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2 Editorial Board

ARTICLE

11 The Role of Self-Efficacy in Cardiovascular Disease Prevention in Women

Lisa Banman RN, BN, Jo-Ann V. Sawatzky RN, PhD

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Message from the President

Dear Membership

I am returning from the CCCN spring conference and the CCCN annual face-to-face board meeting. This meeting serves to rejuvenate the CCCN Board of Directors and give us the courage to continue forward with the goals outlined by the CCCN membership. I feel very proud of the work CCCN has accomplished over the past year. Our voice is strong and it has volume. We are nationally recognized as the official voice of cardiovascular nursing in Canada.

When developing a strategic plan for CCCN the financial challenges facing our organization are at the forefront. To provide the services our membership is requesting we need revenue. Revenue for CCCN comes in two forms: sponsorship and membership. Sponsorship is always being pursued by our management firm AMCES. However, the economic downturn in the global economy has directly impacted the area of revenue generation. That leaves membership as our main source of revenue.

I would like to ask for your support in our latest campaign entitled: **Left and Right**.



**Are the colleagues to your left and right CCCN members?
If not, extend an invitation to join us at www.ccn.ca**

Benefits of Becoming a Member

Join the CCCN, an organization dedicated to advancing cardiovascular nursing through leadership, advocacy, research, and knowledge translation and help be the voice for cardiovascular nursing in Canada.

For a very competitive membership fee of \$85.00 you will receive the following CCCN member benefits:

- Be part of the collective voice of cardiovascular nursing; CCCN is the only voice of cardiovascular nursing in Canada
- Demonstrate your commitment to Cardiovascular Nursing and raise your professional profile
- Opportunity to be a formal mentor or receive mentorship through our "The Courage Within" Mentorship program
- Subscription to the *Canadian Journal of Cardiovascular Nursing (CJCN)*, the Council's peer-reviewed, electronic journal, and only national journal of cardiovascular nursing
- Online access to previous issues of the *CJCN*
- Receive a copy of the Standards for Cardiovascular Nursing Practice
- Interesting monthly e-newsletters and weekly newsbriefs

- Website with resources for professional development and patient education
- Reduced registration fees for the Canadian Cardiovascular Congress and CCCN spring conference
- Opportunities to volunteer on national and local committees
- Opportunities to participate in the development of position statements
- Educational assistance in preparation for writing the CNA exam in CV nursing with access to our certification study guide
- Eligibility for continuous learning activities toward renewal of CNA Cardiovascular Certification
- New for 2017, opportunity to apply for Certification Bursaries funded through sponsorship
- Access to clinical practice resources on the website (ACS, Hypothermia and TAVI)
- Networking opportunities
- Eligibility for the CCCN membership recognition awards:
 - Research Excellence Award in Cardiovascular Nursing
 - Health Promotion and Advocacy Excellence Award in Cardiovascular Nursing
 - Lynne Childs Clinical Excellence Award in Cardiovascular Nursing
 - Mae Gallant Leadership Excellence Award in Cardiovascular Nursing
- Liaison with the Canadian Nurses Association and volunteer as an exam development subject matter expert
- Informative monthly webinars
- Assistance with abstract writing and developing research ideas
- Voting privileges at the Annual General Meeting to shape the direction of CCCN
- Access to the Annual Report
- Opportunities for professional development by presenting at local and national conferences and publishing in a peer-reviewed journal
- Chances to win prizes during membership engagement activities
- Networking opportunities with nurse experts across the country in various sub-specialties
- Access to research and clinical improvement grants.

New Benefit—The Personal Insurance

Our new partnership serves you well with exclusive rates on home and auto insurance. Get a quote. Your exclusive group rate in as little as 10 minutes. Call 1-888-476-8737 or visit www.thepersonal.com/cccn

Enhanced membership can only serve to make our voice stronger. I encourage you to accept the challenge, harness your inner courage, and then look to the left and right and extend the invitation to join our organization.

With courage,

A handwritten signature in blue ink that reads 'Susan Morris, R.N. (M.Sc. CCCN) (CCN)'.

Susan Morris

CCCN and the Canadian Cardiovascular Congress: The Future has now been Clarified

David Miriguay, CCCN Executive Director, Sandra Matheson, Director of Scientific Sessions, and Sue Morris, CCCN President

We have written to you, the membership, a number of times explaining the financial changes that were occurring regarding the Canadian Cardiovascular Congress (CCC). The Canadian Cardiovascular Society (CCS), organizers of the CCC, facing a continued decline in financial support from the pharmaceutical community, as well as declining attendance, made the decision to change the financial arrangements it had in place with its affiliated partners. CCCN was one of the partners.

Prior to 2015, affiliate groups received all the CCC registrations collected from their respective members. However, CCS decided that effective 2015 they would no longer be providing the funds—a significant reduction in revenue for CCCN. CCS did realize the financial impact their decision would have on affiliate groups and offered a three-year graduated subsidy to allow for adjustments within organizations. In addition to the subsidy, affiliates received coverage of the costs related to their scientific program through meeting space, audio-visual, secretariat services, complimentary badges and reduced registration rates for their members.

While the reduction in CCCN's program expenses was appreciated, the loss of the registration revenue was significantly greater. The CCS decision severely impacted CCCN's operations and forced the Board of Directors into some difficult decisions—all of which have been shared with you in the past.

Over the last three years, CCCN has made several proposals to CCS offering alternatives that would provide financial assistance to CCCN through its member registrations while not impacting CCS's bottom line. CCCN never received an official response in writing from CCS to its proposals. In December 2016, CCCN requested an official position and response from CCS, in writing, to share with CCCN membership. CCCN received CCS's response on June 9, 2017.

CCS's response addressed the various proposals made and provided reasons for not accepting them. CCS did recognize CCCN's concerns over the loss of revenue and agreed to extend the subsidy by one year. Initially scheduled to be finished in 2017, CCCN can expect to receive approximately \$26,000 in 2018. However, the proposal is conditional on the following:

- that the CCCN stand-alone program becomes integrated with the overall CCC program. This would mean one common opening session at CCC, the development of "heart team" sessions with CCS, as well as some nurse specialty programming, including nursing abstracts;

- that the number of CCCN/nursing sessions are reduced to reflect the declining nurse delegate population;
- that CCCN will actively continue to promote the CCC as a member benefit and market for ongoing attendance.

The CCCN Board of Directors understands how important it is to our members to participate in Congress as an affiliated member and has every intention to continue. How CCCN will work with CCS in meeting their conditions of a more integrated program will need to be discussed further to identify a process. CCCN's Board of Directors will act in the best interest of the membership.

How will the CCS's conditions affect CCCN?

CCCN programming at CCS will be different, however, there will be opportunity for nurses to present clinical and/or scientific research. The second opportunity for nurses to submit abstracts will be at the spring conference.

Why continue to run a spring conference?

This question has been asked by members and has been discussed extensively by the Board of Directors. The simple answer is the spring conference is revenue generating for CCCN.

In addition to revenue generation, the spring conference will provide an additional opportunity for nurses to present their work to their peers.

What does the future look like?

