensus that carotid intimal-medial thickness is a promising new marker, which may aid in the risk factor stratification and treatment of clients with or without cardiovascular disease.

It is important for nurses to be aware of the current research on carotid IMT, as its use in clinical practice is imminent. This presentation aims to review the pathophysiology of carotid IMT, the non-invasive ultrasound method, and review the relevance of this new marker in cardiology.

1115 - 1225: General Cardiology

1115 - 1135: UNDERSTANDING PURULENT PERICARDITIS; IT'S IMPLICATIONS FOR NURSING ACUTE AND LONG TERM.

Pearson, N., & McCulloch, H., Calgary Regional Health Authority, Foothills Medical Center, Calgary, Alberta

Purulent pericarditis is an acute but potentially chronic disease process. The infection of the pericardial fluid, most often from pneumococcus and staphylococci can often lead to constrictive pericarditis, a condition that inhibits normal filling of the heart. The infective process not only has acute effects on the patient, but also has implications for long term health and wellness, as outcomes for patients diagnosed with this are grave.

A case study will be presented involving a 45-year-old male that was initially admitted to our unit with a diagnosis of purulent pericarditis and subsequently had multiple admissions for complications regarding this diagnosis.

Although a diagnosis of purulent pericarditis is rare, it is key for nurses to be diligent in their observations during the acute stage of this disease process and be aware of the implications for long term complications. The importance for nurses to accurately assess, care for, monitor and be aware of the potential detrimental long-term effects of this acute process will be presented and discussed.

1140 - 1200: UTILIZING MYOCARDIAL CONTRAST ECHOCARDIOGRAPHY FOR TRIAGE

Annette C. Robertson, Kathy L. Hildebrand, Heather E. Conradson, Linda J. Malley, Luana M. Mann & Todd J. Anderson, University of Calgary, Calgary, Alberta

Nurses are well trained to administer thrombolytics but do we know enough about options for assessing effective myocardial perfusion during acute myocardial infarctions? Recent studies have demonstrated that early complete patency following thrombolysis or direct percutaneous coronary intervention leads to improvement in regional and global left ventricular function and this translates into clinical benefits for patients. However, assessment of the adequacy of reperfusion is difficult at the bedside. Currently, reperfusion is assessed by utilizing angiography which is invasive, has potential risk for complications, time consuming, and requires several trained disciplines. Myocardial Contrast Echocardiography (MCE) is an emerging assessment tool that is non-invasive, expedient, able to be performed at the bedside, and not known to cause any side effects.

MCE is performed with an intravenous injection of a tracer (contrast agent) which distributes into the micro perfusion of the myocardium and can be visualized with a colourizing process of ultrasonography. The images obtained during the MCE procedure depict viable myocardium in colour, whereas the ischemic myocardium appears blackened or speckled with colour depending on the degree of perfusion and technical limitations. Currently the University of Calgary is involved in a study, CEDAR (Contrast Echocardiography and Doppler Assessment of Reperfusion), which is evaluating this test as a predictive marker of myocardial perfusion in acute de novo myocardial infarctions. This technique could allow the assessment of myocardial perfusion without invasive procedures and enable confident triage modalities in acute coronary syndromes.

This presentation aims to inform nurses about MCE, current research utilizing MCE , and the implications for assessing and treating patients who present with myocardial infarctions.

1205 - 1225: STRESSORS PATIENTS MOST COMMONLY FACE IN THE CORONARY CARE UNIT

Czartorski, C. and Sumitro, M. R.

Patients in Coronary Care Units (CCUs) are exposed to a variety of stressors, ranging from psychological, sociological, and environmental. These stressors can effect the patient's state of health and recovery. The object of this study is to identify those stressors most likely to be experienced by the patient admitted to the CCU. A survey, in questionnaire format, will be offered to stable patients in the CCU, just prior to their transfer from the unit. Patients who were admitted with unstable angina, myocardial

infarction, or congestive heart failure, with an approximate stay in the CCU of greater than 24 hours, but less than 5 days, will be considered for the study. Those patients who have experienced complications requiring treatments, such as mechanical ventilation, IABP assistance, or CPR, will be excluded from the study. All patients must be comfortable speaking, reading, and writing in either the French or English language. A sixty (60) item questionnaire, adapted from literature regarding common stressors in Intensive Care Units and Surgical Care Units, will be offered to this patient population, and a Consent Form will be signed by the patient and the investigator, and will be witnessed. The patient will rate each stressor item using a 6-point Likert Scale (0=not stressful to 5=extremely stressful). The patient will be provided with complete privacy while completing the questionnaire, and the results will be confidential. There are no foreseen risks to patients involved the study. Patients may benefit from their involvement since they have the opportunity to express their concerns, be active members of the health care team, and have a sense of improving care for all future CCU patients.

1115 - 1225: Heart Failure

1115 - 1135: HEART FAILURE SUPPORT GROUPS

Benoit, R., Molloy, M., & Svendsen, A., Queen Elizabeth II Health Sciences Centre, Halifax, NS

Heart failure is a chronic debilitating disease which has major implications for patients and their families. This diagnosis is associated with increased stress as well as caregiver burden. Education remains a key component to avoiding admissions due to volume overload. However, adherence to essential lifestyle modifications continues to be difficult, and sometimes impossible for many people. Support groups have become an increasingly popular method to providing an opportunity for patients and families with similar diagnosis to come together to discuss common interests and coping patterns. It is imperative that patients/families remain active participants in their care. Incorporating principles of adult learning, a support group was established at a tertiary care facility in Nova Scotia. Heart failure patients and families decided they would like an educational format followed by a time to interact with one another over a low sodium lunch. Every 4-6 weeks experts present information on topics which have been chosen by the patients/families. These sessions have become so popular that they are now being televised to other institutions around the province, via TeleHealth technology.

This presentation will discuss the process involved in the development of a support group. What resources are needed (space, financial etc.)? How do you ensure patients and families remain involved and that their needs are being met? A one year evaluation of the effectiveness of the support group will also be presented.

1140 - 1200: THE PIVOTAL ROLE OF THE NURSE IN AN OUT-PATIENT HEART FUNCTION CLINIC

Button, D. E., Trillium Health Centre, Mississauga, Ontario

The role of the nurse is pivotal in the assessment, monitoring and treatment of the patients enrolled in the out-patient Heart Function Clinic. A collaborative team approach is used in the clinic. Nurses perform a comprehensive patient/family assessment, tailor interventions, and initiate any referrals that are required. The nurses ascertain that communication is ongoing between the patient/family, family physician, cardiologist, and other members of the multi-disciplinary team. A key nursing role, it to assess the coping strategies used by patient and families and to provide additional support if required. The establishment and maintenance of community links with other health care services is crucial.

A focus on health promotion and prevention, is a vital component when providing information to the patient/family. The nurses work with the patients to empower them, to assess their own health state, and intervene by employing protocols and strategies they have been taught. This presentation will summarize the unique role, and contribution of the nurses in our out-patient Heart Function Clinic.

1205 - 1225: EVALUATION OF CLINICAL PATHS FOR CONGESTIVE HEART FAILURE PATIENTS

Rubin, Sandy & Bradley, Chris Vancouver Hospital and Health Sciences Centre, Vancouver, B.C.

Congestive Heart failure (CHF) is the most common reason for hospital admissions in patients over 65 years of age and is associated with a significant readmission rate. The purpose of this study was to implement a hospital and community clinical pathway for congestive heart failure patients with the goal of promoting consistent use of proven standards of care by both acute and community care providers. It was postulated that use of a clinical path would reduce unplanned hospital readmissions, improve quality of life for CHF patients and reduce caregiver burden.

The study was conducted at three acute care hospitals and in the community. A prospective before-after design using a consecutive sample of patients with CHF was used. Readmission data were collected on 350 patients before and 350 patients following path implementation. Quality of life data were collected on a convenience sample of 38 patients before and 23 patients after path implementation. A clinical path spanning the continuum of care from hospital to community was implemented. On discharge patients were referred to home care nursing according to usual criteria or cared for by their family physician. The transition to home was facilitated by strategies to enhance communication of the care plan to community care providers.

Readmission and quality of life date are currently being analyzed. Many lessons have been learned during path implementation. Reinforcement of new learning and buy-in from the entire interdisciplinary tam are all necessary for successful implementation of a clinical pathway. Conducting a study in four different settings each with its unique set of circumstances is challenging. Finally, the energy level of chronically ill patients is limited and the impact of asking them to participate in studies should be considered.

1545 - 1655: Women / Gender

1545 - 1605: NURSES PERCEPTIONS ON CARING FOR WOMEN

Middleton, P., & Caves, W., University of Ottawa Heart Institute, Ottawa, Ontario

In reviewing research directions and priorities for the coming year, the Nursing Working Group on Heart Health for Women considered research on the issue of cardiac nurses perceptions of caring for women. Group members opinions varied as to whether there was a preference for caring for one gender over another. A small informal survey of staff nurses suggested that there was a preference for caring for men.

We decided to look at the question: Does a patients' gender influence cardiac nurses' evaluations, attributions and care delivery decisions?

A systematic review of the literature will be done using Medline, CINAHL, and Embase. We will search these sources using the keywords: heart disease, sex/gender differences/bias, nursing/care. Articles will be included in the review if they are: 1) research based, 2) report patterns of nursing care by patient gender. Data will be abstracted from the included articles by two reviewers using a standardized abstraction form.

A preliminary review of the articles does indicate that gender may influence cardiac nurses' evaluations, attributions as well as their care delivery decisions.

The results of this literature review will show that there is a need for all cardiac nurses to be aware of potential biases, since these biases may result in less therapeutic decision-making and nursing care interventions for the female cardiac population.

1610 - 1630: THE IMPACT OF RECEIVING A CARDIOVASCULAR DISEASE DIAGNOSIS FOLLOWING AMBULATORY CARDIAC CATHETERIZATION: WOMEN'S EXPERIENCES

Price, S. Queen Elizabeth Health Sciences Centre, Halifax, N.S.

Cardiovascular disease (CVD) remains the number one cause of death among Canadians and despite the fact that cardiac disease kills more women than men each year, there continues to be an under-representation of women in cardiovascular literature and research. A diagnosis of CVD carries life long implications for the patient and their families, which therefore necessitates an understanding of patient needs and concerns on the part of nurses and other health care professionals. Advances in technology and changes in cardiac care delivery have provided a more cost-effective approach to earlier diagnosis and treatment of CVD, as evidenced by ambulatory cardiac catheterization. However, time for individuals and families to learn how to effectively deal with the implications of this life threatening disease is compromised as access to health professionals, who can provide the necessary information and support, is limited.

This presentation will highlight the findings of a qualitative study exploring the experiences of women who have received a CVD diagnosis following ACC. In addition to providing insight into the unique needs and concerns of this population, the presentation will also provide direction for the development of interventions aimed at enhancing the well being of women living with this illness.

1635 - 1655: ROLES, ROLE CHANGES AND ROLE SALIENCE IN WOMEN AND MEN AFTER ACUTE MI

Woodend, AK. University of Ottawa Heart Institute, Ottawa, Ontario

The purpose of this analysis was to compare the changes in role that men and women undergo as a result of a myocardial infarction (MI) and the salience of those roles and role changes. Role pertains to a person's position within a group (ie husband, mother, provider). Women are socialized to value and invest in primary relationships while men value achievement-related activities. It has been hypothesized that changes that occur in roles considered salient (important for self-concept), will have the greatest emotional impact. The little information available on role occupancy and changes after MI suggest that role loss may differ between the genders.

A cross-sectional survey of 194 (36% women) patients between the ages of 55 and 75 years was done 3-6 months after first MI. The number of roles and the dimensions of salience, change, burden, and reward were assessed using the procedure developed by Hoelter and modified by Thoits.

The mean age of patients was 66 years with no gender difference. 56% of women and 86% of men were spouses but rated the role of spouse as equally stressful and rewarding. Men and women rated all other roles as equally rewarding. 85% of women and 38% of men were homemakers ($p<0.05$). Women rated the roles of parent and grandparent as significantly more stressful than did men. 28% of the patients were caregivers to a relative, with no significant difference between the genders. The number of role changes which occurred after MI was small with most changes occurring in the roles of caregiver, worker for pay and volunteer. The only significant gender difference in role change was in the caregiver role with women more likely to lose the role. There were no gender differences in the amount that heart disease interfered with the roles of spouse, parent, homemaker or worker for pay, nor was there a gender difference in the importance assigned to those roles.

There are gender differences in roles, and role salience. Differences in role loss are minimal. .These differences may have a differential impact on psychosocial well-being in the post-MI recovery period.

1545 - 1655: Pediatric

1545 - 1605: THE FAR-REACHING ROLE OF THE PEDIATRIC CARDIOLOGY NURSE CLINICIAN.

Wetmore, N., Hagkull, T., Human, D. G., Children's and Women's Health Centre of British Columbia, Vancouver, BC

In 1994, British Columbia's Children's Hospital (BCCH) initiated the Community Partnerships in Pediatric Cardiology Program to offer non-acute care to clients in their community. The program's intent is to strengthen the regional services provided to clients, to optimize resource use locally, and to facilitate education of community health care professionals involved in the care of children with congenital heart disease.

Partnership clinics take place on a regular basis in seven communities across BC. The Nurse Clinician's role is comprehensive, illustrating a unique example of an advanced practice nurse within a specialized pediatric program. In addition to the administrative responsibilities associated with the coordination and ongoing program development, the nurse also provides nursing expertise at each clinic. A detailed history and physical assessment are obtained; education and support are provided as needed. This contact often continues by phone after the clinic, to provide ongoing nursing expertise and support. The nurse is also responsible for educational sessions to the community health care professionals at each center. These sessions provide opportunities to share client specific information, new treatment trends and research with the staff who are involved in caring for these children in their own community.

Ongoing formative and summative evaluation indicates that the Partnership Program has been a huge success, both from families' and health care professionals' perspectives. Families have highlighted the advantages of decreased personal cost and travel time. Community health care professionals emphasize the benefits of the Partnership Program in developing their expertise in the care of children with congenital heart disease.

1610 - 1630: PEDIATRIC DILATED CARDIOMYOPATHY: A CASE PRESENTATION

Edmond, L. I., Maser, C. M., Hospital for Sick Children, Toronto, Ontario

Cardiomyopathies are diseases of the heart muscle. Gajarski & Towbin, (1995) state the incidence of two to eight cases of cardiomyopathies per 100,000 population. Primary or idiopathic cardiomyopathy is a heart muscle disease of unknown cause. Identifying features of dilated cardiomyopathy (DCM) include: myofibril damage, decreased systolic function effecting the heart's ability to pump, dilation of all four chambers, and diminished blood flow within the heart (Wynne & Braunwald, 1997). The current causative factors of cardiomyopathy include viral infections and autoimmunity (Thelan, Urden, Lough, & Stacy, 1998). The use of various treatment strategies can only provide palliation and cardiac transplantation represents the only hope for survival.

The aim of this presentation is to provide a summary and review of current literature pertaining to the clinical presentation, pathophysiology, epidemiological and treatment of an 8-year-old patient with DCM. The nurses in Critical Care and Cardiology units play an important role in the identification and treatment of DCM. By developing a better understanding of how to recognize and appropriately treat children with this disease process nurses will positively influence the care of this population and optimize patient outcomes. Current advances and trends in care will be discussed and recommendations made for future considerations.

1635 - 1655: COMBINING EXPERTISE: RECOGNIZING THE ISSUES AND PERSPECTIVES OF CHILDREN ANTICIPATING CARDIAC SURGERY FROM A FAMILY CENTERED POINT OF VIEW

Sweett, B., Cender, L.M., Children's and Women's Health Centre of British Columbia, Vancouver, BC

It is well recognized that children who experience hospitalization between the ages of eight months and early school age are at risk for experiencing emotional difficulties later in life. This presentation will address the emotional needs of children experiencing cardiac surgery, and will highlight, through case studies, the similarities and differences in preparation needs between preschool, school age, and adolescent clients and their families. Using anticipatory guidance and emphasizing developmental perspectives, the clinical nurse specialist (CNS) and the child life specialist combine their expertise, incorporating the unique knowledge of each child's family, in a pre-operative preparation program. Individual family and child assessment, and need specific intervention have replaced the one-size-fits-all approach to preparation. Youth, as a population in transition, present the team with complicated cognitive and emotional issues and needs.

Ongoing evaluation of this preoperative preparation program is accomplished through direct observation and through solicited verbal reports from children, their families, and health care professionals. By combining experience and expertise the child life specialist and CNS, as part of the multidisciplinary team, are successful in reducing overall anxiety, integrating active coping skills, and weaving a stronger net of support for both the child and the family. Although more time consuming initially, this proactive approach reduces the need for reactive intervention at times of crisis. Long term benefits for children who have positive experiences translate into improved coping abilities with future hospitalizations and medical treatments.

1545 - 1655: Guidelines / Wait Times

1545 - 1605: MORBIDITY, MORTALITY AND QUALITY OF LIFE OF PATIENTS ON THE WAITING LIST FOR ELECTIVE CORONARY ANGIOGRAPHY

de Jong-Watt, W., Rouge Valley Health System, Centenary site, Toronto, Ontario.

There is a paucity of data that examine the morbidity, mortality and health-related quality of life (HRQL) of adult patients awaiting elective coronary angiography (CA). The objectives of this study were to document the risk of waiting for elective CA by examining the physical, psychological and cardiac-specific HRQL issues inherent in waiting for CA. A prospective, inception cohort design was used with a sample of 42 adult patients referred for elective CA. Clinical events that were tracked weekly on the waiting list included changes in cardiac status (death, unstable angina pectoris, myocardial infarction), visits to and/or admissions to hospital and visits to physicians. The possible association between time on the waiting list and subjects perceived anxiety while awaiting CA was analysed. Cardiac-HRQL was measured using the Seattle Angina Questionnaire (SAQ) at baseline (T1) and one week prior to CA (T2)

The results indicated that there were low numbers of acute clinical events and no deaths in the cohort waiting for CA. Paired sample t-tests comparing subjects mean anxiety levels at T1 and T2 indicated a statistically significant increase in anxiety levels at T2 ($p=.000$). Paired sample t-tests comparing mean SAQ scores at T1 and T2 demonstrated an overall deterioration in cardiac-HRQL over time. The author concluded that waiting for elective CA may have a negative impact on patients anxiety (psychological) status and cardiac-specific HRQL. Nursing interventions to reduce anxiety and improve cardiac-HRQL are indicated for this population..