CCCN's Board of Directors is committed to its continued participation in the CCC, as well as establishing a spring conference that is successful from an educational programming perspective and financially. With continued CCCN member support for two conferences, the Board of Directors is confident that this will lead to a more financially stable organization.

We are always open to hear what our members are thinking and are willing to answer any questions you may have. If you have any questions, comments or concerns, please do not hesitate to contact David Miriguay at david@cccn.ca or at 613-599-9210. If you would like to communicate directly with either Sandra Matheson or Sue Morris, please forward the request to David and he will make sure it gets to the appropriate person.

CCCN Spring Nursing Conference & Annual General Meeting

"Update Your Cardiovascular Nursing Toolkit"



May 26–27, 2017, Victoria, BC

Thank you to all of our attendees, presenters and sponsors for a very successful conference.



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Did You Know? About Learning Resources for Registered Nurses

Did you know that the internet is a wonderful place to enhance your professional development and many of these resources are free of charge? Allow me to take you on a virtual tour of sites that I encourage my colleagues, critical care students and undergraduate students to visit.

First, allow me to direct you to the Canadian Council of Cardiovascular Nurses website. There are resources for you to enhance your professional development and patient education information. If you are a member of CCCN, then you have access to previously recorded webinars and a study guide for CNA certification at www.cccn.ca

Cardiac Rhythms

<http://www.skillstat.com/tools/ecg-simulator> – For those who love to play games, it is quite entertaining.

<https://www.aclsmedicaltraining.com/ecg-simulator/> – This site is similar to the one above, but has a few more heart blocks included.

Once the basics are mastered, registered nurses love 12 Lead ECG interpretation (well, at least I do!).

12 Lead ECG

<http://ecg.utah.edu/> – This is one of my favourites.

<http://www.healio.com/cardiology/learn-the-heart/blogs/10-steps--course-to-learn-ecg-interpretation> – This site provides a good review.

<http://www.12leadecg.com/full/> – This site has lots of practice ECG's followed by the correct interpretation.

<http://www.cardiacmonitors.com/> – This site is a little quirky but is very good.

<http://ekgpress.blogspot.ca/p/ecg-competency.html> – Dr. Grauer is an excellent educator.

15 Lead ECG

<https://www.ena.org/practice-research/Practice/Documents/RightSideECG.pdf> – This was developed by the Emergency Nurses Association and is an excellent resource.

Anatomy and Physiology of the Cardiovascular System

<http://www.le.ac.uk/pa/teach/va/anatomy/frmst.html> – The respiratory system is also useful.

<http://study.com/academy/topic/cardiovascular-system.html> – This is a great site for review.

Additional sites of interest

<https://www.theonlinelearningcenter.com/default.aspx>

<https://ccforum.biomedcentral.com/>

<http://criticalcarereviews.com/index.php/web-sites/629-critical-care-websites> – This site provides links to many critical care websites.

https://ca.video.search.yahoo.com/search/video?fr=yset_ie_syc_oracle&p=chest+x-ray+tutorial#id=1&vid=80cbd13b6917c3b7b386e9d-383c91783&action=click – This is a YouTube tutorial on chest x-ray interpretation. Although not in the scope of practice for registered nurses, it is an area of interest.

What about finding guidelines online? Allow me to direct you to the Canadian Cardiovascular website, as there are a number of useful tools.

CCS

<http://www.ccs.ca> – This is a wonderful website with access to all the latest guidelines. Personally, I use this site at least once a week for staff development. The pocket guides are an exceptional resource and the information is always current.

<http://www.ccs.ca/en/guidelines/guidelines-library> – Pocket guides: Atrial fibrillation, Heart Failure, Dyslipidemia, Antiplatelet Therapy and CRT

<http://www.ccs.ca/index.php/en/resources/pocket-guides>

What about useful smartphone apps?

<http://www.ccs.ca/en/guideline-resources> – The following apps are available for download:

- Atrial Fibrillation
- Heart Failure
- Cardiac Resynchronization Therapy
- Dyslipidemia
- Antiplatelet Therapy
- Fitness to Drive/Fly

As an educator, I purchase apps for my smartphone or my iPad frequently. A personal favourite is DART Sim. Here is a great tutorial on how it can be used <https://www.youtube.com/watch?v=pwUs4hWCy8I>

These are just a few of the resources I find beneficial to my practice. Stay tuned for a follow-up article on “apps”. Happy surfing!

Submitted by Susan Morris, RNBN, Med, CNCC(C), CCN(C)

Clinical Nurse Educator, New Brunswick Heart Centre
Teaching & Learning Consultant, NB Critical Care Program, University of New Brunswick
President, Canadian Council of Cardiovascular Nurses

CCCN Spring Conference Abstracts

Canadian Cardiovascular Nurses' Knowledge, Practice and Advocacy Role in Promoting Evidence-Based Pre-Procedural Fasting Guidelines

R. Millard, Fraser Health Authority/Royal Columbian Hospital, New Westminster, BC, S. Reimer Kirkham, Trinity Western University, Langley, BC, J. Reimer-Kent, Reimer-Kent Consulting, Surrey, BC

Since 1990, the Canadian Anesthesiologists Society (CAS) has had an evidence-based pre-procedural fasting guideline, which recommends patients have nourishment and hydration prior to surgery. Yet, the uptake of this guideline has been inconsistent, resulting in detrimental effects. While there is a growing body of evidence about improved patient outcomes with shortened pre-procedural fasting times, an evidence-practice gap remains in how this research is implemented by nurses. Therefore, a knowledge translation project was conducted with the purpose of examining the current state of knowledge, practice and advocacy role of Canadian cardiovascular nurses in promoting the CAS guideline. The project methods employed the Promoting Action on Research Implementation in Health Services (PARIHS) framework and consisted of a literature synthesis and a survey of 51 cardiovascular nurses. All respondents reported they were knowledgeable about pre-procedural fasting in general, yet only 42% were aware of the CAS guideline, and 34% still believed all cardiac patients should be kept NPO after midnight prior to their procedure. Of the 42% who were aware of the CAS guideline, 62% reported it was always or often implemented. Barriers to implementation included inconsistent medical practice, unforeseen circumstances, and lack of communication and knowledge. Advocacy strategies used to support the adoption of the CAS guideline were pre-printed orders, discussion at professional practice meetings, and seeking a directive from the organization's senior executive. Closing the evidence-practice gap will require multimodal, coordinated efforts such as leadership, professional and patient education, practice support tools, improved interprofessional communication, and engagement with key stakeholders.

Revision of the Cardiac Prodromal Symptoms Screening Scale: A Qualitative Exploration of Ischemic Symptomology [Preliminary Data]

S. O'Keefe-McCarthy, Brock University, St. Catharines, ON, L. Keeping-Burke, University of New Brunswick, Saint John, NB, K. Taplay, Brock University, St. Catharines, ON, J. Vigo, Brock University, St. Catharines, ON, J. Crawford, Brock University, St. Catharines, ON, J. Salfi, Brock University, St. Catharines, ON

Background: The Prodromal Symptoms Screening Scale [PS-SS] is a 9-item measure to evaluate cardiac-specific warning signs in individuals with coronary artery disease (CAD). Preliminary research of the PS-SS suggests satisfactory psychometric properties that present as a two-factor structure of specific and non-specific prodromal symptoms. Internal consistency is acceptable at 0.61. The PS-SS contains one open-ended symptom item (#9) whereby participants can elaborate the subjective nature of their prodromal symptoms. Although the current PS-SS reflects clinical practice, further item generation for clarity of item #9 is required to capture the full range of prodromal symptoms experienced by those who suffer with CAD.

Purpose: This qualitative inquiry will expand item generation of the PS-SS with individuals afflicted with CAD. A purposive sample of adult men and women will be recruited who have/had cardiac-specific prodromal warning symptoms, confirmed CAD by nuclear imaging or chemical/exercise stress test, and documented class I, II or III angina.

Methods: Focus groups will be held with CAD patients recruited from one community hospital in southeastern Ontario.

Data Analysis: Content analysis will be employed to code, categorize and generate themes until data saturation occurs.

Results: A complete description of the preliminary results of prodromal symptoms will be presented. Revision of the items contained in the PS-SS will be highlighted.

Significance: The revised PS-SS may assist clinicians to screen individuals at risk for development of CAD. Moreover, further research will help validate the PS-SS in a diverse sample of acute coronary syndrome patients and establish the positive predictive value the PS-SS may have on major adverse cardiac events.

Wise Choices: Does My Patient Really Need Telemetry?

N. Cook, Fraser Health, Abbotsford, BC, S. Crowe, Fraser Health, BC, J. Reimer-Kent, Reimer-Kent Consulting, Surrey, BC

Telemetry monitoring was originally developed in the 1960s to reduce post myocardial infarction arrhythmic deaths, and is now widely used in a variety of non-critical care medical and surgical in-patient settings. The demand for telemetry monitoring is increasing and may be based on the changing patient profile (e.g., older/sicker patients), perceptions of care providers that patients will receive better care (e.g., improved nurse-patient ratios on telemetry units), and an overestimation of the benefits of telemetry monitoring. Evidence exists that telemetry monitoring is an over-used resource and is frequently applied without appropriate indication, and is also not discontinued when appropriate and safe to do so. Consequences of inappropriate overuse of telemetry monitoring include financial burden related to overutilization of a scarce and costly resource, potential patient harm associated with the misinterpretation of telemetry monitoring and subsequent unnecessary additional testing or treatments, nursing alarm fatigue, and admission, transfer or discharge delays.

Following an environmental scan and gap analysis examining use of telemetry monitoring across multiple acute care sites, it was determined that a clinical policy guiding the appropriate use and discontinuation of telemetry monitoring was needed. The purpose of this presentation is to discuss the process of developing such a policy, the implementation and education associated with the policy, and the evaluation process after implementation that we undertook. As well, we will discuss learnings along the way and challenges we encountered in our effort to improve the care of our patients.

Sub-Speciality Clinical Training for Graduate Nurses in a Pakistan Nursing School

Z. Bhimji, Aga Khan University Hospital, Karachi, Pakistan

Immersive clinical simulations utilized in lower middle-income countries reflect a growing technology-based educational approach to health education. A nursing school in Karachi, Pakistan, will be initiating an advanced practice clinical stream to their Master of Nursing program to address the complexities of patient care requiring advanced sub-speciality skills and knowledge. The cardiovascular sub-speciality practicum will be a hybrid of high-fidelity simulation training, direct clinical work, and theory courses using innovative teaching pedagogies to engage the modern nursing student. An oral presentation will highlight the curriculum developed, educational philosophies underpinning the program,

and learning objectives and course design to ensure graduates meet international standards as nurse clinicians in cardiology. The advent of this program in Karachi will improve the clinical decision-making skills of students, engender critical examination of ethical and legal issues and hopefully impart in students continued inquiry to maintain current with best practices and become leaders in their profession. Several outcomes to be evaluated include direct clinical competency of graduates, improvement in healthcare outcomes in areas where they are employed, and feedback of graduates on meeting the demands of healthcare delivery. Specialization in graduate nursing education with a practice-orientated approach, incorporating simulation technology, will offer professional development for nurses in Pakistan; on par with international graduates.

Perceptions of Experienced Nurses to What Influenced Their Decision to Leave Clinical Practice

D. Hayward, South Surrey, BC

Nursing turnover remains a pressing problem for healthcare delivery in acute care inpatient settings. Turnover contributes to increased recruitment and orientation cost, reduced quality patient care, and the loss of mentorship for new nurses. The purpose of this research was to critically examine the factors that contribute to turnover of experienced nurses including their decision to leave clinical practice settings and seek new employment. The study objectives were to explore experienced nurses' decision-making processes in leaving current clinical practice settings and examine the personal and environmental factors experienced nurses' perceive that influenced their decision to leave. An interpretive descriptive approach was used to guide the study. Interviews were conducted with 12 nurses, averaging 16 years in clinical practice. Participants were equally represented from clinical units and roles, which included critical care and medical-surgical areas in point-of-care and leadership positions. The findings indicated that nurses' decisions to leave were influenced by several interrelated environmental and personal factors such as higher patient acuity, increased workload demands, ineffective working relationships among nurses and with physicians, gaps in leadership support, and significant impact to nurses' health and personal well-being. It is vital that healthcare organizations learn to minimize turnover and retain the wealth of experienced nurses to maintain quality patient care and contain costs. The study highlights the need of healthcare leaders to re-examine how they promote collaborative practice, enhance supportive leadership behaviours, and reduce nurses' workplace stressors in order to retain the wealth of skills and knowledge offered by experienced clinical practice nurses.

CCCN Cardiovascular Nursing Excellence Recognition Awards Program

Through our Cardiovascular Nursing Excellence Recognition Program, CCCN seeks to:

- Celebrate and profile Cardiovascular (CV) Nursing Excellence within CCCN
- Acknowledge nurses who obtain CV certification/recertification
- Acknowledge outstanding students who have completed a CV practicum
- Recognize Canadians who have advocated for CV health and/or CCCN.



Chris Kuttig, RN, BN, CCN(C)
Lynne Childs Clinical Excellence Award in Cardiovascular Nursing



Dr. Jane MacIver, RN-NP, PhD, CCN(C)
Canadian Council of Cardiovascular Nurses Excellence in Research Award



Priscilla Taipale, RN, MSN
Mae Gallant Cardiovascular Nursing Leadership Excellence Award

CCCN Scientific Session and Canadian Cardiovascular Congress

The 2017 Canadian Cardiovascular Congress, October 21–24, Vancouver, BC, CCCN Scientific Session registration is now open. CCCN members can save \$45.00 when registering before August 8, 2017.

The Canadian Cardiovascular Congress (CCC) is the premier annual cardiovascular event in Canada. The CCCN sessions will showcase the wide range of outstanding clinical and research work in the CV nursing field. Visit www.cccn.ca for more information.

NEW Mentorship Program for CNA Certification in Cardiovascular Nursing

Are you looking for...

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- Knowledgeable experts in the field of CV nursing?
- A study guide and eleven weeks of articles, activities and sample questions?