1610 - 1630: G.R.A.D. - WHAT IS IT AND WHO IS IT FOR?

Bickerton, L., Doucette, P., Kearns, SA., The University of Ottawa Heart Institute, Ottawa, Ontario

In this time of fiscal restraint the need to continually improve bed and resource utilization and to alleviate patient anxiety while waiting, led us to examine if we could safely discharge patients from hospital to wait at home for cardiac procedures. A working group of physicians, nurses and the triage coordinators at a major tertiary care center, reviewed the needs involved and put in place a **G**uaranteed **Re-A**dmit **D**ecision Program (GRAD).

The literature shows that waiting for cardiac surgery is likely the most stressful part of the cardiac surgical experience. Uncertainty about the unknown contributes to a sense of loss of control for the patient and family during this already stressful time. They express relief when the surgery is finally performed. Recent research at our institution shows that waiting for cardiac angiography is equally as stressful, with components of hostility and illness intrusiveness.

The GRAD Program has been implemented as part of the ongoing Triage Program in our institution. Patients are eligible for inclusion in the program if they are stable, requiring immediate, not urgent intervention. They are provided with a guaranteed return date for procedure and encouraged to use the telephone support number. Operating Room scheduling was permanently adjusted to allow for guaranteed dates. In a pilot of those waiting for surgical intervention, sixty six patients were entered into the GRAD Program over a period of six months, with fifty-five patients having surgery on or before their readmission date. There were no adverse outcomes. This represented an 83% success rate. Based on our experience with the surgical patient group we have implemented the GRAD Program for the patient group admitted to hospital with MI or unstable angina requiring angiography as part of their care.

This presentation will describe the implementation of this exciting program including; criteria established for patient inclusion, the process, patient and family support system, patient satisfaction and cost effectiveness.

1635 - 1655: BEST PRACTICE GUIDELINES FOR PATIENTS ON CARDIAC WAIT LISTS

Bickerton, L., Doucette, P., Kearns, SA. University of Ottawa Heart Institute, Ottawa, ON

In response to patient deaths while awaiting cardiac surgery, the Regional Cardiac Care Coordinator Committee of the Cardiac Care Network (CCN) established best practice guidelines for patient surveillance while on cardiac wait lists. The mandate of the Regional Coordinators at all cardiac surgical centers in Ontario was to provide ongoing monitoring and patient/family support during the waiting period. Best Practice Guidelines were piloted over a period of six months in three surgical centers and then instituted province-wide in 1996.

While we were developing and establishing the guidelines, other opportunities for improvement became apparent. Patients were encouraged to keep the Coordinators informed of their status. Close monitoring allowed us to facilitate access to available resources such as patient education, physician services and social work. The autologous blood program patient information sheet was revised to better meet patient needs based on patient input from those on the waiting list.

Based on the success with the surgical patient group and in recognition of the growing waiting lists of patients requiring cardiac catheterization and coronary intervention, (at this point in time we were monitoring this patient group without the aid of a database), the Regional Cardiac Care Coordinator group was expanded to include cardiology in the fall of 1999.

This presentation will describe our Institute's experience with the implementation of the best practice guidelines. We will discuss the background to the establishment of the guidelines, the process of development, implementation and evaluation of the guidelines in a large teaching cardiac center. Most importantly, the monitoring of clinical status and support of patients/families during the waiting period will be discussed.

1545 - 1655: Medical Directives

1545 - 1605: ESTABLISHING THE ACUTE CARE NURSE PRACTITIONER ROLE IN A COMMUNITY HOSPITAL THAT OFFERS TERTIARY LEVEL CARDIAC CARE

Pogue, P., & Deane, M.L., Trillium Health Centre, Mississauga, Ontario

Until recently, Acute Care Nurse Practitioner (ACNP) roles in both cardiology and cardiac surgery have been primarily associated with well established cardiac programs in teaching hospitals. The advent of a newly established Advanced Cardiac Services Program at Trillium Health Centre in Mississauga provided an opportunity to introduce and implement the ACNP role in a community hospital setting that offers tertiary level cardiac care.

This presentation will provide an overview of the issues and processes associated with the role's inception into an existing, yet rapidly expanding cardiology program, and a newly created cardiovascular surgery program at this hospital. A practical overview of organizational factors that influenced the decision to incorporate the ACNP role into this cardiac program and the processes involved in introducing and developing the role will be summarized. Emphasis will be placed on the process of developing an advanced practice nursing framework for the Acute Care Nurse Practitioner role. Strategies for implementing and evaluating the role within this advanced practice nursing framework will be discussed. Implications for the development of cardiology and cardiac surgery clinical nurses will be discussed.

1610 - 1630: PROMOTING AUTONOMY IN NURSING CARE THROUGH MEDICAL DIRECTIVES IN A CARDIAC SHORT STAY UNIT

Adarna, E., Li-James, S., & Glaves, P., University Health Network, Toronto, Ontario

The Cardiac Short Stay unit was inspired by the need to improve patient safety and to promote nursing autonomy by developing and implementing the use of medical directives. A "medical directive" is a prescription for a procedure, treatment or intervention that may be performed for a range of patients who meet certain conditions. A medical directive identifies a specific treatment or range of treatments, the specific conditions that must be met, and any specific circumstances that must exist before the directive can be implemented. A medical directive is always written. (CNO, 2000)

The implementation of the medical directive was related to limited access to staff cardiologists throughout the day. Removal of femoral sheaths occurred at the end of the day, after the staff cardiologists finished their cases in the Cath Lab. In order to meet the patients' needs in a timely manner, nurses were educated to remove femoral sheaths. However, it was identified that physicians would not be available to treat a vasovagal response in a timely manner. A medical directive to treat vasovagal response was developed to provide patient care effectively and at the same time promote autonomy among the nurses. The implementation of the medical directive expanded the nurses' problem solving and critical thinking skills. As well, advanced assessment skills and accountability in practice. At the same time, patient's discomfort due to prolonged bedrest is minimized. This discussion will include the significance of a medical directive to nursing practice and the maintenance of nurses' competency. As well, we will share our experience in developing and implementing the medical directive.

1635 - 1655: THE TWILIGHT ZONE: NURSES' EXPANDED ROLE IN CARING FOR PATIENTS RECEIVING IV CONSCIOUS SEDATION

Logan, G., Li-James, S., & Ramsamugh, R., University Health Network, Toronto, Ontario

The rapid growth of minimally invasive techniques over recent years has lead to an increase in the use of IV sedation. As a result, many procedures once performed in the traditional operating rooms have now moved to other settings – within and outside a hospital setting. Conscious sedation refers to the administration of IV sedative, hypnotic and opioid drugs to produce sedation, analgesia and amnesia. Effectively managed, IV conscious sedation decreases recovery time and reduces risks for patients undergoing interventional or diagnostic procedures.

Administering IV conscious sedation, outside of the operating room, requires that nurses are skilled and knowledgeable in managing patients receiving sedatives and analgesics in relation to potential complications, hemodynamic monitoring and an understanding of airway management. Effective management of patients receiving IV conscious sedation is dependent on the multidisciplinary team – from the physician who orders the drug to the nurse administering the medication. This presentation will address what constitutes IV conscious sedation? What precautions and added assessments are required? What is important to include in the education of the nurses? What protocols and support are required to safely and effectively manage the patients? As well, share our experience in implementing a conscious sedation protocol in the Cardiovascular Investigation Unit to safely manage the patients receiving IV conscious sedation.

1545 - 1655: Collaboration

1545 - 1605: PARTNERSHIPS: HOW TIMES HAVE CHANGED IN THE RELATIONSHIP OF THE CHRONICALLY ILL CARDIAC PATIENT, FAMILY AND HEALTH CARE TEAM

MacIsaac, Janice., & Matheson., Sandra., QEII Health Sciences Centre, Halifax, Nova Scotia.

The importance of helping family members deal with the stress of a prolonged chronic cardiac illness has been recognized as an integral part of professional critical care nursing practice. Today families expect the health care team to provide consistent and realistic information on a regular basis. Families want to be involved in the discussions about the medical/nursing plan of care and in decision-making around treatment options. As a health care team we utilize numerous strategies to communicate with families in an attempt to meet their informational needs over time. However despite our best efforts, we identified that family members were not satisfied with their communication with the team and their knowledge level of the proposed plan of care for their loved one. This level of family frustration led to poor relations between the team and the family.

The health care team designed and implemented an intervention for chronic cardiac patients. Specifically two outcomes were set: 1) to improve family satisfaction with their communication with the health care team; and 2) to increase the family's knowledge of the proposed plan of care. Health care team expectations and standards for

communication with families were established. Negotiation and resolution around the role and responsibilities of all team members, including the family, occurred. A documentation tool was developed for communication as well as a process for quality monitoring was instituted.

This presentation will highlight the steps taken and lessons learned by the health care team and family as we worked together to successfully develop, implement and evaluate an intervention that addressed the special needs of families of chronic cardiac patients.

1610 - 1630: DEVELOPMENT OF A TRANSITION PROCESS FROM A PAEDIATRIC TO AN ADULT HEALTH CARE SETTING

Johnson, M., Fofonoff, D., Paone, M., Sweett, B., Spencer, M., Wetmore, N., Cender, L; Young, Q., Hryhor, B.; BC's Children's and St Paul's Hospital, Vancouver, BC.

With advances in congenital heart disease treatment and surgery in the past 20 years, there is a growing population of youth surviving with complex cardiac health needs. At B.C's. Children's Hospital approximately 300 youth transition yearly to the Pacific Adult Congenital Heart Clinic at St Paul's Hospital, and moving to the adult health system requires enabling their successful transition. In consultation with the adult clinic and with support from our Youth Health Program, a multi-disciplinary cardiac transition team was developed. Identification of needs led to development of several tools that promote youth education and autonomy, and eventually a transition clinic evolved. Strategies that enhance youths' understanding of their health condition and promote independent behaviours and self-advocacy have been incorporated as a regular component of outpatient visits. Transition discussions are initiated in the early stages of adolescence and reinforced on subsequent visits. A half-day Transition clinic, held at the adult centre, further facilitates the transfer of care. At this clinic the focus for youth is promotion of self-advocacy within the adult health care system, and for families the focus is on fostering youths' independence and adjusting parent roles to those of primary support person. Evaluation of this process including feedback from "graduates" and health care professionals is very positive. Involvement in this process has highlighted the need for specialized nursing support for this complex, unique and growing population.

1635 - 1655: JOINING FORCES FOR DELIVERY: COLLABORATION BETWEEN THE PERINATAL AND CORONADY CARE UNITS

Spencer, Marleen., & Janes, Sandra., & Matheson, Sandra., QEII Health Sciences Centre, Halifax, Nova Scotia.

Caring for the perinatal patient with a history of congenital heart disease in the coronary care unit (CCU) has offered unique challenges and opportunities for our CCU nurses. In the past year, eight patients have been admitted to CCU during varying stages of their perinatal period for critical care prior to, during and post delivery. Team members from the CCU of the adult tertiary hospital and the perinatal team from the pediatric/maternity hospital came together to establish a working relationship. The focus of the collaboration was clear from the start, meeting the needs of mother, baby and family during the perinatal period. Health care team expectations and a process for team communication were established. Negotiation and resolution around the roles and responsibilities of all team members, including the family, took place. A plan of care with various scenarios was developed and revised as needed for the team. The vital element was the communication plan for the team.

This presentation will draw on particular case studies to share how the teams from two institutions joined forces to establish a process for sharing the expertise and clinical skills that are required to care for the needs of mother, baby, family and the health care team.

Tuesday, October 23, 2001

0940 - 1025: CV Surgery

0940 - 1000: CHANGING FOCUS FROM AGGRESSIVE CARE TO PALLIATIVE CARE: WHEN NURSING AND MEDICINE SHARE DIFFERING PERSPECTIVES!

MacIsaac, Janice., & Matheson., Sandra., QEII Health Sciences Centre, Halifax, Nova Scotia.

The process of shifting focus from the traditional high technology and cure oriented interventions to palliative treatment and care directed towards maintaining the comfort and dignity of the patient presents a challenge to members of the health care team. The general orientation in cardiac care is towards monitoring and life saving interventions, however, situations do arise when it is no longer appropriate to continue aggressive interventions because death is unavoidable and imminent.

This change in focus can cause disagreement with the health care team's personal beliefs, values and professional standards, which can result in crisis. This crisis can lead to physical and emotional exhaustion that can impact on the professional and personal lives of the health care team. Practices that promote the physical, psychological, and spiritual well being of health care team are important issues in todays cardiac care environment.

Through a case study this presentation will share a difficult experience that our health care team faced during the process of changing focus from high technology interventions to palliative treatment and care. This particular situation created disagreement and crisis within the health care team, as a result of differing perspectives from the disciplines. The presentation will focus on the steps that were initiated to help nursing and medicine work together to recognize, deal with, and resolve the disagreement and crisis. Specifically outlining the strategy that was put in place and supports necessary to create an environment for the team to dialogue and express feelings, as well as the interpersonal and communication skills that the team required to participate in these difficult discussions.

1005 - 1025: PAIN AND ILLNESS INTRUSIVENESS: MIDCAB VS CABG

Stolarik A, Rowlinson M, Sherrard H, Woodend AK. University of Ottawa Heart Institute, Ottawa, ON

The purpose of this study is to examine, longitudinally, post-surgical pain in patients who have had minimally invasive coronary artery bypass (MIDCAB) or standard coronary artery bypass (CABG) as well as to better understand the relationship between pain, functional status, illness intrusiveness and quality of life (QoL).

While there is data on pain and pain management in patients who have had CABG, there is even less on the location, intensity, and impact of pain on functional status and quality of life in patients who have had a MIDCAB procedure. Although the literature suggests that patients who have MIDCAB procedures will have less pain there is no published, empirical evidence to support this.

This is a longitudinal survey of patients having CABG or MIDCAB procedures. Questionnaires are administered prior to discharge and at 1, 4 , 8 and 12 weeks after discharge. Pain is assessed using a standard VAS pain scale for overall pain and in addition patients are asked to indicate, on a sketch of the body, where their pain is located and use a numerical pain scale to demonstrate the intensity of pain in each area. Illness intrusiveness is measured using the Illness Intrusiveness Rating Scale. The Medical Outcomes Study Short Form - 36 is being used to assess quality of life. The specific Activity Scale, designed to broaden the NYHA Functional Classification Scale, is being used to measure functional status. The patient's family caregivers are also being asked to complete the Caregiving Burden Scale at 1, 4, 8 and 12 weeks post-discharge.

This study will provide us with more information about pain, illness intrusiveness, and quality of life in MIDCAB patients and how these differ from the CABG patients with which we are more for familiar. This knowledge will assist us in the development of nursing (care and educational) interventions to optimize the recovery of patients undergoing MIDCAB. This study will also provide us with longitudinal information about caregiver burden which will assist us in structuring patient and family pre-operative and pre-discharge teaching as well as in planning for nursing needs after post-surgery patients return to the community.

0940 - 1025: Risk Factor

0940 - 1000: REDUCING CARDIOVASCULAR RISK: IDENTIFYING PREDICTORS OF SMOKING RELAPSE

Miller, Clara (Claire) E., St. Paul's Hospital, Vancouver, British Columbia.

The cardiovascualr nurse actively determines strategies in partnership with clients to reduce their cardiovascular risk. As smoking has been identified as the most potent modifiable cardiovascular risk, nurses need to determine strategies to improve smoking cessation rates. One such strategy is to better understand and prevent smoking relapse. Towards this end, the purpose of this study was to identify predictors of smoking relapse in a Canadian sample of former smokers. A secondary analysis was conducted of data collected in the Survey on Smoking in Canada, a national survey panel with four-cycle intervals. In this study, all respondents who reported that they were former smokers at cycle one (N = 3,875) were included. These respondents were divided into two groups. The first group (N = 3,582) remained abstinent from smoking throughout the survey's four cycles, and the second group (N = 293) experienced a smoking relapse sometime between cycles one and four. Multiple logistic regression analysis of sociodemographic variables indicated that age, education, marital status, and employment status were associated with relapse. Differences were also noted between the groups when comparing subjects' exposure to smoke from cigarettes, if they were bothered by cigarette smoke, and if cigarette smoke caused them any physical irritation. Relapsers also differed from non-relapsers in that they appeared to have higher levels of nicotine dependence and reported first starting to smoke at a much younger age. In all four cycles of follow-up, relapsers reported that "stress" was the primary reason for their smoking relapse. In recognizing these predictors, nurses can help to reduce their client's cardiovascular risk of smoking relapse.

1005 - 1025: A CLINICAL APPROACH TO THE MANGEMENT OF HYPERLIPIDEMIA: ARE WE DOING ENOUGH?

Belford, Linda., Brubacher, Linda., Polyak, Beth., University Health Network, Toronto, Ontario

Hyperlipidemia is an established risk factor for the development and progression of coronary disease. In addition to diet and exercise, combination hypolipidemic pharmacotherapy is often required to achieve target lipid levels in patients with mixed hyperlipidemia. The purpose of this presentation will be to review the overall management of hyperlipidemia and will pay particular attention to safety considerations when the initiation of combination therapy is indicated.

Clinical trials have demonstrated that lowering of low density lipoprotein (LDL) cholesterol utilizing HMG-CoA reductase inhibitors (statins) contributes to significant reductions of coronary morbidity and mortality. In addition, low high density lipoprotein (HDL) and elevated triglycerides are now considered a critical aspect in the clinical management of patients with these lipid abnormalities. Normalization of these parameters with a fibrate also results in significant reductions of major cardiovascular events. Numerous studies have confirmed the importance of optimizing all lipid parameters, and for those with mixed hyperlipidemia, combination therapy is often required. Early reports have suggested that the development of rhabdomyolysis is increased with concomitant therapy of a statin with fibrate therapy. However, more recent studies have shown that the incidence of these serious side effects is much less. A comprehensive review of the literature in addition to a retrospective chart review of 20 patients from a secondary prevention cardiology clinic in a teaching hospital in downtown Toronto suggests that combination therapy can be safely initiated with the use of proper screening, provision of patient education, as well as careful follow-up and monitoring of parameters.