Then look no further

- First week of mentorship begins on August 18 and will continue until October 27, 2017, in preparation for you to write between November 1 and 15, 2017. Contact Kathryn Cyr at kathryn@cccn.ca to sign up.

CCCN Research Grant Program

The purpose of this grant is to provide funds to CCCN members for research pertaining to cardiovascular or cerebrovascular nursing in Canada.

Types of research to be funded

1. Development of a research proposal that will lead to funding from another granting agency.
2. Pilot study, a small project, or instrument development and testing.
3. Evaluation of a nursing intervention.

Range of funding

1. Up to a maximum of \$2,500.
2. A candidate may only receive one CCCN research grant for the same project.

Eligibility

1. Canadian citizens or permanent residents.
2. Current members of the CCCN.
3. Currently licensed as a nurse in a provincial/territorial professional association.

Selection criteria

The CCCN National Research Committee reviews grant applications with attention to both relevance and scientific merit. In the event that projects receive equal scientific rating, then preference will be given to the applicant who 1) has not received funding from CCCN in the past five years, or 2) has contributed the most to CCCN endeavours.

Closing date for applications

- September 8, 2017
- Please visit our website at www.cccn.ca for complete details and to apply.

CCCN Clinical Improvement Grant Program

The purpose of this grant is to provide funds to CCCN members for research pertaining to cardiovascular or cerebrovascular nursing in Canada.

This grant is directed to nurses in clinical settings who use results from research to improve practice, and to research nurses wishing to establish linkages with clinical nurses to facilitate the uptake of research evidence and advance clinical practice.

Types of clinical projects to be funded

1. Knowledge Dissemination Project.
2. Knowledge Utilization Project.

Range of funding

1. Up to a maximum of \$2,500.
2. A candidate may only receive one CCCN clinical grant for the same project.

Eligibility

1. Canadian citizens or permanent residents.
2. Current members of the CCCN.
3. Currently licensed as a nurse in a provincial/territorial professional association.
4. Project must include both clinical and research nurses.

Selection criteria

The CCCN National Research Committee reviews grant applications with attention to relevance of the project in relation to pertinence. In the event that projects receive equal rating, then preference is given to an applicant who 1) has not received funding from CCCN in the past five years, or 2) has contributed the most to CCCN endeavors.

Closing date for applications

- September 8, 2017
- Please visit our website at www.cccn.ca for complete details and to apply.

The Role of Self-Efficacy in Cardiovascular Disease Prevention in Women

Lisa Banman RN, BN, Jo-Ann V. Sawatzky RN, PhD

Abstract

Although once considered a man's disease, more women than men are currently living and dying with cardiovascular disease (CVD). Despite the known benefits of adhering to a heart-healthy lifestyle, fewer women than men participate in prevention strategies. One reason for this lack of participation may be attributed to low levels of self-efficacy; the belief in one's own capabilities to successfully perform a behaviour or task (e.g., exercising, eating healthy, smoking cessation). This paper provides a comprehensive overview of the current literature on the concept of self-efficacy within the context of primary, secondary, and tertiary CVD prevention in women. The three themes that emerged from this review provide insight into the relationship between women's self-efficacy and their health behaviours, as they travel through the cardiovascular

health and illness trajectory. These themes include (1) low self-efficacy beliefs prevent women from engaging in physical activity, (2) women who lack social support are less confident in their ability to care for themselves, and (3) depression is negatively correlated with women's self-efficacy beliefs related to health behaviour. Cardiovascular nurses play an important role in identifying female patients who struggle with low self-efficacy beliefs, as well as facilitating individualized strategies to strengthen those beliefs. This, in turn, will enable women to take the necessary steps to improve their overall cardiovascular health.

Key words: cardiovascular disease, self-efficacy, women, health behaviour

Banman, L., & Sawatzky, J.V. (2017). The Role of Self-Efficacy in Cardiovascular Disease Prevention in Women. *Canadian Journal of Cardiovascular Nursing*, 27(3), 11–19.

Clinical Highlights

- Cardiovascular disease affects more women than men, yet women are not engaging in preventative health behaviours that are shown to improve overall outcomes.
- Women with cardiovascular disease often exhibit lower levels of self-efficacy, a person's confidence in their own ability to perform a given task (e.g., a health behaviour) and this may explain their lack of participation in existing preventative strategies.
- Cardiovascular nurses are well positioned to identify low self-efficacy beliefs in their female patients and to create strategies that will strengthen these beliefs with the goal of empowering women to live healthier lives.

Cardiovascular disease (CVD) is the number one cause of death worldwide, claiming more than 17.3 million lives each year (Mendis, Puska, & Norrving, 2011; Mozaffarian et al., 2016). Although once considered a man's disease, more women than men are now living and dying with CVD (Mosca, Barrett-Connor, & Wenger, 2011). An estimated one in two women will be affected by heart disease during their lifetime (Wenger, 2015). Although women of all ages are at risk for CVD, the incidence of heart disease is increasing in young women between the ages of 35 and 44 years (Wilmot, O'Flaherty, Capewell, Ford, & Vaccarino, 2015). Moreover,

with longer life expectancies, women are making up a growing proportion of the ageing population in which the incidence of CVD is the highest (Roger et al., 2011). Women who are diagnosed with CVD also have poorer outcomes than men (Mozaffarian et al., 2016). For these reasons, it is critically important for cardiovascular nurses to have a comprehensive understanding of women's behaviours surrounding the primary, secondary and tertiary prevention of CVD, and to develop strategies aimed at reducing the number of women whose lives are being affected by this disease.

Prevention of CVD is central to improving outcomes in the female population. Current prevention approaches are generally based on reducing the modifiable risk factors such as sedentary lifestyle, obesity, high blood glucose, smoking, and high cholesterol (Schwalm, 2016). Over the past decade, prevention strategies have succeeded in reducing mortality rates for men. However, these statistics have not been dropping as rapidly in the female segment of the population (Roth et al., 2015). One plausible explanation for this discrepancy is many women are not aware of their risk for heart disease (Kling et al., 2013), resulting in a lack of concern for adopting healthy behaviour. After being diagnosed with CVD, women face unique challenges that prevent them from accessing secondary prevention initiatives. These obstacles could include older age at diagnosis (Artinian et al., 2010; Dreyer et al., 2016), more co-morbidities (Moore et al., 2013), and less social support (Bertoni, Donato, Graffigna, Barelllo, & Parise, 2015; Fraser & Rodgers, 2012). With nearly half of women dying within five years of their first

heart attack (Salmoirago-Blotcher et al., 2015), additional strategies for all levels of prevention are critically important.

The concept of self-efficacy has been studied extensively in the area of behaviour modification. Self-efficacy can be defined as an individual's belief in the ability to successfully perform a behaviour, such as engaging in physical activity or making healthy diet choices (Bandura, 1997). Within the context of healthcare, self-efficacy refers to an individual's confidence in the ability to perform a health behaviour that will ultimately have a positive impact on their well-being (Bennett, Adams, & Ricks, 2012). Prior research (Greco et al., 2014; Kang & Yang, 2013; Rodgers, Murray, Selzler, & Norman, 2013) supports the contention that self-efficacy is a predictor of whether or not a behaviour will be attempted, as well as adherence to behaviour change. Self-efficacy has been studied in many areas of healthcare and has been shown to promote healthy lifestyle behaviours, strengthen self-management skills, and guide interventions aimed at changing health-related behaviours (Emme et al., 2014; Fisher & Kridli, 2014; Liu, 2012; Wright, 2015). Thus, the concept of self-efficacy provides insight into women's health behaviours and strategies for behaviour change within the context of cardiovascular health and illness trajectory.