Nursing plays a critical role in coordinating the management of patients with hyperlipidemia. In addition to patient education with regard to the importance of diet and exercise, providing patients with an understanding as to why the addition of medications may be necessary and the safety considerations in their use may maximize patient adherance to therapy and the careful follow-up that is required, minimizing the dangers of unrecognized side effects.

0940 - 1025: Interventional / Alternative Therapy

0940 - 1000: INTRAVASCULAR ULTRASOUND: A COMPLEMENT TO CORONARY ANGIOGRAPHY IN DETERMINING THE BURDEN OF DISEASE.

lundberg, d., & mann, l., University of Calgary

Contrast angiography has been the gold standard for evaluating coronary artery disease but only gives the cardiologist a sense of the lumen size of the coronary artery. Pathologic studies have shown that disease burden has been underestimated with this technique. Intravascular ultrasound (IVUS) is a new technique that can provide detailed, high quality, cross-sectional imaging of the coronary artery by visualizing the coronary artery wall, atherosclerotic plaque composition, as well as a more accurate reflection of lumen size. An ultrasound catheter with a crystal tip is placed into the artery via the guiding catheter. High frequency ultrasound waves project a two-dimensional image on a screen.

IVUS imaging helps the interventionalist plan for appropriate stenting, ballooning or use of IIbIIIa inhibitors in order to optimize an angioplasty procedure. Post intervention, IVUS can be used to detail stent apposition, restenosis characteristics, disease regression, lumen diameter, and changes in plaque composition.

IVUS is commonly being used in research to evaluate new devices and clinically to assess post transplant heart disease or in areas that plaque accumulation is not easily visualized by angiography. Limited numbers of specially trained interventional cardiologists, high equipment costs, and the potential for complications has restricted the use of routine IVUS. With familiarity and the increase use of IVUS, information on diagnosis and prognosis may improve the standards in the management of coronary artery disease. We will provide an informative overview of IVUS targeting nursing. Cases will be presented comparing IVUS and angiography in clinical and research settings with nursing implications reviewed.

1005 - 1025: ANGIOPLASTY RISK INTERVENTION (ARIN) STUDY

Pittman, Lynette G., Stone, James A., Jones, Charlotte A., Anderson, Todd A., Galbraith, P. Diane, Watson, Lorraine A., Foothills Medical Centre & University of Calgary, Calgary, Alberta

Percutaneous Coronary Intervention (PCI) or angioplasty may include the insertion of one or more stents within a diseased coronary artery or arteries. PCI patients, like other patients with coronary artery disease, are among those with the highest risk for death and disability and for which untreated heart hazards or risk factors may be

most damaging. Because of the potential for restenosis and progression of atherosclerosis, the need for lifestyle changes and aggressive pharmacological management of all heart hazards is essential. However, despite the potential for cost-effective health care gains, an informal survey of Canadian hospitals did not reveal secondary prevention programs for PCI patients.

Recent studies have shown effective nurse case-managed models (NCM) for multi-factorial risk reduction. Extending the NCM model, the ARIN Study provides comprehensive management of heart hazards in the PCI population guided by algorithms derived from evidenced-based guidelines and by collaboration with cardiologists, an endocrinologist, a registered dietician, and a social worker.

It is hypothesized that the NCM model will more effectively treat PCI patients to target lipoprotein levels; will demonstrate positive lifestyle changes as measured by smoking and eating patterns, exercise adherence, and blood pressure and diabetes control; and will express improved quality of life compared to usual care. To date 150 of 200 patients have been enrolled in the prospective, randomized, single center study.

This presentation will address the study design, patient baseline characteristics, and a model for a home-based NCM risk factor and lifestyle modification program.

0940 - 1025: Heart Failure / Ethnic

0940 - 1000: A COMPARATIVE STUDY TO EVALUATE THE EFFECTIVENESS OF A HEART FAILURE PROGRAM

Judy Backlund, Peggy Tan, Sharon Witt, Tina Ainsworth, & Carol Gunderson. Calgary Regional Health Authority, Calgary, Alberta

With advances in medical research and interventions, people with cardiac disease are living longer and the incidence of HF is increasing. People with HF have longer lengths of hospital stay and more hospital re-admissions than other cardiac events. Cardiac staff nurses developed the Cardiac Function Assessment Program (CFAP) to provide a nurse managed individualized educational program with interventions that promote self-care and self-management of HF for patients and families The purpose of this study is to evaluate the effectiveness of CFAP for hospitalized patients and to compare with the traditional or usual care program at 2 acute centers. A quasi-experimental design with a sample of 200 patients is used to compare 2 non-randomized groups. The experimental group participates in CFAP at one center. The control group follows traditional/usual nursing care at the other center. Both groups are compared with pretest prior discharge and posttest at 3 months post discharge for measurement of quality of life using SF-36 Health Survey, average length of hospital stay and re-admissions. Standard normal based methods (e.g. t-tests, associated confidence intervals) are used to compare SF-36 scores.

Re-admissions are compared using the Mann-Whitney U- test. Length of stay is assessed graphically for log-transformation followed by t-test. If there is significant difference in any demographic variable between the 2 centers, the variable will be used as a covariant (analysis of covariance ANCOVA rather than t-test). Statistical analysis is conducted using the SPSS program. Preliminaryresults of this study will be presented for potential effects of comprehensive nursing assessment and patient education as an integral part of care for patients and families living with HF.

1005 - 1025: QUALITATIVE AND QUANTITATIVE OUTCOMES OF PATIENTS IN A HEART FUNCTION CLINIC

Button, D. E., Trillium Health Centre, Mississauga, Ontario

The Heart Function Clinic at Trillium Health Centre opened in 1996. Initially, it was comprised of one intravenous Inotrope Program. Diverse patient needs have resulted in the addition of four other programs: 1) Education 2) Check-Up 3) Follow-Up 4) Beta-Blocker. Outcome measurement has been incorporated into these programs from the onset, and has been ongoing. A comparative analysis of outcomes before and after enrolment in the clinic, has been performed. A positive impact on both qualitative and quantitative outcomes, has been documented. The collaborative relationship between the patient/family, and the multi-disciplinary team, is an important component associated with the outcomes achieved to date. This presentation will discuss indicators that were utilized, to assess both qualitative and quantitative outcomes. Strategies to ensure quality assurance is maintained, while achieving positive outcomes, will also be presented.

0940 - 1025: Congenital

0940 - 1000: ANTENATAL DIAGNOSIS OF CONGENITAL HEART DISEASE: PARENTS DECISIONS & NURSES INVOLVEMENT

Rempel, G.R., Cender, L.M., Lynam, M.J., Sandor, G.S.S., Children's and Women's Health Centre of British Columbia, Vancouver, BC

Although antenatal diagnosis of congenital heart disease (CHD) has been available since the 1970s, formalized Fetal Cardiology Centres are a more recent phenomenon. Within our multidisciplinary Fetal Cardiology Service, we conduct 400 - 450 fetal echocardiograms annually with 60–80 positive diagnoses. While continually advancing the technological aspects of antenatal diagnosis of CHD, we are committed to ongoing research to understand the experiences of women and their partners who receive antenatal services. This qualitative study, employing in-depth interviews with 19 women and their partners before and after the birth of their baby with CHD, focused on how couples manage their experience of their baby's antenatal diagnosis of CHD.

Constant comparative analysis of data revealed the agonizing nature of decisions concerning further diagnostic testing and, in many cases, the option of pregnancy termination. Participants described the difficulties of making such crucial decisions in the time-pressured context of a progressing pregnancy. Some participants expressed feeling vulnerable in relation to the influence that health care providers had on their decision-making. Some felt that the professionals were too directive, especially related to termination. Their insistence that health care professionals explore the beliefs and values of those they are counseling regarding the antenatal diagnosis of CHD warrants ongoing discussion amongst us as nurses. As the advanced practice role of nurses expands to include nurse practitioners as well as clinical nurse specialists in pediatric cardiology, increasing cognizance and articulation of the influence of our roles with parents during their antenatal decision-making is necessary and timely both ethically and professionally.

1005 - 1025: PROTEIN-LOSING ENTEROPATHY IN CONGENITAL HEART PATIENTS

Doreen A. Fofonoff, Laurie M. Cender, St. Paul's & BC Children's Hospitals, Vancouver, BC

Our understanding of congenital heart disease has improved considerably over the past two decades. The evolution of various surgical approaches has allowed for the survival, into adulthood, of many children with a variety of complex defects, including tricuspid atresia, single left ventricle and hypoplastic left heart syndrome. As the number of survivors have increased, an unusual condition called "protein-losing enteropathy" or PLE, has been noted to occur years after the operation. PLE is most commonly seen following a Fontan operation but may be associated with other conditions, such as Noonan's Syndrome. However, not all Fontan and Noonan patients get PLE. In the past few years, PLE has been the subject of great interest in many centres. It is one of the main causes of late mortality and results in morbidity that significantly affects the patient's quality of life.

The primary purpose of this presentation is to provide an overview of protein-losing enteropathy, including pathophysiology, sequelae, treatment and considerations for cardiac nursing practice. Using case examples, the presenters will also share their centres' experiences and challenges in caring for patients with protein losing enteropathy.

1115 - 1225: CV Surgery

1115 - 1135: A COLLABORATIVE APPROACH TO POST-OPERATIVE CARDIAC SURGERY CARE FROM HOSPITAL TO HOME

deBruyn, J., Donahue, M., Dowey, H., & Foley, L., Calgary Regional Health Authority, Calgary, Alberta

Cardiac surgery techniques and approaches have advanced such that these patients are faced with shorter and shorter lengths of hospital stay. In addition, our region's population is growing and aging, which also increases the demand for this type of surgery. At our centre, over the next five years we are anticipating a 8% increase in cardiac surgery cases each year. These factors require us to look at new and innovative ways to deliver care and optimize resources.

One approach that we have undertaken is the development of a Cardiac Surgery to Home Care project. The project is a collaborative effort between the Cardiac Surgery program and Home Care. The overall goal of the project was to provide patients and families following cardiac surgery a safe and seamless transition from hospital to home. In effect the project would allow patients time to continue their recovery at home while still receiving the support and nursing care that they may need. We completed a demonstration project to examine the success of this type of discharge from hospital to home approach and to study the feasibility of further implementation of such an initiative.

This presentation will describe our Cardiac Surgery to Home Care project, looking specifically at the steps we undertook in the development and implementation of the project. The measurable outcomes we evaluated will also be discussed and includes length of stay, readmission rates to hospital, emergency room visits, and patient satisfaction. This should be of interest to programs that are also experiencing increasing demands for cardiac surgery beds and a means of bridging care between the hospital and home.

1140 - 1200: TAMPONADE AFTER CARDIAC SURGERY: A CASE PRESENTATION

Tracey J.F. Patton, MScN(Ed), ACNP (Cardiovascular Surgery) and Suzette Turner, MN, FNP (Cardiovascular Surgery), Sunnybrook & Womens College Health Sciences Centre, Toronto, Ontario

Cardiac tamponade is an uncommon but potentially life threatening postoperative complication which poses an acute situation requiring astute nursing assessment and immediate medical intervention. This complication results when fluid accumulates in the pericardial space causing increased intra-pericardial pressure thus preventing complete filling of the heart before the next heartbeat (Eisenberg et al, 1999). Severe pericardial compression may lead to patient compromise secondary to decreased cardiac output, circulatory shock, and arrhythmias.

This case presentation will describe a patient who experienced cardiac tamponade four days following valve replacement surgery. The purpose of the presentation is to overview: 1) the possible etiologies of tamponade; 2) clinical signs and symptoms;
3) hemodynamic parameters; 4) diagnostics and medical intervention; 5) nursing assessment and implications for care post-pericardiocentesis.

Prompt recognition, diagnosis and treatment are key in order to reduce significant morbidity and mortality. The importance of a vigilant nursing assessment and early recognition of symptoms, as well as implications for nursing care will be addressed. This understanding will enable nurses to comprehend more fully what may be happening to these patients, understand the rationale for medical treatment, and the vital role they play in caring for these acute patients.

1205 - 1225: CARDIAC SURGERY PATIENTS' PAIN EXPERIENCES AND DRAINAGE EFFICACY WITH LARGE BORE CHEST TUBES VS SMALL SILASTIC DRAINS

Marville-Williams,C. and Ranmall-Dynes, S., Trillium Health Centre, Mississauga, Ontario

Patients frequently report discomfort with indwelling large bore chest tubes. In an effort to address this problem, small silastic chest drains with slotted channels have been developed. Preliminary data suggest that these drains enhance patient comfort and achieve adequate drainage for cardiac surgery patients. Cardiac surgery nurses are concerned that these silastic drains may not drain mediastinal blood effectively. This pilot study was undertaken to compare drainage adequacy and pain experiences of 100 patients; randomly assigned to receive either large bore chest tubes or silastic drains post cardiac surgery.

This pilot study represents a nursing initiative to achieve optimal pain management and effective chest tube drainage which is essential for faster patient recovery and decreased length of stay. Nurses caring for these patients will record patients' pain experiences and chest tube drainage every four hours after extubation and upon chest tube removal. Comparative analysis of chest tube losses, cardiac tamponade requiring chest reopening, pleural effusions necessitating thoracentesis and patients' pain experiences will be conducted. The results of this research study will be used to enhance both drainage and comfort through selection of the most appropriate chest tube / drain for cardiac surgery patients.

1115 - 1225: Risk Factor

1115 - 1135: RISK FACTOR REDUCTION: TARGETING SMOKING CESSATION IN CARDIAC REHABILITATION.

Susanne L. Burns, Clara (Claire), E. Miller, Sandra and L. Barr. St. Paul's Hospital, Vancouver, British Columbia.

In order to decrease risk of cardiac events, it is imperative that cardiac patients stop smoking. To target nicotine dependence in risk factor reduction, our Healthy Heart Program developed and implemented a smoking cessation clinic. Based upon six evidence-based principles, our smoking cessation clinic offers a comprehensive multidisciplinary approach to smoking cessation. Using stage-based intervention and pharmacotherapy (as needed), a nurse with expertise in smoking cessation provides the intervention. As well, the clinic supports multidisciplinary staff roles facilitating smoking cessation and functions as a resource for other health care professionals. Patient data is collected at baseline and at time of exit from the Healthy Heart Program (4 months). Self- report and/or expired carbon monoxide values confirm verification of a patient's smoking status. We conclude that our smoking cessation clinic is effective with a 32% (N=162) quit rate. It must be recognized that our patients represent highly nicotine dependent and committed smokers who continued to smoke despite cardiac events and/or revascularization procedures. Because smoking is the most potent modifiable risk factor, smoking cessation initiatives, such as ours, is in keeping with the CCCN Standards by contributing to the maximization of cardiovascular health.

1140 - 1200: PERSONAL INVESTMENT IN CARDIAC HEALTH: BEHAVIORAL CHANGE IN THE WORKPLACE

G. M. Shah, C. A. Jones, C. Brewis, L. Webb, Hypertension and Cholesterol Centre, Foothills Medical Centre, Calgary, Alberta

The objective of this study was to collaborate with occupational health nurses (OHN) to facilitate small group education and behavior modification programs to promote adherence to a healthy lifestyle for individuals at risk for cardiovascular disease (CVD). The multidisciplinary team of nurses, dietitians and psychologists at the Hypertension & Cholesterol Centre (HCC) developed a set of seven "Creative Lifestyle Changes" modules for participants and a facilitator's manual. The eligibility criteria for the study included individuals with hypertension, abnormal lipids, diabetes, strong family history of CVD or high level of stress. The six month program was held at work sites, facilitated by HCC staff and the OHN. Prochaska's Stage of Change model was incorporated throughout the program. The OHNs from five companies recruited a total of 82 participants.

Pre and post study data included assessment of lifestyle behaviors, readiness for change and cardiovascular risk factors. Fifty-six participants completed the study. These participants demonstrated statistically significant improvements (P <0.05 +/- 95% confidence interval) for waist circumference, weight, systolic and diastolic blood pressure, eating habits, anxiety and depression scores, and most importantly, the ten-year risk for coronary artery disease for study participants.

The study demonstrates the value of partnering with OHNs and offer small group education programs for cardiovascular risk reduction within the workplace.

1205 - 1225: EVALUATION OF A NURSE-DELIVERED CARDIAC RISK FACTOR COUNSELING INTERVENTION FOR HOSPITALISED PATIENTS

Martha Mackay, Doreen Fofonoff, Sandra Barr, Kenneth Gin, Leanne Heppell, Andrew Ignaszewski. St. Paul's & Vancouver General Hospitals, Vancouver, BC

Modifying cardiac risk factors has been shown to improve outcomes, and hospitalisation for an acute cardiac episode has been recognised as a "teachable moment" when nurses can begin risk modification counseling. Counseling is necessary because patients may not correlate their own lifestyle with their heart disease, and they may lack necessary knowledge and skill for successful health behaviour changes. But there has been little research examining patients' perceptions of their risk factors, their subsequent behaviour, and the efficacy of counseling in assisting hospitalized cardiac patients to begin behaviour changes. Phase I data, describing a control group's knowledge of their risk factors, have previously been reported. These informed the design of a nurse-delivered risk factor counseling intervention. In this paper, we report findings from phase II of the study, in which a brief intervention was introduced and evaluated. Consecutive eligible cardiac patients (200), from two major teaching hospitals received the intervention from a staff nurse before discharge. Then, data regarding knowledge, perception, readiness and intention to change risk factors were collected. At four months post-discharge, the same data, and actual behaviour change are collected by telephone. These findings will be presented, compared and contrasted to those of the control group, and implications for cardiac nursing practice will be discussed.

1115 - 1225: Interventional / Alternative Therapy

1115 - 1135: TRANSRADIAL ANGIOPLASTY: AN ANALYSIS OF PATIENTS' LIVED EXPERIENCES AND GENDER CONSIDERATIONS.