The purpose of this paper is to provide an overview of the current literature on the concept of self-efficacy, as it relates to primary, secondary, and tertiary CVD prevention in women. The goal is to provide insight into women's health behaviours by describing themes that appear as women travel through the cardiovascular health and illness trajectory. These findings will inform current cardiovascular nursing care and facilitate the development of tailored strategies to improve cardiovascular outcomes for women.

Self-Efficacy

Self-efficacy is a modifiable concept; it can be strengthened through targeted interventions that focus on strengthening an individual's beliefs in his or her own capabilities (Barkley & Fahrenwald, 2013; Jerome & McAuley, 2013; Kang & Yang, 2013). Bandura (1997) identifies four sources of self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological feedback. Insight into these sources of self-efficacy enables nurses to develop strategies to enhance self-efficacy.

Mastery experiences involve performing a task successfully, such as walking around the track or choosing a healthy snack. This source of self-efficacy, which adds to a sense of confidence in one's abilities, is thought to have the most impact on behaviour change (Bandura, 1997). Vicarious experience entails an individual observing the successful completion of a task by someone considered to be similar to themselves, for example, observing fellow cardiac rehabilitation (CR) participants gain exercise tolerance. The third source of self-efficacy is verbal persuasion, which occurs when individuals are told that they are capable of successfully

completing the desired task; for example, when a nurse encourages patients in their efforts to exercise. Lastly, physiological feedback includes the individual's ability to control physical and emotional reactions to a behaviour, for example, when a patient with cardiac disease is able to control the fear of experiencing chest pain with increased activity. Thus, the concept of self-efficacy is well suited for application within the context of CVD prevention because it considers that people learn new behaviours in interactive environments, which are ideal for nurses who work with patients to implement intervention strategies for behaviour change (Blanchard et al., 2011).

Although most research in this area has been conducted on men, self-efficacy has been studied extensively in the CVD population and has been found to have a positive impact on changing health-related behaviours such as weight loss (Hays, Finch, Saha, Marrero, & Ackermann, 2014; Shin et al., 2011), smoking cessation (Gwaltney, Metrik, Kahler, & Shiffman, 2009), and exercise (Ashford, Edmunds, & French, 2010; Bergstrom, Borjesson, & Schmidt, 2015; Howarter, Bennett, Barber, Gessner, & Clark, 2014). Researchers have found that consistently engaging in a change behaviour is not based on confidence alone, but also on being confident in multiple forms of self-efficacy including task self-efficacy, barrier self-efficacy/coping self-efficacy and scheduling self-efficacy (Fraser & Rodgers, 2012; Martin & Woods, 2012; Murray & Rodgers, 2012; Rodgers et al., 2013). For example, within the context of physical activity, task self-efficacy can be described as self-confidence in the physical skills (e.g., balance or coordination) required to perform the actual skill, such as riding on a stationary bike or walking around a track. Barrier self-efficacy describes a person's confidence to overcome any barriers that are faced when attempting to perform the behaviour (e.g., inclement weather or lack of motivation). Scheduling self-efficacy is confidence in the ability to organize one's life to include the behaviour (e.g., finding time for regular exercise in a busy schedule) (Fraser & Rodgers, 2012). Understanding the multi-dimensionality of self-efficacy is integral for nurses to apply this concept effectively within the context of their clinical practice.

Self-Efficacy & Cardiovascular Disease Prevention in Women

The concept of self-efficacy has been studied extensively as a means to understand the health behaviour of individuals with CVD. Research has focused on how self-efficacy beliefs for specific health-promoting behaviours, such as physical activity and healthy eating, correlate with the adoption and maintenance of these beneficial activities. Despite the fact that women make up more than 50% of the population affected by CVD, the research on self-efficacy beliefs related to health behaviours in this population has focused primarily on men. There is, however, an emerging body of literature

with a specific focus on women's self-efficacy beliefs.

A review of the current literature on women's self-efficacy beliefs related to the prevention of CVD revealed several themes, which coincide with three key risk factors for CVD in women. First, low self-efficacy beliefs prevent women from engaging in physical activity. Second, women who lack social support are less confident in their ability to care for themselves, and third, depression is negatively correlated with women's self-efficacy beliefs related to health behaviour. Insight into women's self-efficacy beliefs and these risk factors will facilitate the development of specific strategies for CVD prevention in women.

Theme 1: Physical Activity and Self-Efficacy

Physical activity is central to primary prevention of CVD, as it has been shown to improve cardiovascular risk factors including lowering blood pressure, blood cholesterol, and body weight, and improving glucose metabolism (Fraser & Rodgers, 2012; Reddigan, Arden, Riddell, & Kuk, 2011). The AHA recommends that adults should engage in a minimum of 150 minutes of moderate to vigorous intensity aerobic activity each week in order to maintain good health (Eckel et al., 2014). Unfortunately, women are less likely than men to engage in physical activity, which places them at greater risk for developing CVD (Westerman & Wenger, 2016).

Physical activity is also a key strategy in secondary prevention. Following a cardiac event, physical activity is typically initiated within the context of a cardiac rehabilitation (CR) program. CR programs have been successful in reducing CVD-related mortality rates by 20–30% (Andraos et al., 2015; Dolansky, Stepanczuk, Charvat, & Moore, 2010). Unfortunately, only 10–15% of eligible women choose to attend these programs, compared to 30% of men (Rolfe, Sutton, Landry, Sternberg, & Price, 2010). As well, women are more likely than men to drop out before completion of the program (Wenger, 2015). Therefore, it is important to explore factors that may influence participation in physical activity as a strategy for secondary prevention of CVD in women.

The role of self-efficacy in physical activity. The majority of the literature on self-efficacy and CVD prevention focuses on exercise behaviours. Exercise self-efficacy, which is an individual's confidence in his/her ability to successfully perform a specific exercise behaviour, is a consistent determinant of physical activity (Ashford et al., 2010). Furthermore, this confidence is a better long-term predictor of having a cardiovascular event than self-reported activity levels (Bergstrom et al., 2015). Several researchers have examined the self-efficacy beliefs of women with one or more CV risk factor, who participated in primary prevention interventions based on exercise and education. Two of these studies found that self-efficacy for exercise beliefs were strengthened as a result of participation in these interventions (Brennen & Williams, 2013; Pearson, Hall, & Gammage, 2013; Wieland et

al., 2012). However, two additional studies found no change in self-efficacy beliefs for the women who completed the intervention (Hays, Pressler, Damush, Rawl, & Clark, 2010; Sadjja et al., 2012). Therefore, further research is needed related to women's self-efficacy for exercise beliefs in primary prevention.

Most of the cardiovascular-related research on physical activity and self-efficacy focuses on secondary prevention, much of which centres on task self-efficacy, barriers, and scheduling self-efficacy in CR. For example, task self-efficacy provides information on how confident someone is performing the assigned exercises in CR and can predict whether or not a participant will successfully complete the program (Frank, McConnell, Rawson, & Fradkin, 2011; Murray & Rodgers, 2012; Rodgers et al., 2013). Women generally have lower task self-efficacy than men on entry to CR and are, therefore, at greater risk of quitting the program prior to completion (Rolfe et al., 2010). Women's lack of confidence related to exercise may be explained by their reported higher levels of fatigue and pain with exercise (Sadjja et al., 2012), increased social anxiety related to physical activity (Pearson et al., 2013), negative body image with aging (Bailey, Cline, & Gammage, 2016), inadequate physical condition (Mikkelsen, Thomsen, & Tchijevitch, 2014), and increased concern for safety during exercise (Sutton, Rolfe, Landry, Sternberg, & Price, 2012).

Women in CR must also gain confidence to overcome any obstacles they face when attempting a newly learned behaviour, such as physical activity (i.e., barrier self-efficacy). For example, women commonly report lack of motivation and lack of interest as barriers to participation physical activity (Baruth, Sharpe, Parra-Medina, & Wilcox, 2014; Colbert et al., 2014; McArthur, Dumas, Woodend, Beach, & Stacey, 2014; Moreno & Johnston, 2014). Similarly, women report issues related to scheduling the time to engage in physical activity (i.e., scheduling self-efficacy). The ability to surmount these challenges is imperative for maintaining the physical activity in the long term (Dohnke, Nowossadeck, & Muller-Fahrnow, 2010; Dolansky et al., 2010; Fraser & Rodgers, 2010; Slovynec D'Angelo, Pelletier, Reid, & Huta, 2014; Sweet, Tulloch, Fortier, Pipe, & Reid, 2011).

Theme 2: Social Support and Self-Efficacy

Social support is an important predictor of cardiovascular health; research shows that those with less social support are at greater risk of developing CVD (Petrova, Garcia-Retamero, & Catena, 2015). One explanation for this relationship is that individuals with strong social support are more likely than those who are isolated to pursue healthy behaviours (Gallant, 2013; Kouvonen et al., 2012). As women age, they often move from receiving social support to providing social support for dependent family members, such as spouses, children, and aging parents. In this caregiver role, women with CVD frequently choose not to prioritize their own

health needs, focusing instead on the needs of their loved ones (Rolfe et al., 2010; Sanderson, Shewchuk, & Bittner, 2010). Women also tend to continue to lose social support, as they age, due to longer life expectancies than their male counterparts, leaving them widowed and/or living alone in their twilight years. Thus, factors that may have a positive impact on social support are integral to primary and secondary CVD prevention strategies in women.

Social support and the role of self-efficacy. Social support is closely linked to self-efficacy beliefs and adoption of new behaviours. In the area of secondary prevention, researchers have found that higher self-efficacy beliefs are associated with a strong sense of belonging to the group (Fraser & Rodgers, 2010; Pryor, Page, Patsamanis, & Jolly, 2014). Specific to CR, the strong emotional connections that women develop with other participants have been shown to increase self-efficacy beliefs for healthy behaviour (Simony, Pedersen, Dreyer, & Birkelund, 2015). Interestingly, emotional support has also been found to correlate negatively with scheduling self-efficacy, suggesting that finding time to exercise might be difficult for those who are emotionally isolated (Fraser & Rodgers, 2010).

Individuals who are married have more social support, and are more likely to be actively engaged in their cardiac care compared to those who are single (Bertoni et al., 2015; Mikkelsen et al., 2014). However, Bandura (1997) warns that spouses can act as either encouragers or detractors, depending on how they think their partner can tolerate the activity in question. Additionally, family members may feel over-protective or resentful of their wives or mothers who choose to participate in CR, which may result in low self-confidence and poor behaviour adoption (Bertoni et al., 2015; Clark et al., 2013; Jokar, Yousefi, Yousefi, & Sadeghi, 2015). Finally, when women stop attending CR they may lose these supportive connections, resulting in less social support and subsequent diminished confidence in their abilities to sustain healthy behaviours (Beckie, Beckstead, Schocken, Evans, & Fletcher, 2011; Howarter et al., 2014).

Heart failure is a significant problem in the aging female population (Westerman & Wenger, 2016). The tertiary prevention exemplar of an elderly woman with heart failure and living alone highlights the importance of social support in self-efficacy beliefs. Self-care behaviours such as monitoring body weight and fluid intake are essential in managing end-stage heart failure (Mills et al., 2010; Paradis, Cossette, Frasure-Smith, Heppell, & Guertin, 2010). However, social isolation hinders women's self-confidence to manage their own care. In fact, research indicates that women with heart failure feel more self-assured in making treatment decisions along with a support person (Stampe, 2014). Thus, elderly women with heart failure appear to be at high risk for experiencing low self-efficacy beliefs related to lack of social support.

Theme 3: Depression and Self-Efficacy

Not only are those who suffer from depression at greater risk of developing heart disease, but individuals with CVD are also more likely to develop depression (Davidson et al., 2010; Martens et al., 2010; Xiang & An, 2015). Depression has been linked with poorer CVD outcomes including higher mortality rates (Chapa et al., 2014), greater rates of surgical complications (Wang et al., 2013), and higher incidence of a second cardiac event (Elderon & Whooley, 2013). Importantly, depression is a significant predictor of a woman's cardiovascular health and illness (Huffman, Celano, Beach, Motiwala, & Januzzi, 2013; Wenger, 2015). Women generally experience higher rates of major depressive symptoms than men following an MI and are, therefore, at risk for poorer outcomes (Doering & Eastwood, 2011). Although the link between depression and heart disease is multi-faceted, a significant contributor is the predominance of poor health behaviours in CVD patients with depression, including decreased physical activity, smoking cessation, and medication adherence (Elderon & Whooley, 2013; Rutledge et al., 2012). Strategies for CVD prevention in women must address factors such as self-efficacy, which may reduce or eliminate depression.

Depression and the role of self-efficacy. In order to reduce their risk for developing CVD, women must adopt healthy behaviours, such as exercise and healthy eating, and avoid harmful behaviours, such as smoking and excessive weight gain. Self-efficacy plays an important role in a woman's ability to choose healthy behaviours (Eccles et al., 2012); however, depression has been found to have a negative impact on one's sense of self-confidence (Moore et al., 2013). Depression also reportedly correlates with cardiac risk factor self-efficacy, specifically one's confidence in the ability to follow restrictions related to smoking, diet, alcohol use, and stressful behaviour (Greco et al., 2014). Kontinen, Silventoinen, Sarlio-Lähteenkorva, Männistö, and Haukka (2010) found that higher levels of depression were related to lower levels of self-efficacy for physical activity and higher rates of emotional eating in women compared with men.