Duke, Sandra A., Nichols, Natalie L., Oldford, Debbie A., Queen Elizabeth II Health Sciences Centre, Halifax, NS

Percutaneous transradial angioplasty is becoming an increasingly popular method for treating coronary stenoses. Previous research has investigated the technical and procedural aspects of angioplasty using the radial artery as an access route, however the majority of studies have involved mainly male participants. There is a paucity of literature exploring women's and men's subjective experiences with angioplasty. This study will explore patients' subjective lived experiences with this procedure. Using a qualitative research methodology, patients undergoing first time transradial angioplasty will be asked to participate. Audiotaped interviews transcribed verbatim will describe patients' accounts of their transradial angioplasty experience. Gender issues will be examined using a thematic analysis approach. Capturing patients' subjective accounts and recognizing patients' experiences with this invasive treatment will assist nurses in the preparation of patients undergoing transradial angioplasty.

1140 - 1200: DEVELOPING A TEACHING TOOL ABOUT NATURAL HEALTH PRODUCTS FOR CARDIAC PATIENTS

Slater, R., Elliott, J. & Harvey, J., London Health Sciences Centre, London, Ontario

A 1997 Angus Reid poll revealed that 50% of Canadians have used natural health products (NHP). The results of informal surveys among our cardiac inpatients identified a need for educational materials on NHP.

Individuals believed that NHP, including herbal remedies, are safe because they are "natural" and seemed unaware that interactions with prescribed medications could occur. Anecdotes from our practice, supplemented by a review of the literature, validated our belief that most patients are reluctant to discuss their use of NHP with health care providers.

The purposes for developing an information and learning package related to NHP include opening up communication between patients and health care providers, educating patients and staff, and facilitating the process of documenting patient's use of NHP. The information should be recorded on the chart so that the health care team can identify possible contraindications.

This presentation will outline the process and development of the educational materials and patient questionnaire. Plans for future research will also be presented.

1205 - 1225: RESULTS FROM THE PROGRAM TO ASSESS ALTERNATIVE TREATMENT STRATEGIES TO ACHIEVE CARDIAC HEALTH: PATCH-EDTA STUDY (CHELATION).

P. Diane Galbraith, Kathy Hildebrand, Diana Paterson, Deborah Richardson, Connie Burkart, University of Calgary, Calgary, Alberta, Canada.

It is vital that nurses be aware of the results from trials of chelation therapy so that informed responses can be given to the increasing number of patients seeking alternative/complementary therapies. Although case series have been published suggesting efficacy of ethylene diamine tetraacetic acid (EDTA, chelation) in coronary artery disease (CAD) and many patients report a greater sense of well-being after a course of treatment, there was no randomized data available.

Between 1996 and 2000, 84 patients with documented coronary ischemia were randomized to blinded intravenous treatments of EDTA or placebo at a single center. All patients received multi-vitamin therapy and optimal medical therapy. Patients were required to have a symptom-limited exercise treadmill test (ETT) using a ramping protocol. Patients received treatments twice weekly for 15 weeks and then once per month times three. The primary endpoint was time to ST depression at the end of the

study treatments and secondary endpoints included sense of well-being as measured by three validated quality of life instruments: Duke Activity Status Index, SF-36' Survey and Seattle Angina Questionnaire.

71 males and 13 females were enrolled with a mean age of 65±8.7 years. 78 patients completed the trial. This is the first randomized controlled clinical trial of chelation vs placebo in CAD patients. Data will be presented to address the usefulness of chelation therapy, as measured by time to ischemia and quality of life questionnaires, in this subgroup of patients. Administration issues will be addressed. Knowledge of the results of this trial will assist nurses in presenting scientific data to their patients seeking chelation therapy.

1115 - 1225: Heart Failure / Ethnic

1115 - 1135: THE IMPACT OF SOCIAL SUPPORT ON LIVING WITH HEART FAILURE

Elaine Hendershott, Montreal, PQ

This descriptive correlational study explored the relationship between perceived social support and perceptions of illness for individuals living with NYHA Class Two or Class Three congestive heart failure. A total of 34 participants were interviewed at the University of Ottawa Heart Institute, Ambulatory Heart Failure Clinic. These individuals were asked to fill out three questionnaires, which included a demographic questionnaire, a social support questionnaire (PRQ-85/Part Two), and the Meaning of Illness Questionnaire (MOIQ). They were also asked to respond to two open-ended questions that elicited information about how heart failure had affected their lives and about the resources that had been most helpful to them in coping with their illness. This data was collected in the clinic during a routine follow-up visit, with the researcher present. The responses to the two open-ended questions were tape-recorded.

Results indicated that subjects perceived their social support to be high. Perceptions or cognitive appraisal of illness were generally positive with respect to MOIQ Factor 4 (positive attitude toward illness as challenge, hope, motivation, and control). Results for MOIQ Factor 3 revealed moderate mean scores, which reflected a change in commitments and a secondary appraisal of coping resources. The negative impact of the illness on everyday living patterns was evident by the low mean scores seen in the other factors that reflected a concern for the unpredictability, controllability and vulnerability of the disease.

Perceived social support was seen to account for 24% of the variance in MOIQ Factor 3 (degree of stress, change in commitments, and secondary coping resources to deal with it), and 11% of the variance in MOIQ Factor 2 (type of stress, negative attitude of harm, loss or threat, and viewing the illness as disabling, disfiguring, and deteriorating).

Content analysis revealed six major themes which described the subjects' feelings about how heart failure had affected their lives. The themes that were elicited were: physical limitations, surprise and disbelief, a need for knowledge, adjustment, support from significant others, and getting in touch with one's spirituality.

1140 - 1200: CARDIAC CARE AND TRADITIONAL ABORIGINAL HEALING PRACTICES

Linda Hunter, University of Ottawa Heart Institute, Ottawa, Ontario

Eight percent of Aboriginal people have heart problems compared to four percent of all Canadians with Aboriginal people believing that returning to traditional ways will improve their wellness. Aboriginal people have an established cultural approach for dealing with cardiac disease that emphasizes physical, social, emotional, and spiritual dimensions of health care. While it is a challenge for health professionals to understand cultural aspects of health and healing, it is imperative to do so in order to deliver appropriate cultural care. An ethnographic study was undertaken as part of a graduate thesis with the purpose of determining how Canadian Aboriginal people in Ottawa-Carleton use traditional healing practices to address health issues. The information gleaned from this study is appropriate for use with a population who presents with cardiac disease. Aboriginal people have historically had lower rates of cardiac disease, however cardiac disease is now the leading cause of death in American Indians. The methods used for data collection included individual interviews and participant observations at healing ceremonies. These ceremonies included smudging, sweat lodges, pow wows, as well as talking and drumming circles. The interpretation of the results reveals the rich stories that are shared by Aboriginal people and relate the holistic manner in which health is regarded. This presentation will clarify who Canadian Aboriginal people are and review the cardiac health issues they face. Traditional healing practices will be explained with a focus on how these practices begin to address the cardiac problems that they face. The implications for nursing practice include that the understanding of healing practices increases cultural competence of cardiac nurses; thereby allowing these nurses to work in conjunction with their Aboriginal patients in delivering culturally appropriate cardiac care.

1205 - 1225: HEALTH BEHAVIOUR CHANGE IN AN ETHNICALLY DIVERSE COMMUNITY

Brubacher, Linda; Caruso, Veola; & Belford, Linda; University Health Network, Toronto, Ontario

The following presentation will review health behaviour change through the use of the transtheoretical model of cognitive or behavioural change, and the concept of self-efficacy within an ethnically diverse community of patients with established coronary artery disease. The focus will be on the theory as it applies to changing the level of exercise amongst sedentary elderly individuals.

The health care arena widely recognizes the risk of unhealthy lifestyle behaviour on the development of coronary artery disease. In particular, among the modifiable coronary heart disease risk factors, a sedentary lifestyle is most prevalent, especially among the elderly. Lifestyle counselling is also recognized as an essential part of health promotion and disease prevention. However, the information and advice often shared with patients and their families to assist them in making the necessary lifestyle changes for a healthy future are not always adopted. This can result in frustration among health practitioners and their patients. The challenge for the health care professional remains to engage the patient in a collaborative partnership for change, which recognizes their specific needs and readiness for change. As well, within a culturally diverse patient population attention to the cultural context of health care is important in providing culture-congruent care that meets the specific needs of the patient.

Unfortunately, literature on the application of the transtheoretical model regarding change in level of physical activity does not examine its use in a culturally or ethnically diverse community. However, the experiences of healthcare providers using this model and the concept of self-efficacy in a secondary prevention clinic in downtown Toronto will be shared. Nurses must continue to maximize their ability to facilitate health behaviour change in order to contribute to the promotion of health and prevention of disease in any healthcare community.

1115 - 1225: Congenital

1115 - 1135: THE ADULT CONGENITAL PATIENT IN THE CARDIOVASCULAR INTENSIVECARE UNIT: UNRAVELING THE TIES THAT BIND THEM.

Harris, L., Bush, K., Galea, J., Jutras, E., & Paton, J. University Health Network, Toronto, Ontario

The adult with congenital heart disease is an emerging population. Their complexities challenge the expertise of the health care providers caring for this expanding patient population. The challenges posed by these patients during their early postoperative period are frequently very daunting. In an effort to improve care and provide a better guide for nursing practice, we undertook a three year chart retrospective. To clarify the adult congenital patient's early postoperative needs, we examined their major problems and challenges. These include: achieving early hemostasis with the endpoint of maintaining adequate preload, supporting moderate to severe ventricular dysfunction, managing complex antiarrhythmias and providing a full spectrum of respiratory support.

198 patients were reviewed. Data presentation will include: blood loss and replacement, incidence of resternotomy, combination of inotropic support used and time required, incidence of early postoperative echo, need for epicardial pacing, initiation of afterload, antiarrhythmic therapy and duration of ventilatory support. Length of stay statistics will be shared. The evaluation of the data has provided an improved understanding of patient trends and specific patient needs, in particular the Fontan and Tetralogy of Fallot patient undergoing surgical revision. The lessons learned and impact on the nursing care provided to this unique patient population will be shared.

1140 - 1200: HAVING A CHILD WITH TRANSPOSITION OF THE GREAT ARTERIES

Robyn L. McKenzie, London Health Science Centre, London Ontario

As the day began, little did I know that the events that would occur later that afternoon, Nov. 25 1993, would change and shape many lives. Keanna, my daughter, was born at London Health Sciences Centre after an uncomplicated pregnancy, appearing healthy weighing 6 lbs 4 oz, apgars of 9 and 9. Within 12 hours she gradually deteriorated, was diagnosed with Transposition of the Great Arteries, transferred to pediatric intensive care, intubated, started on Prostagladin E (to maintain the patency of the ductus arteriosus) and taken to the catheterization lab for an atrial septostomy (enlarging the foramen ovale). Four days later she was transported by plane to Toronto's Hospital for Sick Children. The following morning taken to the operating room for an arterial switch.

The purpose of this presentation is to give nurses some insight of what we, as parents, went through during Keanna month long hospital stay and the how much we appreciated the care that she was given.

1205 - 1225: END OF LIFE CARE: FOCUSING ON CARING FOR NURSES

Janes, Sandra. & Matheson, Sandra., & Ells, Patricia. & Horne, Nancy., QEII Health Sciences Centre, Halifax, Nova Scotia.

Caring for the dying patient and their family is an important and sometimes difficult part of cardiac nursing. The point when the team initiates discussions of withdrawal of care with the patient and family can be complex and filled with many emotions. At this difficult time the needs of the patient and family as well as the team providing care should be addressed. Issues such as symptom management, and bereavement support are essential elements to be included in the plan of care.

A process was developed by our nursing staff with the goals of standardizing and improving end of life care for cardiac patients. The process includes a checklist (tool) used by physicians to clarify limits of interventions and standardize the process of withdrawal of active support. Specific orders in the area of symptom management were established. As well, a bereavement support process for staff involved in providing end of life interventions was developed. Specifically, a process to deal with the conflicting feelings that nursing staff experience-surrounding end of life issues and discussions. As part of this process we identified that a debriefing period was a key component in helping staff work through their feelings and emotions concerning end of life care.

This presentation will discuss how the challenging issue of end of life care can be a positive one addressing the needs of the patient and family as well as focusing on caring for nursing staff.

Marketplace

DOES POST ACUTE HOME CARE FOR MYOCARDIAL INFARCTION PATIENTS REDUCE READMISSION DAYS AND COSTS? A RANDOMIZED CLINICAL TRIAL.

Young, W. and the Heart Health Project Group, Toronto East General Hospital, Toronto ON

A needs assessment for residents of East Toronto in 1997 identified several gaps in the provision of care to patients who have experienced a myocardial infarction. These gaps included lack of standardized care; eligible patients were not receiving cardiac rehabilitation; lack of empowerment of patients and families; and high readmission rates. To address these issues, health-care providers, researchers and administrators developed a clear, precise, easy to use community pathway. This pathway that is consistent with the CCS guidelines for the management of the post myocardial infarction patient was implemented in the context of randomized trial over a one-year period.
Our Market Place presentation will highlight the systematic approach used to develop the pathway, its implementation and the qualitative and quantitative evaluation of the outcomes achieved.

SELF-MANAGEMENT TEACHING TOOLS FOR HEART FAILURE PATIENTS IN THE COMMUNITY

Struthers, C. & Svendson, A. for the Canadian Congestive Heart Failure Network Nursing Group

Heart failure is a chronic, progressive disease that is characterized by frequent readmission. It affects over 5 million people in North America with over 400, 000 new cases identified each year and is the leading cause of hospitalization in patients over 65 years of age. Nurses working in Heart Failure Clinics are instrumental in providing support, education, and counseling to heart failure patients to promote self-care, and self-management. The goal of self-management is to have patients understand the role of sodium and fluid retention in worsening symptoms and develop skills that will allow early intervention, thereby avoiding hospitalization. The Canadian Congestive Heart Failure Network Nursing Group has developed several teaching tools and strategies to increase self-efficacy and promote self-management in the complex population. These tools and strategies will be displayed and available for review.

IMPROVING TIME TO TREATMENT WHEN INSERTING A TEMPORARY TRANSVENOUS PACING WIRE

Robertson, L. Queen Elizabeth II Health Sciences Centre, Halifax NS

Delay in providing a patient with a temporary pacemaker can be detrimental to the prognosis of a cardiac patient. Our institution implemented a solution to decrease access time to a temporary pacemaker. Nurses in the Coronary Care Unit (CCU) were educated to assist the physician in the Cardiac Catheterization lab to insert the temporary pacemaker, eliminating the need to cal back Cardiac Cath staff.

This "solution" caused great anxiety for staff of the cath lab as the well as the staff of CCU. The anxiety of the cath lab staff was around the issue of decrease of clinical skills and clinical overtime. The anxieties of the CCU staff included: going to a new environment they were not familiar with the equipment, what would happen if the CCU was to busy to allow a staff member to go the cath lab and what other responsibilities would they be assuming if they started to go to the cath lab? (would the physician want to do a cardiac Catheterization)

The way that we alleviated some of the anxiety was to set up a "pacemaker cart" which was taken to the cardiac cath lab and had all the equipment that would be needed during the procedure. All nurses were also provided with an opportunity to take a tour of the room that was designated for the procedure.

The poster will present the assessment, implementation and evaluation of the change of this practice as well as the positive outcomes for patient care and areas identified for future improvement.

Posters

THE APPLICATION OF BIPHASIC WAVEFORM TECHNOLOGY TO ELECTIVE CARDIOVERSION

German, S. & Frazer, N., University of Ottawa Heart Institute, Ottawa, Ontario

Technological advancements have resulted in the introduction of biphasic waveform technology to external defibrillators. To date, external defibrillators have delivered energy in monophasic waveforms; however, biphasic waveforms have proven superior to monophasic in defibrillation by implantable defibrillators (AICD). It is proposed that biphasic technology will allow utilization of lower energy requirements for defibrillation/cardioverson. Biphasic waveforms have recently been developed and approved for clinical use in external defibrillators. AHA guidelines for Advanced Cardiovascular Life Support state that all health care providers with a duty to perform CPR should be trained to perform defibrillation. Cardiovascular nurses are constantly integrating emerging technological advancements into their clinical practice. Knowledge of waveform technology will allow the nurse to better understand the lower energy levels required in defibrillation/cardioversion with the new biphasic defibrillators. This presentation will introduce the concept of biphasic waveform technology. This includes a discussion of the differences between monophasic and biphasic waveforms focusing on the application of biphasic technology to cardioverson. It will include a review of the literature and a discussion of our experience using biphasic defibrillators in our cardioversion procedure. As of date ninety eight percent of patients were effectively cardioverted using voltages from 30 to 100 joules. We are continuing to trial a variety of biphasic defibrillators And will include a summary in this presentation.

THE INFLUENCE OF PAIN MANAGEMENT ON THE DEVELOPMENT OF DELIRIUM IN THE ELDERLY CARDIAC SURGICAL PATIENT

Stolarik A, Clarke L, Woodend K. University of Ottawa Heart Institute, Ottawa, ON

The purpose of this presentation is to review the literature on pain management in the elderly cardiac surgical patient and explore the relationship between pain management and the development of delirium in this patient group. Puntillo et al reported that elderly patients after cardiac surgery received less opioids than younger patients and that these differences became greater with time. The pain prevalence study done in our Institution showed a significant increase in pain with increasing age.

Although our prevalence study did not include an assessment of delirium, research studies have shown that post-operative pain at rest is associated with the increased incidence for delirium, even after controlling for age. The elderly cardiac surgery patient has many of the identified risk factors for the development of delirium such as age, decreasing physical and/or cognitive function, and abnormal serum chemistries. The impact of inadequate pain management may increase the risk for the development of delirium in this patient group. Researchers have found that pain, not analgesic intake, predicted cognitive status after surgery in elderly patient groups.

Improving pain management in the elderly cardiac surgical patient may be one avenue to decrease the incidence of this problem which is distressing and frightening for patients and their families.

HEART FAILURE READMISSIONS: A SELF-CARE PROBLEM WITH A NURSING SOLUTION

Struthers C, Morin J, Rowlinson M, Sherrard H, Woodend AK, University of Ottawa Heart Institute, Ottawa, ON

The purpose of this presentation is to contrast and compare evidence based practice in heart failure teaching (from the literature and the CHF Consensus guidelines) with hospital and community practice in order to identify the gaps in patient education which could have an impact on the patient's self-care ability.

Heart failure (HF) is a growing health problem. Approximately one in 100 of the general population and one in 10 of the elderly is afflicted. Studies of HF report readmission rates as high as 47% within three months and 54% within six months. Several studies have identified the use of post discharge interventions such as weight monitoring, vital sign monitoring (ECG, pulse and blood pressure) diet counselling and medication information as useful in reducing readmissions. These are all activities well within the mandate of nursing practice.

Charts of patients with heart failure seen in family practice, hospital and heart failure clinic were abstracted as part of a larger study of heart failure care. The abstraction included documentation of patient education and counselling for each of the following: disease process, fluid & salt, weight monitoring, medications, activity/exercise, nutrition/obesity, alcohol, and smoking.

Five hundred and fifty-four charts of heart failure patients were abstracted. Thirty-four % of these were heart failure clinic charts, 34% were hospital charts and the remainder were from family practices. Not surprisingly, the highest rates of teaching of most topics were seen in the heart failure clinic patients with the patients being most likely to receive teaching on fluid and salt consumption (82%) and weight monitoring (76%). These were also the most frequently documented education topics in hospitalized patients although the rates were lower (36% and 32%). Alcohol consumption and smoking were the least documented educational topics of those included.

The nurse's role in teaching and counselling in both hospitalized and heart failure clinic patients is an important one and can have a large influence on both the patient's well-being and his/her use of health care resources.

IS THERE GENDER BIAS IN THE TREATMENT OF HEART FAILURE?

Morin, J., Struthers, C., Rowlinson, M., Sherrard, H., & Woodend, A. K., University of Ottawa Heart Institute, Ottawa, Ontario

Although the presentation of heart disease in women differs from that of men, it is nevertheless just as prevalent particularly in post-menopausal women. Women are also more likely to be disabled by heart failure (30% vs. 21%) after myocardial infarction. Despite this, there continues to exist discrepancies in access to care and treatment for women with heart disease.

The purpose of this study was to compare the documented care for men and women with heart failure who were admitted to hospital or seen in physician's offices and clinics. This was a secondary analysis of a review of 554 charts of heart failure patients. One-third of these were from a heart failure clinic, 1/3 hospital admissions and 1/3 family practice. Forty-one percent (n= 229) of the patients included were female.

Results: The prevalence of risk factors (except alcohol and sedentary lifestyle) was similar for both sexes. Despite similar incidence of risk factors, females were less frequently screened than males. Risk factor screening (with the exception of hypertension) was more prevalent in males than in females with screening for alcohol, smoking, dyslipidemia and diabetes being statistically significant ($p<0.05$). More males than females underwent revascularization procedures including bypass surgery (29.5% vs. 12.7%) and angioplasty (23% vs. 18.2%). Of the cases presenting an ischemic profile, males underwent more stress tests (13.1% vs. 5.4%; $p=0.016$) and angiograms (23.9% vs. 12.7%; $p=0.007$). Sixty percent of males were on beta-blockers compared with 45% of females ($p=0.001$). Seventy-four percent of male subjects were on ACE inhibitors compared with 66% of female subjects, but the difference was not statistically significant ($p=0.057$).

Awareness of gender inequities in the screening of cardiovascular risk factors and treatment strategies is a starting point toward optimization of care for women with heart disease, many aspects of which are well within the realm of nursing. The prominent expression of advocacy for women involves primarily the teaching and supportive aspects of the caring relationship although nurses acknowledge that the advocacy role includes human rights and thus equity of care between sexes.

LEUKOCYTE ADHESION IN ACUTE CORONARY SYNDROMES

Kathy L. Hildebrand, Annette C. Robertson, Heather E. Conradson & Todd J. Anderson, University of Calgary, Calgary, Alberta

Leukocyte binding to the endothelium is one of the earliest events in the occurrence of atherosclerosis. Inflammation of the endothelial lining of arteries is thought to be the mechanism that activates the rolling, tethering, and sticking of leukocyte cells. It is the subsequent migration and accumulation of these cells in the intima that leads to development of foam cells, which are involved in the formation and progression of atherosclerotic lesions. The interaction between activated leukocytes, platelets, and the endothelial cells is mediated by the expression of three groups of adhesion molecules: selectins, immunoglobulins, and integrins. It has been well documented that if leukocytes are activated this interaction may contribute significantly to plaque instability and rupture, this is important information for nurses who provide care for patients with acute coronary syndromes. An increase in a white blood cell count is an indication that the leukocytes are activated but this information does not tell us to to what extent they are rolling or sticking within the coronary artery wall. Varieties of leukocyte adhesion molecules which can be measured and how the activity of leukocytes can also be visualized utilizing a flow cytometry procedure will be topics discussed during this presentation.

Currently there is adequate medical documentation stating the benefits of glycoprotein IIB/IIIA inhibitors, a new therapy in acute coronary syndromes which attenuates leukocyte behavior. Being aware of leukocyte activation and understanding the implications is important for nurses who manage patients experiencing acute coronary syndromes.

HEPARIN-INDUCED THROMBOCYTOPENIA (HIT) AND CARDIOPULMONARY BYPASS (CPB): A CASE PRESENTATION

Stoop, Jacqueline, Foster, Barbara, & Estabrooks, Lorna, Foothills Medical Centre, Calgary, Alberta

Heparin is one of the most common anticoagulant drugs used for cardiac patients. A small number of patients develop an immune mediated reaction to heparin leading to thrombocytopenia. HIT poses a serious problem for patients requiring CPB because heparin is the standard anticoagulant used in the CPB circuit. The anticoagulant effect of heparin is reversed with protamine after cardiac surgery. Heparin use in the presence of HIT could lead to thrombo-embolic events, severe bleeding, and sudden death. For patients who have developed HIT, an alternative to heparin is required. Recombinant hirudin has been used successfully in this patient population requiring CPB.

This presentation will describe the pathophysiology of HIT. A case study documenting the use of hirudin as an anticoagulant in CPB will be examined, along with immediate post-operative nursing management of a patient.

WE NEED NPS RIGHT NOW! HOW ONE PROGRAM WORKED TO FILL THE DEMAND

McCue, J. & Donahue, M., Calgary Regional Health Authority, Calgary, Alberta

The role of the Nurse Practitioner (NP) is not new to the nursing profession. However, recently the demand for the Acute Care Nurse Practitioner has escalated as the inpatient workload has increased. At one time both physicians and nurses were reluctant in recognizing the benefit of the role or even how the role might function in a hospital setting. Now, the request is "we need NPs now and we want lots of them".

The problem faced by the Heart Health program, at the Calgary Regional Health Authority (CRHA), was that the number of qualified acute care NPs did not meet the demand. There was no NP program at our local university and qualified NPs in other centres did not want to relocate. In discussions with universities with existing NP programs most of the students had work commitments upon program completion.

This presentation will highlight the problems encountered when the NP role was initially considered in the Heart Health program and what factors motivated the push for the implementation of this role. The process undertaken to work with the local university in setting up a NP program, the recruitment of interested nurses, and the results to date will be discussed. This presentation will be of interest to other organizations looking at implementing this unique nursing role.

THE ENDOTHELIUM PLAYS A DYNAMIC ROLE IN OUR HEALTH

Heather E. Conradson, Kathy L. Hildebrand, Annette C. Robertson, Deborah Houston , Brigitte Gauthier, Todd J. Anderson, University of Calgary, Calgary, Alberta & McGill University, Montreal, Quebec

Cardiovascular disease (CVD) remains the leading cause of mortality and morbidity among adults in Canada. Identifying people who are at risk for coronary heart disease is important in the development of effective primary prevention strategies. Research supports the theory that endothelial dysfunction occurs before clinical signs of cardiovascular disease are present. Evaluating the function of our endothelium may be a new clinical test used to risk stratify patients years before the onset of a clinical cardiovascular event.

The endothelial layer (the inner lining of arteries) was once thought to be a passive barrier, which allowed blood to be transported through the body. In the last decade, the endothelium has been identified as a dynamic regulator of vascular homeostasis. The healthy endothelium is anti-atherogenic which is maintained though the favorable effects of vasodilation, antiplatelet and anti-inflammatory properties of the inner lining. Endothelial dysfunction has been seen in people with established CVD and in people with risk factors for CVD. Endothelial function can be improved by the modification of established risk factors. A non-invasive technique utilizing ultrasound is used to evaluate endothelial function.

Can endothelial function be used as a marker to evaluate individual's risk for CVD disease? Several studies support this theory and other large prospective studies are underway to evaluate the clinical utility of this potential new marker. FATE (Firefighters and their Endothelium), a large Canadian initiative, is one such study evaluating the predictive value of this diagnostic tool and will be discussed during this presentation. In addition; a summary of endothelial function, assessment, and the implications of this new marker will be addressed. Not only does this information give nurses the tools to better educate their clients on risk reduction; it also enables them to develop implement primary prevention strategies.

VASOPRESSIN: OLD ACTOR, NEW ROLE

Bengivingo, Susan, & Donahue, Marlene, Foothills Medical Centre, Calgary Alberta

The release of the 2000 Advanced Cardiac Life Support (ACLS) guidelines has thrust Vasopressin into the cardiovascular arena. As cardiovascular nurses are you cognizant of its effects on the cardiovascular system, its indications, side effects, and dosage?

Vasopressin occurs naturally in man and is the main hormone involved in regulation of body fluid osmolality. Its therapeutic uses have included the treatment of diabetes insipidus, postoperative ileus, and bleeding esophageal varicies. However Vasopressin acts on tissues other than the kidneys and gastrointestinal tract.

Focusing on the cardiovascular effects of Vasopressin, case studies from our cardiovascular intensive care unit will be utilized to illustrate its potential in the cardiovascular setting.

OPEN VERSUS CLOSED CHEST TUBE SYSTEM—IS THERE A DIFFERENCE?

Urquhart, G. L., Rebeyka, D. M., Roschkov, S., & Bulbuc, C.F. University of Alberta Hospital, Edmonton, Alberta.

As the number and complexity of adult congenital cardiac surgery patients increase, challenges for optimizing postoperative care also escalate. One aspect of patient care that differs in this population is the chest tube (CT) management system. Mediastinal chest sump tubes (MCSTs) that are open to atmospheric air have evolved as the preferred method for CT management following surgical repair in adult congenital cardiac patients. Unlike conventional CTs requiring negative pressure, the physiologic principles of MCSTs are based on a three-lumen system being open to atmospheric air. The central lumen enables removal of air/blood into a standard collection system. The side lumens function to be either opened or closed to atmospheric air. When the side lumens are open, atmospheric air is entrained into the mediastinum. Technologic advances of the open system offer theoretical advantages, such as reduction in mediastinal tissue damage associated with conventional negative pressure. However, the MCST system remains an untapped area of nursing research. To explore the efficacy of the MCST versus closed CT system, a sample of 36 adult congenital surgical patients with MCSTs are compared to 36 cardiac surgery patients with conventional CTs. Select variables including: hematological values (PT INR, PTT, platelets, and hematocrit), volume of CT blood loss and blood product usage, length of time requiring mechanical ventilation and CT therapy, arterial blood gas values, type and amount of sedative, analgesics, anticoagulants, antifibrinolytics, and reported complications are compared. Data analysis includes measures of central tendency and variability, t tests, ANOVA, and ANCOVA. As information related to this technology remains in its infancy, relevant findings will build upon our body of knowledge related to nursing practice and future research.

VENTRICULAR ASSIST DEVICES IN THE ICU: A TEAM APPROACH TO NEW TECHNOLOGY

Patricia Rose, Ramzi Majaj and Renzo Cecere, Royal Victoria Hospital, McGill University Health Centre, Montreal, QC

Until recently, the Canadian experience with ventricular assist devices (VADs) was mostly limited to short-term post-cardiotomy support with non-pulsatile devices. Over the past two decades the discrepancy between the number of patients awaiting heart transplantation and the number of available donor organs has spurred the development and introduction of pulsatile ventricular assist devices (VADs) as a bridge to transplantation. At our institution, the Biomedicus non-pulsatile device had been the only VAD available since the mid-1980s. In 1999, the proposed introduction of pulsatile VADs necessitated strong collaboration between ICU nurses and perfusionists with the goal of creating a team of competent clinicians. This process consisted of: 1) developing strong links between, and clarifying respective roles of, surgeons, perfusionists and ICU nurses; 2) training a core group of ICU nurses and perfusionists to become the "VAD operator team"; 3) implementing an educational plan designed to train a critical mass of ICU staff; 4) designing care guidelines, standard order sheets and flowsheets; 5) sensitizing team members to the psychological needs of patients and families.

Since June 1999, a total of 8 pulsatile VADs— 4 Novacor devices and 4 Thoratec devices—have been implanted. Analysis of patient and staff outcomes point to the success of this program. This presentation will outline issues related to pulsatile VADs: indications and contraindications, treatment plan, staff development approach and patient outcomes. This paper is of interest to nurses, perfusionists and physicians exploring the possibility or reality of introducing pulsatile VADs as a bridge to transplantation for patients with end-stage cardiac failure.

NUTRITION EDUCATION NEEDS OF POST MYOCARDIAL INFARCTION PATIENTS

Toone, M. & Whitmore, B. Calgary Regional Health Authority, Calgary, Alberta

In 1999 the Heart Health Program of the Calgary Regional Health Authority began distributing education materials to patients with heart disease. These patients could be admitted to one of the three tertiary care centres.

To determine the completeness of the distribution of the materials and to measure nutrition information needs of the myocardial infarction (MI) patients, a telephone survey was conducted. This survey included 53 patients who were two to six weeks post discharge. Seventy-two percent of patients reported receiving the folder of materials, which contained information on heart disease, exercise, stress and nutrition. Sixty six percent reported reading all of the information provided while 97% reported reading the nutrition information. Eighty five percent of participants identified the hospital as an optimal time to receive nutrition information and 75 percent felt that nutrition was important in the prevention and treatment of heart disease. Patients were also polled for their preferences regarding time, place, and inclusion of family for nutrition education.

These results confirm the value of distributing written information to patients in hospital. The time, in hospital, following a MI appears to be a prime opportunity for educating patients. It is important for health care professionals to realize the extent to which patients value and use information that is provided in hospital.

OPTIMIZING ANTICOAGULANT THERAPY IN ATRIAL FIBRILLATION PATIENTS

Wheatley, M & Nemis-White, J., on behalf of the Bridgewater ICONS Team, Health Services Association of the South Shore (HSASS), Bridgewater, Nova Scotia

Despite compelling evidence for the beneficial use of anticoagulant (ACG) therapy in atrial fibrillation (AF), many patients do not receive optimal treatment. Baseline patterns of practice (Oct.15/97-Oct.14/98) for the Improving Cardiovascular Outcomes in Nova Scotia (ICONS) project revealed that provincially, only 56.2% of AF patietns receive warfarin therapy. Discussion amongst community physicians in the Bridgewater (BW), NS area (during a small case-based workshop on AF) brouight forth a suggested intervention to improve physician practices regarding ACG therapy in AF patients in the BW area.

Community physicians were mailed a desk reference of the American College of Chest Physicians (ACCP) guidelines for ACG therapy. All ECGs of patients with AF at two hospital sites of the HSASS were stamped with the following information: ICONS logo, AF – consider anticoagulation, see ACCP guidelines. Utilization rates for ACG therapy in AF discharged patietns were measured pre and post intervention by chart audit.

(Finalized Data to be inserted here).

This simple nurse initiated intervention is expected to result in increased utilization rates of ACG therapy in eligible AF patients. Stamping of ECGs in the BW region will continue indefinitely.

ARE OUR CARDIAC INPATIENTS RECEIVING EDUCATION?

Smith, C & Nemis-White J., on behalf of the Amherst ICONS Team, Amherst, Nova Scotia.

Despite compelling evidence that patient education improves patient outcomes, many patients leave hospital without receiving any formal disease specific patient teaching. The purpose of this research study is to examine the patient teaching endeavors being completed in a rural regional hospital and identify if a care gap exists.

A randon sample of 100 Improving Cardiovascular Outcomes in Nova Scotia (ICONS) charts from the regional hospital will be abstracted, 25 from each disease group: Myocardial Infarction, Unstable Angina, Congestive Heart Failure and Atrial Fibrillation. Data collected will include but not be limited to variables such as: a) Did the patient receive education? b) did the patient receive written materials? c) If education was provided, where was it documented and by whom?

The data will be analyzed to reflect what inpatients, with what cardiovascular diseases actually receive patient education. study data will be included here.

Ultimately, the study results will support our health care managers target resources toward appropriate areas. Historically nursing has been the cornerstone to inpatient

education. With the changing role of nursing, as well as the substantial nursing shortage we can notassume our inpatients are being educated. This study will help serve as an indicator as to what actions are currently in place for the basis of Health Care , i.e., "The Patients".

ELEVATED CARDIAC ENZYME POST CARDIAC ANGIOPLASTY: IMPLICATIONS ON DISCHARGE AND CLINICAL EVENTS

Hoffman, J., Cardiac Care, London Health Sciences Centre, London, Ontario

Elevated cardiac enzymes are used as an indication of myocardial damage and patients are routinely admitted to the hospital to be monitored. In the post angioplasty patient, these guidelines are not generally used and patients may be discharged with elevated cardiac enzymes. Patients are admitted the day of their angioplasty and, if clinically stable, discharged the following morning (i.e. their length of stay is less than 24 hours).

The objective of this study was to detect if elevated cardiac enzymes [creatine kinase (CK) and troponin I] post angioplasty had an impact on length of stay and if these patients had more clinical events post discharge.

321 patients over 1 year were studied. 27 (8.4%) had an increased CK of which 10 (37.0%) had a delayed discharge. 116 (36.1%) had an elevated troponin I of which 15 (12.9%) had a delayed discharge. Telephone follow up of patients up to 1 year with respect to readmission, symptoms or other clinical events is underway and will be presented.

FROM A NOVICE TO A COMPETENT NURSE: A RECRUITMENT AND RETENTION INITIATIVE

Skanes, C., University Health Network, Toronto, Ontario

Working in a new environment can be both stressful yet challenging for new staff regardless of prior experience. Over a relatively short period of time, there has been a large number of new staff starting in Coronary Intensive Care Unit (CICU). Both the senior and junior staff members recognized that the environment could be overwhelming both during and after their orientation. This can potentially lead to job dissatisfaction and stress for both the new staff and senior nurses in the unit. In order to ease the transition and reduce stress for these nurses, a new position was created in CICU - a clinical resource nurse. The mandate of this resource is to support, educate, and coach new staff in providing safe and competent care in CICU. As well, provide support for senior nurses in their daily practice. The clinical resource nurse works in collaboration with the educator, nurses, and preceptors in facilitating the integration of new staff members to the CICU.