Specific to secondary prevention, Howarter et al. (2014) found that those who report depression at the beginning of a CR program demonstrated significantly lower levels of self-efficacy for exercise. Furthermore, those with depressive symptoms also experienced steeper levels of decline in self-efficacy for exercise beliefs after they completed a CR program (Howarter et al., 2014). In addition, emotional problems, such as depression and anxiety, have been found to negatively affect women's self-confidence to return to work after a cardiac event (Meland, Grønhaug, Øystese, & Mildestvedt, 2011). Thus, strategies to increase self-efficacy may impact on a woman's depression, which, in turn, may influence her cardiovascular health outcomes.

Discussion

Reviewing the literature related to self-efficacy and CVD in women revealed several key themes, including its central role in physical activity, social support, and depression. These themes affect women across the cardiovascular health and illness trajectory and are often interrelated. For example, many young women are adopting sedentary lifestyles, which is contributing to the increasing rates of obesity (Green et al., 2014). In turn, obesity can have a negative impact on self-confidence to be physically active, and may also increase the risk of depression and social isolation (Kontinen et al., 2010). Cardiovascular nurses can address their female clients' sedentary behaviour through activities designed to strengthen the multi-dimensional self-efficacy beliefs needed to adopt an exercise behaviour, as outlined in this review. Nurses should also work in collaboration with physiotherapists and kinesiologists to ensure that their female clients can perform exercise behaviours competently, resulting in strong task self-efficacy beliefs. In both in-patient and out-patient settings, nurses caring for women with CVD should teach their patients how to plan for obstacles to exercise that they may encounter, such as injuries or lack of motivation. These coping strategies serve to strengthen barrier self-efficacy, which is necessary for adherence to a new behaviour. Finally, nurses should include instruction on time management whenever they discuss the adoption of a new exercise behaviour with their female clients.

In the area of primary prevention, public health nurses and nurse practitioners (NPs) are well positioned to assess the learning needs and to educate women of all ages about their risk for CVD. Research shows that NPs are as effective as physicians in counselling patients regarding their cardiovascular risk factors (Klemenc-Ketis, Terbovc, Gomiscek, & Kersnik, 2015). Knowledge of the link between self-efficacy and the health behaviours required to reduce certain CVD risk factors (e.g., physical activity, social support and depression) should inform the development of individualized, primary prevention educational strategies for women of all ages.

In secondary prevention, cardiovascular nurses working on in-patient units must be strong advocates for women to enrol in CR programs. Along with numerous other benefits, participation in CR has been shown to enhance self-efficacy beliefs (Daniels, Arena, Lavie, & Forman, 2012; Grace, Bennett, Ardern, & Clark, 2014). The strength of the endorsement made by the healthcare provider has been found to strongly influence women's attendance in these programs (Sanderson et al., 2010). Currently, nurses focus on program outcomes (e.g., decreased mortality, weight loss, lower blood pressure) to convince patients they should attend CR. However, studies show that there is no link between outcomes and exercise behaviour (Flora, Anderson, & Brawley, 2015). Instead, the focus should

shift to strengthening self-efficacy beliefs, which is a better predictor of whether or not women will engage in this desired behaviour (Jokar et al., 2015). As mastery experiences have been found to be the strongest source of self-efficacy, nurses should provide opportunities for women to be successful at accomplishing the desired behaviour change, such as walking in the hallway or performing self-care behaviours.

Women entering CR programs are generally screened for depression, and to some extent for social support. However, this screening is often overlooked in the many women with CVD who choose not to attend these programs, and who may be at greater risk. Nurses working in outpatient and community settings are ideally situated to identify women with CVD who may be suffering from depression and living in isolation. Research shows that treating the individual's depression may be as important as treating their CVD (Elderon & Whooley, 2013; Sin, Yaffe, & Whooley, 2015). Participation in a CR program has been shown to reduce depressive symptoms in those who attend (Milani & Lavie, 2007), another reason why all women with CVD should be enrolled in secondary prevention programs.

Women who have been diagnosed with CVD report losing self-confidence in their ability to care for themselves (Sutton et al., 2012). This is heightened in women with a lack of social support (Liu, Hernandez, Trout, Kleiman, & Bozay, 2017); therefore, nurses should design and implement interventions that will improve this low self-efficacy, which may include strategies to increase social support. It is important for women to have a sense of control over their disease, much of which comes through increasing their knowledge and teaching them the skills required to manage their CVD (Mills et al., 2010). Similarly, nurses working in CR programs should focus on developing individualized strategies to help women become confident, independent exercisers, so that they are able to sustain this activity outside of the controlled CR environment. To this end, enhancing social support has been found to be effective in increasing self-efficacy and activity compliance (Daniels et al., 2012).

Women-only CR programs are emerging in centres around the world with promising results. Women report feeling more comfortable in this type of milieu, with decreased anxiety and an increased feeling of safety (Rolfe et al., 2010). Research also consistently reports that women gain confidence from the social support they receive when connecting with other women (Clark et al., 2013; Mendes, Roux, & Ridosh, 2010; Sutton et al., 2012). These interactions, which are an important source of vicarious experiences, are more likely to occur in a gender-specific environment. Therefore, cardiovascular nurses should advocate for women-only CR strategies within existing programs, such as women-only exercise classes, as a means of increasing their participation in CR.

Home-based CR may also be a solution for women to overcome barrier self-efficacy. While currently not as widespread as centre-based CR, home-based CR programs have been found to be equally effective, even in the elderly (Oerkild et al., 2011). Women who choose to exercise at home do not have to overcome barriers such as transportation and inclement weather issues. As well, staying at home to exercise may take less time away from family responsibilities. Although there appear to be major advantages of home-based programs for women, further research is needed regarding alternative CR delivery models.

Finally, nurses must be aware that elderly women with heart failure may be isolated and in need of social support to boost their confidence in their ability to manage their disease. Home care nurses working in the community can play an important role in working with these women to develop strategies to reduce their isolation and improve their quality of life. Nurses should also seize opportunities to educate friends and/or family members about the benefits of attending regular exercise programs (Clark et al., 2013). This knowledge could translate into increased motivation for family members to facilitate their loved one's participation in these and other health-promoting programs.

Conclusion

This overview of the literature related to the role of self-efficacy in cardiovascular health and illness focused on women. The themes of physical activity, social support, and depression were described within the context of women's cardiovascular health and illness trajectory. In general, women lack confidence to make healthy behaviour decisions. Therefore, cardiovascular nurses play an important role in strengthening women's self-efficacy beliefs, which, in turn, will enable these women to take the necessary steps to improve their overall cardiovascular health.

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In patients with baseline resting heart rate ≥ 77 bpm:

Superiority demonstrated vs. placebo in reducing the risk of the primary composite endpoint of CV mortality or hospitalization for worsening HF in SHIFT study subgroup analysis (27.4% vs. 34.2%; HR: 0.75 [95% CI 0.67–0.85], $p < 0.0001$)*¹

While **both components of the composite endpoint** were shown to contribute to the **beneficial effects** observed in this subgroup, hospitalization for worsening HF was the main driving component.¹

LANCORA™ (ivabradine) is indicated for the treatment of stable chronic heart failure with reduced left ventricular ejection fraction ($\leq 35\%$) in adult patients with NYHA Classes II or III who are in sinus rhythm with a resting heart rate ≥ 77 beats per minute, to reduce the incidence of cardiovascular mortality and hospitalizations for worsening heart failure. LANCORA™ should be administered in combination with standard chronic heart failure therapies.