By not having a patient assignment, this nurse can expand her energy on teaching and assisting new staff. The resource nurse's work schedule revolves around the new staff in order to meet the learning needs. The role is constantly evolving and being refined as the new nurses adapt and adjust to the CICU environment. Efforts are currently underway to evaluate the role.

This presentation will highlight the role of the clinical resource nurse and the daily challenges encountered. As well, discuss how this role has assisted the new nurses to integrate into their new environment and how it supported the senior nurses in their practice.

RADIATION FOR LIFE: NURSING IMPLICATIONS IN THE CATH LAB

Adaoag, V., & Bautista. V., University Health Network, Toronto General Hospital, Toronto, Ontario

The medical use of radiation accounts for approximately 90 % of the human-made radiation dose to which the population is exposed. Radiation exposure is a concern for those who participate in many aspects of cardiology practice like the cath lab nurses who are assisting the cardiologist in the different procedures done. Cardiologist doing invasive and interventional procedures likes coronary angiograms, angioplasty and tents have frequent exposure through fluoroscopy and cineangiography. Electrophysiologist specialists rely heavily on fluoroscopy for procedures. Cardiologist and critical care specialist utilize fluoroscopy for placement of central catheters and temporary pacemakers. Nuclear cardiologist are exposed to radioactive materials. In addition to practitioners, cardiologist in training, laboratory technicians, support personnel and especially the nurses are also exposed to radiation in the cardiac laboratory settings and through patients who have been injected with radioactive materials

To minimize radiation exposure and risks cath lab nurses should have good understanding of the characteristics of ionizing radiation, it's effects on living tissues and cumulative doses. Optimal protective methods like distance, time and shielding to reduce the exposure from radiation should always be utilized using the ALARA principle(As Low As Possible). Understanding the use of the thermoluminescent dosimeter (TLD) and it's report will keep each staff member informed of the magnitude of their exposure.

This paper will discuss the hazardous effect of radiation, the amount of radiation scatter and the use of radiation safety equipment while producing quality image. The nurses have the responsibility as much as the doctors in the health and safety measures taken for the benefit of the team, and patients.

A QUALITY ASSURANCE EVALUATION OF THE EFFECTIVENESS OF A HEPARIN NOMOGRAM

Ann Comeau, Rick Chow, Trish Morris, University of Alberta Hospital, Edmonton, Alberta

Unfractionated heparin is an anticoagulant used in the treatment of acute coronary syndromes. Due to a number of pharmacodynamic properties, response can vary considerably between patients or within the same patient. Therefore, frequent monitoring of partial thromboplastin time (PTT) is required. In order to achieve a therapeutic PTT as quickly as possible, a nomogram is used to adjust heparin dosing based upon PTT results. A new nomogram was developed and instituted on three Cardiology units to reflect current evidence-based practice in the treatment of acute coronary syndromes. Concerns were raised by nursing staff regarding the nomogram's effectiveness, particularly the number of blood draws. The purpose of this quality assurance effort was to retrospectively evaluate the effectiveness of the nomogram by benchmarking against the current literature. A convenience sample of patients with heparin initiated on the Cardiology stepdown units was obtained by collecting the anticoagulant flow sheets over a four week period. The anticoagulant flow sheets were analyzed for: 1) percentage of patients in therapeutic range at 24 and 48 hours, 2) time to therapeutic PTT, and 3) number of rate changes/blood draws to therapeutic PTT. Anticoagulant flow sheets for 18 patients were collected and reviewed: 1) 77.8% of patients reached therapeutic PTT within 24 hours and 89% within 48 hours, 2) the median time to reach therapeutic range was 13 hours and 40 minutes, 3) 94.4% of patients reached therapeutic range after 4 rate changes or 4 blood draws; the median number of rate changes was 1. Current literature recommends achieving therapeutic PTT within 24 to 48 hours of initiating therapy. This study demonstrated the nomogram to be effective and comparable to current recommendations.

NOT JUST A ROUTINE TRANSFER&A SEAMLESS TRANSITION FROM THE CVICU TO THE CARDIAC SURGICAL WARD

Klein, J. & Alleyne, C., Sunnybrook & W omens College Health Science Center.

Cardiac surgery has undergone major transformation over the last decade. One of the most significant changes is that patients who were once turned away for surgery are now being accepted, surgeons have had to "raise the bar" in terms if criteria for acceptance. Today nurses working in the Cardiovascular Intensive Care Unit (CVICU) are challenged to care for patients with complex medical issues, enormous family expectations and advanced technology. These issues have evolved as the population ages. Advanced age coupled with multi-system organ failure and prolonged ICU stay are but a few of the issues that we must prepare for when elderly patients undergo cardiac surgery.

A transfer to a new environment after a lengthy ICU stay is stressful and may trigger new issues. Planning for transfer, meeting the manager and anticipating next steps were key factors to assist long term patients with the transition. The purpose of this case study is to reflect how communication and planning can be the impetus to a seamless transfer of care.

Mr. R. was an elderly male who underwent bypass surgery. During his postoperative experience he suffered numerous complications that required a prolonged ISU stay. A multidisciplinary meeting provided the family a connection with the ward and offered their participation in the next planning phase of recovery.

Implications for nursing practice are basic principles of care; that is, to guide, support and teach patients and their families. The family's participation in the planning process, and involvement with the next steps was key to the patient's success.

A PROTOCOL FOR ADMINISTRATION OF BETA BLOCKADE THERAPY IN CHILDREN WITH CONGESTIVE HEART FAILURE

Kilburn, J. & Benson, L. The Hospital for Sick Children, Toronto, Ontario

We present an institutional protocol for the administration of beta blockade therapy (Carvetilol) to children with chronic congestive heart failure (CHF). Our approach is extrapolated from adult studies of initiation of beta blockade therapy, and details the frequency of patient assessment, titration of Carvetilol, communication between team members, and documentation. Patients are seen by a clinic nurse weekly during the initiation of Carvetilol therapy, and by their cardiologist monthly, or more frequently as the condition demands. The cardiologist establishes dosing, usually beginning at 0.2 mg/kg/day, to a maximum of 1 mg/kg/day, with the flexibility to adjust dosing according to the patient's condition. The patient population consists of children between the ages of 1 month and 16 years, with dilated cardiomyopathy or end-stage congenital heart defects, with a left ventricular ejection fraction of < 45%. These patients are on triple therapy of digoxin, diuretics, ACE inhibition, and aldactone, and are volume stable.

Over and implementation period of 18 months, a low hospital admission rate for CHF (1 patient of 13) indicates effective outpatient management of symptoms. Additionally, positive feedback from both staff and families demonstrates the viability of our methods. Our experience indicates that this protocol is both a safe and workable approach to administering beta blockade therapy in children with chronic CHF in the outpatient setting.

EQUIPP YOUR HEART: THE EDUCATIONAL QUEST FOR UNDERSTANDING IN PROMOTION AND PREVENTION FOR YOUR HEART

Cranis, M., & Tedesco-Bruce, A., The Hospital for Sick Children, Toronto, Ontario

Hypercholesterolemia is a major risk factor for atherosclerosis. It is evident that the atherosclerotic process begins in the young and is related to known cardiovascular risk factors. A large epidemiologic study, The Bogalusa Heart Study, has shown fatty streaks and fibrous plaques in the coronary arteries and the aorta of children. Early management and primary prevention of coronary heart disease in children is supported by the fact that a health-related diet and lifestyle, along with behavioral patterns, do affect a child's lipoprotein levels.

The Hospital for Sick Children manages a Familial Hyperlipidemia Clinic of more than 250 children. We emphasize and support that a heart healthy lifestyle is a family affair. An important aspect of the child/family management of care is an EQUIPP class, using group dynamics and an interactive teaching setting. The EQUIPP class promotes family life style changes with age appropriate recognition of control and responsibility. This class is also an efficient and effective use of the dietitian and nurses' time.

EQUIPP is a program of primary prevention, focusing on the heart and cholesterol function, and the dietary management of hyperlipidemia. The class includes discussion about the heart and its' function, controllable risk factors, nutritional goals focusing on dietary fats, the "more often–less often foods", and encourages activity and a non-smoking status. The patient/family are also instructed in the use of the Clinic self-evaluation tools, i.e. "Food Frequency Checklist", "Activity Questionnaire" and the "Report Card" of lipid profile results.

PRE-OPERATIVE PREPARATION IN THE PEDIATRIC CARDIAC PATIENT

Cranis, M., Slater, N., & Kilburn, J., Hospital for Sick Children, Toronto, Ontario

Over 550 children and families are prepared for cardiovascular surgery at the Hospital for Sick Children each year. We recognized that these preparation days were often too lengthy, families were overwhelmed with new information, and unidentified issues resulted in postponement of surgery. To prepare families while supporting them in a holistic manner, we examined the roles of our inter-disciplinary team members and the structure of the existing pre-operative day.

An important goal was incorporating the family into the health care team, fulfilling the hospital mission of family centered care. We recognize parents are the most consistent caregivers, and that being an active part of the health care team enables them to move more easily from the hospital to home.

To prepare families prior to their pre-op day, a triage phone assessment by the Surgical Nurse Coordinator was initiated. This enabled identification of issues that could delay surgery. A package including a follow-up letter, information on directed donation and use of blood products, pain management, is mailed to reinforce the initial information. To satisfy a need for patient and sibling support, the Child Life Department developed a pamphlet that includes strategies parents can use to prepare the child and siblings for the hospital admission. Re-organization of the day allowed for more effective use of time, i.e. earlier arrival time avoided traffic delays, and use of labs during less busy hours.

While the pre-operative day has a certain structure to it, we recognize the need for flexibility to allow for the patient and family to obtain the greatest benefit.

DEVELOPING A COMPETENCY BASED ORIENTATION IN AN ACUTE CARE PEDIATRIC CARDIAC UNIT

Edmond, L, I., Hospital for Sick Children, Toronto, Ontario

Purpose: To ensure that orientation for nursing staff provides the tools and education needed to become a competent practitioner.

The nursing orientation to the Cardiac Program has historically been to train individuals to carry out those duties that nurses perform the most. The orientation consisted of a general hospital nursing orientation and a unit based orientation. There was no versatility built into the program, those who came with ten years experience received the same orientation as new graduate nurses.

Competency Based Orientation (CBO) provides a framework that allows each individual to identify and define their learning needs. The orientee becomes a shared responsibility among all members of the nursing team. The orientation also highlights adult learning principles and learning instead of teaching.

Competencies were developed using four nursing education priorities. 1) Fatal: needs that relate to high-risk patient care, 2) Frequent: any nursing practice that is often performed, 3) Fundamental: needs that are essential aspects of effective nursing practice, 4) Fixed: educational needs for all hospital employee's. The tools used to measure and evaluate practice and the competencies were created before implementation. Connelly and Hoffart, 1998, provide a challenge to educators to ensure they are presenting what is needed to survive in the organization rather than extraneous material that is "nice to know". A variety of learning options utilizing an array of learning styles are available to new staff members including unit procedures, observation of expert staff, practice under supervision, videotapes, pre and post testing and independent study.

Competency Based orientation provides the new orientee with a "real world" environment that will integrate them into the highly specialized role of pediatric cardiac nursing.

NEONATAL TRANSPLANTATION- WHERE TO WAIT

Mosolanczki, E., & Maser, C., Hospital for Sick Children, Toronto, Canada

The neonate awaiting heart transplantation requires specialized care from all members of the interdisciplinary team. Infants with single ventricle physiology present a unique set of challenges. Often these neonates endure lengthy waiting periods in critical care environments. Limited and costly critical care resources have forced The Hospital for Sick Children (HSC), Toronto, Canada, to address the feasibility and appropriateness of caring for these neonates and their families beyond the critical care setting. At HSC, the alternative setting was an observation room on the inpatient cardiac unit.

Initiating this change in the care environment revealed several issues and gaps. They included knowledge and resource deficits around the care of a patient in a hypoxic gas environment; ensuring appropriate monitoring and timely intervention in the event of any deterioration; and the ability to adequately support the family and the ongoing developmental needs of the infant.

In response, an interdisciplinary "Pre-transplant Working Group" was formed to identify and secure the appropriate resources for the care of this fragile patient population.

This poster presentation will identify the challenges faced, solutions and recommendations for the future. Current literature on outcomes and treatment of single ventricle and neonatal heart transplant recipients from a physiological, psychosocial and developmental perspective will be included. Recent research related to the needs of the family and the team will be incorporated. Experience to date at HSC will highlight the benefits of this initiative while addressing fiscal and resource implications for both the critical care and inpatient units.

PLAYING THE WAITING GAME: LIVING WITH UNCERTAINTY FOLLOWING A RECURRENT CARDIAC EVENT

Minorgan, H., & Purden, M. McGill University Health Centre, Montreal, Quebec

This descriptive-exploratory multiple case study examined the experience of coronary heart disease (CHD) patients who suffer a recurrent cardiac event and are re-admitted to hospital. Unstructured and semi-structured interviews were used to elicit the stories of fifteen patients while in the coronary care unit (CCU) phase of their recurrence. The findings suggest that with each admission to hospital patients felt increased levels of uncertainty and less control over their lives. Gradually, individuals' previous lives were replaced by the emerging life of a CCU patient. They came to feel more comfortable in the hospital environment, to play a greater role in their care, and to actively learn about their illness. It was through their role as a patient that they were able to regain a sense of control that was missing from their lives. Implications for nursing practice and suggestions for future research are proposed.

RECLAIMING THEIR LIVES FOLLOWING MYOCARDIAL INFARCTION: WOMEN'S EXPERIENCE IN RESUMING THEIR ROLES

McBean A., & Purden M., SMBD-Jewish General Hospital and McGill University, Montreal, Quebec

Previous research on women suggests that females experience poorer clinical outcomes following myocardial infarction (MI) compared to males. Women experience higher rates of reinfarction and mortality, take longer to return to work, resume sexual activity later and suffer anxiety and depression longer. Socially, women are also more likely to be at a disadvantage either because they are widowed or the caregiver to an aging spouse. Despite these challenges to their recovery, few studies have explored how women experience post MI adjustment. Therefore, the purpose of this study was to explore single and married women's experiences in resuming their roles and responsibilities following an MI. A longitudinal, comparative, multiple case design was used. Two single women and two married women were followed from time of hospitalization to 6 months post-discharge. Unstructured and semi structured interviews, and participant observation were the selected approaches to data collection. Analysis revealed that following an MI single and married women's role resumption occurred through a role transformation process of 'testing it out', 'making choices' and 'negotiation'. Women's altered role enactment post MI resulted in single women's preservation of self and married women's transformation of self. Both groups of women normalized their post-MI self-concept to protect their ego. Factors such as fatigue, expectations, social support and family care giving were found to influence the transformation process. These findings provide new insight into women's work in resuming their roles post MI and the significance of women's roles to their self-concept. In understanding women's experiences, nurses may play an important role in helping to create a supportive family environment that facilitates the women's work in reshaping her identity post MI.

REGAINING A HOLD ON LIFE: DERIVING MEANING FROM A FIRST- TIME CARDIAC EVENT

LaRiccia, P. N. & Purden M., McGill University Health Centre, School of Nursing, McGill University, Montréal, Québec.

Every year approximately 50,000 patients spend time in the cardiac care unit (CCU) after a myocardial infarction (MI) or unstable angina (UA). Within the last few years the total hospital stay of these patients has decreased dramatically. Many are being discharged from the highly technical CCU environment directly to their home. In view of this, it is important to understand patients' and families' thoughts and feelings about the sudden cardiac event and their return home. The purpose of this descriptive study was to explore the lived experience of a first-time cardiac event for CCU patients and their families. Both unstructured and semi-structured interviews were used to explore the personal significance of the MI or UA event for fourteen patients and seven family members.

The patients were found to ascribe a particular meaning for the cardiac event namely, a punishment, a blessing, a catastrophe, or fate. The meaning provided the context for the coping process, which occurred in two phases. First, the patients relived the dramatic event. Second, the patients attempted to make sense of the event by seeking a cause, reviewing their lives and taking control of the future. Patients coped with introspection by using humor, sharing the emotional load, as well as taking a "wait and see" approach. The family members did not always perceive the event in the same way as the patient, which in turn led to differences in causal attribution, life review and how they faced the future. This study suggests that deriving meaning from the cardiac event is important to patients and their families. Remarkably, they are not focusing on the illness per se but on the impact of the event on their lives. Nurses can assist CCU patients and their families early on in their recovery as they begin to come to terms with this sudden, unexpected life event.

GENDER DIFFERENCES IN THE ADJUSTMENT OF MALE AND FEMALE CARDIAC PATIENTS AND THEIR SPOUSES

Purden, M.A., and Frasure-Smith, N. McGill University, The Sir Mortimer B. Davis – Jewish General Hospital, Montreal Heart Institute, Montreal, Quebec, Canada.

Few investigations have compared the cardiac couple's adjustment. Most research is based on separate studies of male pts and their wives. This study compared adjustment outcomes for female and male MI pts and their spouses at 2 months post-MI. Methods: All couples completed The Psychosocial Adjustment to Illness Scale (PAIS). Over a 2 month period, married women with MI or unstable angina were recruited from the inpatient settings of 4 Montreal hospitals. Eleven patient couples completed the home interview. Female patients were matched on age, CPK ratio, and history of previous MI with 130 male pts from a previous study. Twenty male pt couples were retained for analyses. Results: MANOVA of the 7 domains of the PAIS showed a significant overall main effect of role (pt/caregiver; $p=0.030$) with pts having worse adjustment than caregivers, and a marginally significant effect of gender ($p=0.058$) with women having worse adjustment than men, but the interaction of gender by role was not significant ($p=0.16$). There was also a significant within subjects difference associated with domain ($p<0.0001$) and a significant domain by role interaction ($p<0.0001$), and the interaction of domain by gender was marginal ($p=0.085$). Post-hoc analyses revealed that the major differences between pts and caregivers were in the vocational and social/leisure domains with pts having worse

adjustment in both areas. Gender differences were most pronounced for the vocation, social/leisure and psychological domains. Women had worse adjustment than men. Conclusion: These results suggest important contrasts in adjustment associated with both gender and role and may suggest the need for different interventions with male and female MI/UA pt couples.

IMPROVING ACCESS TO TERTIARY CARDIAC CARE: IMPACT ON NURSING

Marshall, Lynn., & Janes., Sandra., QEII Health Sciences Centre, Halifax, Nova Scotia.

Creating a balance between providing care to the community and providing care as a tertiary referral center presents a challenge to the health care team. The cardiology service is faced with high occupancy rates due to multiple demands for the same cardiac beds. The occupancy rate and varying patient acuity has a direct impact on nursing workload.

To assist in meeting the requirements for tertiary care for patients receiving care in community centres across our province, a specific number of in-house beds were designated as Rapid Transfer Beds (RTB). The RTB's can be accessed for patients presently in outlying hospitals who meet criteria for transfer for cardiac investigation procedures such as a cardiac catheterization and possibly coronary angioplasty. The patient is transferred for a pre-determined period of time (i.e. 24 or 48 hours), depending on travel time and their arrival at our institution. Patients are transferred back to the referring center within 24-48 hours for ongoing management. The quick turn around time for the patients creates many challenges for nursing workload, specifically in the areas of meeting the cardiac educational, discharge planning, and other patient/family needs.

The presentation will focus on the nursing implementation, positive results, as well as the challenges, changing the environment in which care is provided, created for members of the health care team. Ongoing outcome evaluation and monitoring processes that have been established to continually improve the service of RTB's will be presented and discussed.

IMPROVING TIME TO TREATMENT WHEN INSERTING A TEMPORARY TRANSVENOUS PACING WIRE

Robertson, L. Queen Elizabeth II Health Sciences Centre, Halifax NS

Delay in providing a patient with a temporary pacemaker can be detrimental to the prognosis of a cardiac patient. Our institution implemented a solution to decrease access time to a temporary pacemaker. Nurses in the Coronary Care Unit (CCU) were educated to assist the physician in the Cardiac Catheterization lab to insert the temporary pacemaker, eliminating the need to cal back Cardiac Cath staff.

This "solution" caused great anxiety for staff of the cath lab as the well as the staff of CCU. The anxiety of the cath lab staff was around the issue of decrease of clinical skills and clinical overtime. The anxieties of the CCU staff included: going to a new environment they were not familiar with the equipment, what would happen if the CCU was to busy to allow a staff member to go the cath lab and what other responsibilities would they be assuming if they started to go to the cath lab? (would the physician want to do a cardiac Catheterization)

The way that we alleviated some of the anxiety was to set up a "pacemaker cart" which was taken to the cardiac cath lab and had all the equipment that would be needed during the procedure. All nurses were also provided with an opportunity to take a tour of the room that was designated for the procedure.

The poster will present the assessment, implementation and evaluation of the change of this practice as well as the positive outcomes for patient care and areas identified for future improvement.

CARDIOMYOPATHY: DILATED VS. RESTRICTIVE

Robertson, L. and Janes, S., Queen

Cardiomyopathy is a chronic or subacute disorder of the heart muscle. It also refers to a group of systemic diseases and processes that are toxic or alter the myocardium.

Cardiomyopathies are divided into three types dilated, hypertropic and restrictive. The most common type is dilated cardiomyopathy, which affects approximately 2 out of 100 people. This type represents a large subset of the congestive heart failure cases. With dilated cardiomyopathy severe dilatation of atria and ventricles occur, creating global enlargement of the heart.

Restrictive cardiomyopathy is the least common type. It affects approximately 1 out of 1000 people. With restrictive cardiomyopathy there is restricted filling of the ventricles, usually caused by an infiltrative process. The heart loses compliance and grows stiff.

This presentation will compare the precipitating factors, pathophysiology, signs and symptoms, nursing interventions, current treatment and the complications of dilated versus restrictive cardiomyopathy.

COMPLETING THE CIRCLE: A BEREAVEMENT FOLLOW-UP PROGRAM

Matheson, Sandra., QEII Health Sciences Centre, Halifax, Nova Scotia

When saving a life is not possible the goal of enhancing psychological comfort for the grieving family members is essential. One way that our cardiac program has chosen to increase psychological comfort is with our Bereavement Follow-up Program. The program was initiated by the Clinical Nurse Specialist (CNS) for Cardiac Sciences and has been designed around the various stages of grief that family members are likely to experience when a loved one dies.

When a person within our cardiac program dies, formal follow-up contact is made through both hand-written messages and telephone calls. The initial follow-up is a written communication including a message from any staff who wants to participate. These are usually nurses who cared for the patient, however other members of the health care team have also chosen to participate. At one month following the death a phone call to the next of kin is made. This is followed by written contacts at three-six month intervals depending on the amount of support that is desired by the family. A final contact is made with a hand-written note at the one-year anniversary of the death. Formal evaluations have demonstrated that the program is viewed by family members as valuable, providing a sense of closure and consolation during this difficult time.

Cardiac nurses giving care during the final days of a person's life are in a unique position to give information and support the family. In addition to receiving positive feedback about the program from family members, our program has been able to incorporate the feedback into changing practice, and as a result improving our holistic approach to end of life care.

CLAMP COMPRESSION VERSUS MANUAL & CLAMP COMPRESSION: A COMPARISON OF VASCULAR COMPLICATIONS, PATIENT'S PERCEPTION OF GROIN PAIN AND NURSE'S PERCEPTION OF BACK PAIN/DISCOMFORT

Benn, Linda, F. & Mood, Carmen, M., Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia

The purpose of this quality assurance (Q/A) study was to determine if the exclusive use of a mechanical groin clamp to achieve hemostasis with femoral arterial sheath removal following a percutaneous transluminal coronary angioplasty (PTCA) was as safe as the current combined method of manual and clamp compression.

The nursing staff on the Cardiac Investigation and Recovery Unit at the Queen Elizabeth II Health Sciences Centre attributed the increase of back pain among nurses to the static posture required during manual groin compression when removing femoral sheaths. Would the exclusive use of a groin clamp rectify this problem? Would there be an increase in the rate of vascular complications and groin pain reported by patients where a clamp was used exclusively? In April 2000 a Q/A study was undertaken to determine the answers. A total of 60 patients undergoing PTCA were randomized to one of two groups; 30 patients to the group where a groin clamp was used exclusively and 30 patients to the group where our current practice of combined manual and groin clamp compression was used. The rate of vascular complications and the patient's and nurse's perception of pain in both groups were tracked and compared.

The results of our study showed very little difference in the complication rate of both groups and allowed us to conclude that the exclusive use of a groin clamp is safe. Patient's perception of pain seemed to decrease and nurses reported less back pain where a groin clamp was used exclusively. This study has allowed us to assess and change our practice and our sheath removal protocol will be revised accordingly.

C0NFUSION AMONG CARDIAC PATIENTS.

Elizabeth J Hodgson, Queen Elizabeth II Health Sciences Centre, Halifax, N.S., Judy L McKay, Catherine Wilson

Confusion among cardiac patients is a serious co-morbidity which results in increased risk of injury and prolonged hospital stays, increased use of nursing time and resources and distress for patients and families. This study was undertaken to identify the incidence of confusion among cardiac patients at the Queen Elizabeth II Health Sciences Centre, and to identify factors contributing to the development of confusion. We hope to use this information to develop a profile of patients at increased risk of developing confusion and strategies to improve their care.

Patients experiencing confusion were identified by the nursing staffs of CCU, IMCU and the cardiology ward. Data was abstracted from the charts of these patients using a prepared data collection tool; data was analysed using standard statistical methods.

Confusion was identified in over 1% of cardiac patients. The largest contributing factor to confusion among cardiac patients was advanced age. Mean ages ranged from 73.5 years for males admitted to CCU, to 80.1 years for females admitted to IMCU. Other factors identified as contributing to confusion included multiple co-morbidities, smoking and alcohol use, analgesic and sedative administration and acute deterioration in condition.

Early identification of patients at risk for developing confusion while hospitalized for heart disease, will assist in establishing appropriate treatment options to reduce the risk to these patients and facilitate their recovery. The development of an easily applied screening tool for confusion would be of great benefit. More research in this area is needed.

PERIPARTUM CARDIOMYOPATHY

Svendsen, A., RN, MS, Queen Elizabeth II Health Sciences Centre, Halifax, NS

Peripartum cardiomyopathy (PPCM) is type of dilated cardiomyopathy which usually occurs in women without any pre-existing heart disease. This supposedly rare condition actually occurs in one out off every 3000-4000 pregnancies and is associated with a significant maternal mortality rate (up to 50-60%). While the cause is unknown, PPCM is usually diagnosed in the last month of pregnancy or within the first 6 months postpartum. Mothers face significant challenges – coping with the multiple challenges of new motherhood as well as the challenges associated with living with heart failure.

Using a case study format, this presentation will discuss PPCM – the incidence, potential causes, treatment and long term implications. What does the future hold? This discussion will focus on care required following discharge. Careful follow-up is essential.

FEMORAL SHEATH REMOVAL BY REGISTERED NURSES: ONE UNIT'S PERSPECTIVE

King, Laurie C., Campbell, Debra S., Leighton, Millie E., Burke, Phyllis M., Queen Elizabeth II Health Sciences Centre, Halifax, NS

Historically, at the Queen Elizabeth II Health Sciences Centre, femoral sheath removal post percutaneous transluminal angioplasty (PTCA) was performed by clinical associate physicians. Nurses were responsible for monitoring the site post removal. Due to a decrease in the number of clinical associate physicians this procedure became a delegated medical act (DMA) performed by registered nurses on the unit.

This poster presentation will focus on the change in practice and the concomitant educational and implementation processes associated with this change. Continuous quality monitoring for this DMA and recommendations for implementing the change in practice will be outlined.

THE NATURAL EVOLUTION OF THE CABG CLINICAL PATHWAY-USING OUTCOME DATA TO IMPROVE THE QUALITY OF DOCUMENTATION

Martin, Mary Lou; & Cormier,Fay; & Frayle,Sheila; & Matheson,Sandra; & Dunphy,Sheila; & Chisholm, Karen; QEII Health Sciences Centre, Halifax, Nova Scotia

A clinical decision making pathway was developed and implemented by the cardiac surgery interdisciplinary team. Specific goals were identified for documentation on the patient's record with compliance being monitored through chart reviews. The goals identified were to standardize and maintain best practice, reduce length of stay, provide efficient discharge planning and to utilize resources effectively.

The goal for nursing focused on reducing the duplication in nursing documentation as well as to close the gap surrounding the narrative details that were felt to be missing on specific elements of post-operative cardiac care.

A nursing workgroup took the initiative to identify the key elements of care specific to cardiac surgery. These included the components of patient/family education, resources required and process of discharge planning, social supports available and cardiac risk factor assessment. These elements were incorporated into a revised nursing kardex and flow record. As a result the quality of nursing documentation has improved with the introduction of workable tools that reflect details of care in progress. Nursing can quickly and accurately assess the efficiency of the plan of care for the CABG patient from surgery to discharge.

This presentation will present the development, implementation and evaluation that the nursing team continues to undertake in establishing the baseline standard of practice and expectations of care for CABG patients.

MYOCARDIAL INFARCTION AND DIABETES ENHANCING CONFIDENCE IN CARDIOLOGY NURSES TEACHING PATIENTS HOW TO GIVE INSULIN

Linda Hunter, Sharon Brez, Betty Organ, Brenda Lee, Sharon Ann Kearns, Eileen Frattini University of Ottawa Heart Institute

A continuous quality improvement project was undertaken on a 30-bed cardiology unit to enhance cardiology nurses' capability, confidence, and resources related to diabetes teaching of post-myocardial infarction patients. This project included nurses from clinical practice, advanced practice, education, management, and quality improvement. The increasing prevalence of diabetes is reflected at the University of Ottawa Heart Institute where approximately 40% of the cardiology population have diabetes. People with

diabetes who experience an acute myocardial infarction (MI) are at an increased risk of having serious future cardiovascular events. Recent research suggests that early and continuing use of insulin therapy may improve clinical outcomes for this population. Our team developed educational in-services on two topics: how to teach a patient to give insulin and how to teach a patient to do blood glucose home monitoring. The clinical nurses were facilitators for the entire process from development through to implementation and evaluation. This presentation will explain the development of the teaching program, the development of the diabetes resource binder, an expert on call line for diabetes questions, and the documentation record that was used for diabetes education. Outcomes seen and implications for nursing practice included an attitudinal change in clinical nurses realizing their responsibility as an integral team member in diabetes education. There were more consistent documentation practices and initiation of insulin therapy education was identified earlier in the patient's hospitalization. There was improved collaboration and follow-up noted between cardiology and metabolism services, with minimal cost and disruption to clinical nursing staff in cardiology.

MOVING TOWARDS TOTALLY ENDOSCOPIC ROBOTIC CORONARY REVASCULARIZATION

Boyle, A., Mulcahy, C., & Richardson, C., London Health Sciences Centre, London, Ontario

Over the last two decades, surgical strategies for coronary revascularization has remained relatively static. While the introduction and widespread acceptance of minimally invasive techniques have revolutionized surgical practice in many other surgical disciplines, cardiac surgeons lagged behind in developing and adopting minimal access methods. Minimally invasive approaches to cardiac surgery can achieve less morbidity and more rapid recovery than "conventional" surgical approaches. These novel approaches to coronary revascularization include avoiding the use of the heart-lung machine and improving access to the heart through smaller incisions between the ribs. This can improve outcome by avoiding the trauma of sternotomy, and the potential for neurological complications.

Recent studies have demonstrated lower levels of post-operative pain, decreased incidence of infection and arrythmia, decreased requirement for blood transfusions, and shorter ICU and hospital length of stay.

At LHSC (London Health Sciences Centre), the road to totally endoscopic surgery began with OPCAB (Off Pump Coronary Artery Bypass) via sternotomy which progressed to mini thoracotomy with endoscopic internal mammary artery (IMA) harvesting and finally to port-access computer-assisted robotic surgery using the Zeus microsurgical system.

Nursing has been an important component of this incredible leap forward with input concerning various aspects of patient care. Along the road, many patient care issues have been addressed and worked out, and new techniques and skills have been developed. These innovative nursing solutions have facilitated success of the robotics program. Our presentation details these various stages and the intra operative nursing considerations for optimal patient outcomes.

A DOCUMENTATION TOOL THAT STANDARDIZES A SYSTEMATIC NURSING ASSESSMENT OF CHEST PAIN

Jana L. Jeffrey , St Michaels Hospital, Coronary Care Unit, Toronto, Ontario

The purpose of the project was to create a tool for documentation that would ensure a standardized systematic nursing assessment of all episodes of chest pain.

An existing nursing flow sheet was modified to include a chest pain assessment section. The development process involved a literature review, forming a working group of experienced Coronary Care RN's, developing a template, obtaining approval for trial from the CCU unit based council, an implementation process and an evaluation process.

There was an improvement in documentation of the description of the quality of chest pain, associated symptoms, ECG changes and the effects of treatment. Evaluation was based on nursing and physician feedback.

This tool has enabled the CCU RN to document a systematic nursing assessment of all episodes of chest pain as well as the effects of treatment in a clear and concise manner. It has provided a framework for preceptors to teach new nursing staff this standard, and has centralized the documentation of chest pain for quick access by all members of the health care team.

A PERSPECTIVE OF ATRIAL FIBRILLATION FOLLOWING OPEN HEART SURGERY

Serrano, L., Van Deursen, A., & Jussaume, L. Toronto General Hospital, Toronto, Ontario

Demographic trends for the next decade indicate that our baby boom segment population is moving into the +65 category. Increasing health care needs follow increasing age. As the population ages, the number of patients needing therapy for atrial fibrillation increases dramatically.

Atrial fibrillation, the most common sustained tachycardia in humans, not only increases with age but with the presence of heart disease. It is the most common atrial arrhythmia and the most common complication that occurs after most types of open heart surgeries. Possible clinical consequences are hypotension, decreased cardiac output, congestive heart failure, stroke, and prolonged hospital stay resulting in considerable effect on hospital resources and cost of care. Considering that age is the strongest predictor of atrial fibrillation and that the over 65 age bracket with increasing health care needs is closing in at 13% (or 3,849,897 Canadians), emphasis should be placed on how to deal with the new challenges facing nursing when caring for aging patients undergoing cardiac surgery.

This presentation will discuss: 1) the incidence 2) risks and predictors 3) pathophysiology 4) consequences 5) advancement in management and 6) the implications for nursing care of post operative fibrillation. With cardiac surgeries increasing two fold and cardiac centers opening in peripheral hospitals, this presentation aims to assist the cardiovascular nurse in developing a solid knowledge base of post operative atrial fibrillation and consequently the delivery of quality patient care to this increasingly aging patient population.

PSYCHOSOCIAL ASSESSMENT OF THE ADULT CONGENITAL HEART PATIENT

Balon, Y., & Yee, J., Peter Lougheed Centre, Calgary, Alberta

The psychosocial assessment of the adult patient with a congenital heart defect is an integral part of primary prevention used by adult cardiologists and nurses at adult congenital heart clinics to promote self-care. Throughout childhood and adolescence, parents and/or caregivers are the recipients of the knowledge necessary to maintain the health and wellness of their child or adolescent. It is the parents and/or caregivers that are responsible to ensure their child/adolescent adheres to the recommendations for primary prevention as outlined by their pediatric cardiologist. As these patients grow to become young adults, move out of home and are transferred to the adult congenital heart clinic, the responsibility for self-care shifts. They are expected to understand their anatomy, recite their medical history, and remember the recommendations—information their parents/caregivers have been taught so well. Some arrive at the adult clinic having been very well prepared by their family. Others are not so well prepared. They may begin the first appointment at the adult clinic on their own but soon request the assistance of the parent that has accompanied them but now sits in the waiting room because this is adult clinic.

Assessment is the first step in patient education and provides the basis for diagnosing, setting goals, implementing, and evaluating. Unfortunately, all too often, education is often focused solely on imparting information. Assessment is often neglected because of time constraints. Ideally, educational content must be individually determined by the patient's diagnosis and how he/she reacts physically and emotionally to the disease.

In order to expedite the assessment at the Adult Congenital Heart Clinic in Calgary, a clinic questionnaire was developed to address the educational and psychosocial requirements of the patients. The questionnaire is completed by all patients on the initial visit to the clinic.

Influencing educational outcomes of the young adult are intrinsic factors such as their specific defect and more importantly, their perception of the defect, their psychological adaptation, and their previous experiences. Extrinsic factors that are of particular importance to these young adults are economic issues and social support. It is variations that occur among these intrinsic and extrinsic factors that may explain why individual patients respond differently to the same education.

The question arose as to whether we can predict which intrinsic and extrinsic factors will be present in a patients with a particular congenital heart defect and if so, can we then implement an educational program for that particular patient population.

The challenge was to devise a method of coding the clinic questionnaire used in the assessment of the intrinsic and extrinsic factors and find a statistical program that would allow us to analyze the data within specific patient populations.

The SPSS Base 10.0 will allow the authors to look at frequencies and correlations between various patient groups within our adult congenital heart population. It is also anticipated that this project will enable administration to justify the complement of psychosocial staff required to meet the needs of this patient population.

LOW MOLECULAR WEIGHT HEPARIN AND HEMATOMA: DOES ICE OR TWENTY MINUTES OF BEDREST FOLLOWING INJECTION MAKE A DIFFERENCE?

Ainsworth, T., Koenders-Newbold, E., and Simpson, J., Calgary Regional Health Authority, Calgary, Alberta

The treatment of Low Molecular Weight Heparin (LMWH) in acute coronary syndrome has resulted in nurses seeing patients having different degrees of abdominal bruising. This abdominal bruising has initiated some old and new methods to try to prevent abdominal hematoma formation. On Unit 56, some nurses have reported success using ice pre and post-Lovenox injections, while other nurses have reported success with twenty minutes of bed-rest following the Lovenox injection. The various nursing practices used have caused confusion for the patients. This nursing study is an attempt to validate which nursing practice does make a difference in the patient's outcome by observing the degrees of abdominal hematoma formation post LMWH injection.

This study will be administered to a group of fifty patients receiving Lovenox. Each patient will receive ice pre and post-Lovenox subcutaneous injection in the right anterior lateral abdomen with the morning dose and no ice pre and post Lovenox subcutaneous injection in the left anterior lateral abdomen with the evening dose. These fifty patients will also be randomized to twenty minutes of bed-rest or normal activity following both injections to compare if an individual's activity will have an effect on hematoma formation. The injection sites will be examined twenty-four and forty-eight hours post injection. The observations made by the nurses will be documented and the results tabulated. The results of this study will influence nursing practice on Unit 56 for the injection of LMWH.

MINIMALLY INVASIVE DIRECT CORONARY ARTERY BYPASS SURGERY: IMPLICATIONS FOR PATIENT CARE

McGarrell, C., Hardcastle, M. and Revie, G., London Health Sciences Centre, London, Ontario

Minimally invasive direct coronary artery bypass (MIDCAB) surgery may be defined as bypass graft surgery performed through small incisions made in the chest wall between the ribs without assistance of cardiopulmonary bypass. The advantages to the patient include avoidance of cardiopulmonary bypass and median sternotomy, early extubation and mobilization, less post-operative pain, reduced length of hospitalization, and earlier return to normal activities.

Nurses caring for MIDCAB patients face new challenges in facilitating their progress through the health care continuum. The compressed hospital stay necessitates that ambulation, resumption of diet and medications, and teaching with the patient and family begins almost immediately post-operatively. However, patients are not always ready to participate in the learning process early in the recovery period as many experience post-operative effects such as nausea, hemodynamic fluctuations, and issues with pain control. In addition, the MIDCAB patients are scheduled for transthoracic doppler and angiography studies to assess graft flow within 24-36 hours post operatively. This further impacts on available teaching time.

This presentation will use a case study approach to describe our experience in caring for MIDCAB patients. The discussion will include an overview of the surgical procedure and standard care routines. The challenges for the nurses working with this patient population will be identified, and implications for practice changes will be addressed.

VASOVAGAL SYNCOPE AND THE PREVENTION OF SYNCOPE TRIAL (POST)

Deborah A. Ritchie, Mary Lou Koshman, Robert S. Sheldon, Sarah Rose and Stuart J. Connolly Cardiovascular Research Group, University of Calgary, Calgary, Alberta and Mc Master University, Hamilton, Ontario

Vasovagal syncope is a common and often distressing clinical problem. About 30% of people faint at least once in their life and at least 3% of adults faint more than once. The treatment of vasovagal syncope with medications has shown mixed results. Patients with frequent syncope have a markedly reduced quality of life (QOL) which improves when the frequency of syncope is reduced.

The Prevention of Syncope Trial (POST) is testing the hypothesis that the beta blocker metoprolol prevents recurrences of vasovagal syncope in patients at high risk of a recurrence. A secondary hypothesis is to determine whether metoprolol improves the QOL in these patients. Patients are eligible to participate in this muticentre, placebo-controlled randomized clinical trial if they have had a positive tilt test and one or both of at least 3 lifetime syncopal spells prior to the tilt test, or at least one recurrence of syncope within 6 months of a positive tilt test. Patients are randomly assigned to receive either metoprolol or placebo up to 100 mg BID for 12 months. Data on the frequency of presyncope and syncope, and QOL are being collected. To date, 50/220 patients have been enrolled in six centres across Canada.

The nursing care of patients with vasovagal syncope includes history taking, counselling about the pathophysiology of syncope, general measures to alleviate syncope, treatment options, precautions and reassurance. The POST results will advance our understanding of the pharmacological care and QOL in patients with vasovagal syncope.

RECRUITMENT PLAN FOR A NEW ADVANCED CARDIAC SERVICES

Dibert, C., & Savage, R., Trillium Health Centre, Mississauga Ontario

Trillium Health Centre's Cardiac Services recently expanded to include advanced cardiac services (cardiac catheterization laboratories, percutaneous transluminal coronary artery angioplasty (PTCA), and cardiac surgery). Highly skilled nurses are required to establish such a specialized program. However, these specialized nurses are a very limited resource.

The goal was to attract 50-60% experienced nurses (approximately 50 full-time equivalents {FTE}) to these new programs. It was anticipated that the remaining 40-50% of the nurses (approximately 35 FTE's) would be nurses transferring from various units within Trillium Health Centre (intensive care, coronary care, cardiology, operating rooms, medicine, and surgery).

A detailed recruitment plan was developed based upon key strategies: Attract qualified personnel, promote internal candidates, maintain high visibility, and communicate regularly with applicants. Anticipating the internal transfers would significantly impact staffing in our critical care areas, a fifth important strategy was to develop a scholarship program for critical care courses to ensure skilled staff were available to fill these openings. Other activities included ensuring salaries and benefits were competitive, advertising

in media and professional journals, attending and hosting job fairs, hosting open houses, making presentations at educational facilities, sending update letters to applicants, as well as a publishing the newsletter "ECHOES".

Attracting a significant number of nurses with the specialized skills required to establish advanced cardiac program was critical to the success of the program. Considerable planning is required to successfully recruit in the face of such limited resources.

INFLAMMATORY BIOCHEMICAL MARKERS MAY PREDICT CARDIOVASCULAR EVENTS

Annette C. Robertson, Heather E. Conradson, Kathy L. Hildebrand, Subodh Verma, Todd J. Anderson, University of Calgary, Calgary, Alberta

There has been an increased focus to identify biochemical markers for effective risk stratification in the primary prevention of cardiovascular disease. Both traditional and non-traditional risk factors contribute to endothelial injury of our arterial walls. The ensuing endothelial dysfunction initiates an inflammatory response, which is believed to play a role in the pathogenesis of atherosclerosis. There is good evidence that C-reactive protein and neopterin, two markers of inflammation, may improve the prediction of risk for vulnerable plaque lesions and subsequent cardiovascular events.

Many studies have shown that elevated serum C-reactive protein levels are not only present in patients with unstable angina and myocardial infarctions (MI) but also in asymtomatic patients who eventually experience a MI or stroke. Neopterin is emerging in the literature as a promising new biomarker. Recent analysis of serum neopterin levels from the FATE study (Firefighters and Their Endothelium), a Canadian initiative which examines predictive biomarkers for cardiovascular events, will be discussed during this presentation.

C-reactive protein testing currently exists in hospital institutions across Canada. Nurses will benefit from understanding the importance of this emerging diagnostic tool and how this information can be pertinent to patients both in acute care and primary prevention settings.

A PUBLIC CONSULTATION REGARDING TOBACCO ISSUES WITHIN A REGIONAL HEALTH AUTHORITY

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

The main goal of the Calgary Tobacco Reduction Action Coalition (CTRAC) is to improve the health of individuals, families, and communities by preventing and reducing tobacco use through community based initiatives. The purpose of this study (commissioned by CTRAC) was to survey the opinions of the public in the Calgary Health Region regarding tobacco usage, associated health risks and enactment and enforcement of healthy public policy. Nurses play an important role in risk reduction and program development regarding cardiovascular disease.

A telephone survey was conducted over a three month period in Calgary using a random digit dialing procedure. A total of 626 respondents (52% female, 48% male) completed the questionnaire for an overall response rate of 68%. The survey was subdivided into eight sections with 34 major items. There were 5 open-ended questions. The survey took a maximum of 20 minutes to complete.

Results of the public consultation survey revealed that 45% never smoked, 27% are current smokers, and 28% were past smokers, with 53% of respondents having completed college/technical school or university. The major findings indicate that 88% of respondents support initiatives restricting tobacco use, particularly in areas where children may be exposed. Respondents indicated that 33% would go to restaurants or cafés more frequently if they were 100% smoke-free. With respect to smoking and health, over 90% of respondents believed that smoking is associated with lung cancer and heart disease. In addition, just over 42% believe that smoking is associated with ear problems in children and SIDS.

The results indicate that there is strong support among the public for health initiatives that would restrict tobacco use. There were fairly high rates of support for certain significant items, even among smokers. The nursing implications for healthy public policy and health education are discussed.

THE STAFF'S OPINION OF A SMOKE FREE POLICY IN A HEALTH AUTHORITY

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

In 1999 the Calgary Regional Health Authority (CRHA) board approved a Tobacco Reduction policy in principle. The opinion of staff members was sought in order to obtain more data and determine how the policy should be implemented. The purpose of the study was to obtain the opinions of CRHA staff regarding current smoking practices and the proposed policy changes. The method included a self-administered questionnaire and focus group discussions. A total of 1860 questionnaires were completed and three focus groups were conducted.

Results of the staff survey revealed that 59% never smoked, 10% are current smokers, and 31% were past smokers. The largest percentage of current smokers work in either care centres or nursing homes. The "very important" reasons for a smoke-free policy identified by respondents included: protecting patients and employees from second-hand smoke (78%), sending a health message to the community (71%). Seventy-five percent of respondents indicated that education on how to cope or quit smoking should be provided to staff and patients. Other recommendations included the need to: inform the public of policy change by multimedia campaign, set target dates and phase in an implementation plan. In addition, 64% of respondents stated that there should be exceptions to the policy (e.g., long-term care, palliative care and psychiatry).

The authors believe that the smoke-free policy should be portrayed as the first step towards a Total Health Management approach to CRHA staff. The nursing implications for healthy public policy and health education are discussed.

ICD STORM: WHEN GOOD DEVICES GO BAD

Bengivingo, Susan, Godson, Arlyne, & MacDonald, Colleen, Health Authority 5, Alberta

Rural facilities, which provide the initial care for up to one third of Canadians, are seeing more patients with implantable cardioverter defibrillators (ICD). The nursing and medical staff, however, are often unfamiliar with these devices.

ICDs have become more common place in the treatment of patients at risk for sudden cardiac death. These devices are able to deliver life-saving shocks to patients with ventricular tachycardia (VT) and/or ventricular fibrillation (VF). However it's possible for ICDs to deliver inappropriate shocks.

A case study, from a rural facility, will be utilized to illustrate a case of "ICD storm". The patient presented to the emergency department because of repeated discharges of his ICD. The patient's history and presentation will be discussed and implications for nursing staff in this situation will be addressed.

CARDIAC BIOMARKERS IN THE CARDIAC SURGERY PATIENT

Rutley, Judy, Quirk, Pauline, & Strike, Judy, Foothills Medical Centre, Calgary Alberta

Postoperative cardiac surgery patients typically have an increase in their total CK and CK-MB. Perioperative myocardial damage may occur for a number of reasons and may be unavoidable. What is the significance of elevated cardiac biomarkers in the postoperative population?

Historically myocardial infarction was diagnosed by observing typical symptoms, typical ECG pattern and the rise of cardiac enzymes. The newer cardiac biomarkers have allowed for earlier diagnosis, identification of smaller infarcts and identification of patients who present late following an acute event. It is unclear though whether or not these new biomarkers provide additional information in the postoperative patient.

A review of the literature will be done to identify the cardiac biomarkers that are being used in cardiovascular intensive care units. The significance of elevated biomarkers in the cardiovascular postoperative population will also be discussed. A comprehensive, clear understanding of potential tests, patient assessment and patient outcomes are important for nurses within the cardiovascular area. This presentation will look at the implications for nursing staff in identifying patients at higher risk for adverse outcomes.

STAY QUIT: A HOSPITAL BASED SMOKING CESSATION PROGRAM FOR HIGH RISK CARDIOLOGY PATIENTS

Kruger, C., & Burgess, E., Foothills Medical Center, Calgary, Alberta

Smoking cessation has the greatest potential for reducing cardiovascular risk than any other risk factor modification. The purpose of Stay Quit is to provide an intervention that will give patients the skills to maintain non-smoking status after they are discharged from the hospital. The outcome is the number of patients who are still quit at the end of one year. Candidates are patients who have smoked within one month prior to hospitalization and who have a primary diagnosis of MI or CABG. After baseline data has been collected, patients are provided with basic information about coronary artery disease, including risk factors. They are then randomized to usual care or enhanced care groups. Every patient receives the usual care including quitting tips and community resource pamphlets. The enhanced care group view and receive a relapse prevention video, receive a workbook to help identify high risk situations, counseling from the study RN, a relaxation audio tape, a behavioral contract and follow up counseling by telephone at 2, 7, 14, 21, 30, 45 and 60 days post discharge. Both groups are followed at 3, 6 and 12 months time to document quit status .

The poster will describe the intervention provided by the study nurse as well as preliminary results. The potential implication for nursing is that counseling given to the enhanced care group could become the standard of care for all patients.

VENPRO AS AN ALTERNATIVE TO PULMONARY HOMOGRAFT

Simpson, K., & Burrill, L., Children's Hospital of Western Ontario, London, Ontario

Ten percent of pediatric congenital heart patients require a pulmonary valve conduit or right ventricle to pulmonary artery connection, as part of their repair. Pulmonary homografts, in appropriate smaller sizes, have historically been in short supply, are expensive, and mechanical valve devices are difficult to maintain post-operatively due to anticoagulation risks in young children. Neonatal repairs for Tetralogy of Fallot with absent pulmonary valve syndrome, Ross repairs for Aortic Stenosis and older children requiring replacement of previous pulmonary conduits are all candidates for a the new Venpro graft.

Venpro is a bovine internal jugular vein graft that has been harvested with an intact valve. The Canadian Health Devices Program has not yet given wide-spread approval for the valve conduit and for each patient a special approval form is completed and Health Devices provides individual approval to the centers currently using the device. We have completed five surgical repairs using the Venpro conduit. Our smallest was a 12 mm in a 3.2 kilogram newborn and our largest was a 22 mm graft in a 52 kilogram 10 year old girl.

The purpose of the poster is to describe the Venpro valve conduit, surgical usages, size range, storage, intraoperative handling, rinsing, preparation by nursing staff, handling advantages, and expected post-operative outcomes. The Venpro valve conduit provides a safe, readily available, and size appropriate alternative to the traditional pulmonary homograft valve. Data will be presented on patient satisfaction, restenosis and calcification rates, valve gradients, and the projected cost advantages.

THE CANADIAN RNFA ODYSSEY

Robyn L. McKenzie, London Health Sciences Centre, London Ontario, Jane Radey, Algonguin Health services-Huntsville Hospital , Huntsville Ontario,

Thomas Blunt, Hamilton Health Sciences-Henderson Hospital Site, Hamilton Ontario

The registered nurse first assistant (RNFA) is an experienced perioperative nurse with additional education and skills, functioning at an advanced level of nursing practice. The RNFA is an unique position, that may encompass all areas (preoperative, intraoperative and postoperative) of perioperative patient care.

PAST: Little is known about Canadian nurses functioning in the role of the RNFA, the roles of nursing over the years have been influenced by the needs of the patient and physicians. Although in the past nurses weren't formally trained as RNFA's, they have been assisting surgeons during times of need.

PRESENT: In September 1994 the Ordre des infirmieres et infirmieres et infirmiers du Quebec wrote a position paper which outlined that they clearly supported the RNFA role being the first in Canada to do so. In 1992 -1993 ORNAC research committee did a national survey to explore the scope of the perioperative nurse and the need for expanded roles. Data confirmed the need and interest for the RNFA role.

FUTURE: The challenges that RNFA's across Canada seem to be facing at this time are physician acceptance and reimbursement. It is projected that Canada will have a decrease in the number of surgical residents and a shortage of physicians across the country. This coupled with the need to look at cost savings and optimal patient care, leads us to believe that the RNFA will become a significant contributor to the health care of surgical patients in Canada in the future.

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The Journal provides a forum for:

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The original and two copies of the manuscript should be mailed to:

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Associate Professor
School of Nursing
Laurentian University
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Two pieces of documentation must accompany the manuscript:

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Follow the APA guidelines for grammar, punctuation, usage (capitalization, numerals, seriation), unbiased language, references and citations. Two exceptions from APA are these: spelling should be current Canadian usage where applicable; abstract may be expressed in a maximum of 150 words.

Tables, graphs, illustrations: Prepare in accordance with Chapter 3 of the APA Manual. Each table, figure or illustration should be submitted on a separate sheet and numbered as it appears in the article (i.e. Figure 1, etc.),
Illustrations should be computer-generated or professionally drawn. Photographs (in duplicate) should be in print form in the manuscript submission, and unmounted.

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Acknowledgements

Sources of funding for the research that resulted in this manuscript should appear in the acknowledgement section of the paper.

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La RCNC accepte des articles originaux traitant des résultats de recherche et des enjeux reliés à la santé et la maladie cardio-vasculaires.

Le revue pourvoit un forum pour :

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ISSN 0843-6096