Geriatrics: Increased risk of bradycardia in patients ≥ 75 years when treated at a starting dose of 5 mg twice daily; lower starting dose recommended.

Pediatrics: Not authorized for use as the efficacy and safety have not been established.

Refer to the page in the bottom right icon for additional safety information and for a web link to the Product Monograph discussing:

- Contraindications in patients who are hypersensitive to LANCORA™ or to any ingredient in the formulation or component of the container; resting heart rate < 70 bpm prior to treatment; unstable or acute heart failure; existing prolonged QT interval; cardiogenic shock; acute myocardial infarction; severe hypotension ($< 90/50$ mmHg); severe hepatic impairment; sick sinus syndrome; sino-atrial block; third-degree atrioventricular block; pacemaker dependence (heart rate imposed exclusively by the pacemaker); concomitant use of strong CYP3A4 inhibitors; concomitant use of moderate CYP3A4 inhibitors with heart-rate-reducing properties; pregnancy, lactation, and women of

child-bearing potential not using appropriate contraceptive measures; patients with hereditary problems of galactose intolerance, glucose-galactose malabsorption, or the Lapp lactase deficiency;

- Warnings and precautions: stable coronary artery disease; high resting heart rate in spite of background beta-blocker regimen; concomitant use of a CYP3A4 inducer or inhibitor; accurate measure of the patient's resting heart rate prior to treatment initiation or dose modification; aortic stenosis; cardiac arrhythmias; atrial fibrillation; sinus node dysfunction; use in patients with intraventricular conduction defects, ventricular dyssynchrony, and third-degree AV-block; low heart rate (< 50 bpm); use of cardiac devices; patients at risk of QT interval prolongation; chronic heart failure; stroke; hypotension; hypertensive patients requiring blood pressure treatment modifications; ophthalmologic, including visual disturbances and effects on ability to drive and use machines; hepatic impairment; renal impairment; sensitivity to lactose; use in women of child-bearing potential, as well as pregnant and nursing women.
- Conditions of clinical use, adverse reactions, drug interactions, and dosing information that have not been discussed here.

The Product Monograph is also available by calling us at 1-800-363-6093. Please visit www.servier.ca/references/LANCORA_EN to access the study parameters and reference list.

bpm: beats per minute; CV: cardiovascular; HF: heart failure; HR: hazard ratio; CI: confidence interval; BID: twice a day

*Subgroup analysis of the SHIFT study, which was a phase III, randomized, double-blind, placebo-controlled study in 6505 patients with chronic HF. Patients were randomly allocated to receive placebo or LANCORA™ (starting dose: 5 mg BID, titrated up to 7.5 mg BID or down to 2.5 mg BID dependent on heart rate). The sub-study explored outcomes in patients with median baseline heart rate values of 77 bpm ($n=3357$), with a median follow-up of 22.5 months. The primary endpoint was a composite of CV death and hospital admission for worsening HF.



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Contraindications:

- Patients who are hypersensitive to LANCORA™ or to any ingredient in the formulation or component of the container.
- Resting heart rate < 70 bpm prior to treatment
- Unstable or acute heart failure
- Patients with existing prolonged QT interval (e.g. congenital long QT syndrome)
- Cardiogenic shock
- Acute myocardial infarction
- Severe hypotension (< 90/50 mmHg)
- Severe hepatic impairment
- Sick sinus syndrome
- Sino-atrial block
- Third-degree atrioventricular block
- Pacemaker dependence (heart rate imposed exclusively by the pacemaker)
- Concomitant use with strong CYP3A4 inhibitors
- Concomitant use of verapamil or diltiazem which are moderate CYP3A4 inhibitors with heart-rate-reducing properties
- Pregnancy, lactation, and women of child-bearing potential not using appropriate contraceptive measures
- Patients with hereditary problems of galactose intolerance, glucose-galactose malabsorption, or the Lapp lactase deficiency as LANCORA™ contains lactose.

Relevant warnings and precautions:

- Not indicated for the treatment of patients with stable coronary artery disease because clinical trials failed to show clinical outcome benefit in these patients.
- The treating physician should make every effort to achieve the guideline-recommended target doses of the beta blockers prior to initiating treatment with LANCORA™. If the resting heart rate remains high (i.e. ≥ 77 bpm), then treatment with LANCORA™ may be considered.
- Concomitant use with a CYP3A4 inducer may decrease LANCORA™ exposure, therefore, in case of interruption of treatment with the CYP3A4 inducer, close heart rate monitoring is recommended.
- Serial heart rate measurements, electro cardiogram (ECG) or ambulatory 24-hour monitoring should be conducted on at least three separate visits to obtain an accurate measure of the patient resting heart rate prior to initiating treatment with LANCORA™ or modifying the dose.
- Not recommended in patients with aortic stenosis.
- Not effective in the treatment or prevention of cardiac arrhythmias.
- In patients with a history of conduction defects, or other patients in whom bradycardia could lead to hemodynamic compromise, a lower starting dose of LANCORA™ is recommended.
- Use of LANCORA™ in patients with second degree atrioventricular block has not been studied. Therefore, use of LANCORA™ in these patients should be avoided.
- In patients treated with LANCORA™ the risk of atrial fibrillation is increased. Discontinue treatment with LANCORA™ if atrial fibrillation occurs.
- Concomitant use of LANCORA™ and amiodarone should be avoided. If the combination is deemed necessary, close cardiac monitoring is required.

- Discontinue treatment with LANCORA™ if sinus node dysfunction occurs.
- Patients with intraventricular conduction defects (bundle branch block left, bundle branch block right) and ventricular dyssynchrony should be closely monitored. Discontinue treatment with LANCORA™ if third-degree AV block occurs.
- If during treatment the resting heart rate drops below 50 beats per minute or the patient experiences symptoms related to bradycardia (e.g. dizziness, fatigue or hypotension), the dose must be titrated downward or treatment must be discontinued.
- Concomitant use of LANCORA™ with other heart-rate-lowering drugs may cause excessive bradycardia due to additive effect. Heart rate monitoring is recommended.
- Caution should be exercised and close cardiac monitoring is recommended in patients with hypokalemia.
- Use in patients at risk of QT interval prolongation should be avoided. If concomitant use with QT-prolonging therapies is deemed necessary, close 12-lead ECG monitoring is required. The dose may need to be decreased or stopped depending on the ECG results. Discontinue LANCORA™ if severe cardiac arrhythmias develop.
- Caution and close cardiac monitoring is recommended in patients with cardiac devices.
- Heart failure must be stable before considering treatment with LANCORA™
- Caution in patients with hypotension.
- In hypertensive patients, regular monitoring of blood pressure and reassessment of anti-hypertensive treatments are recommended.
- Use of LANCORA™ is not recommended immediately after stroke or transient ischemic attack.
- Visual disorders such as phosphenes and blurred vision were commonly reported in patients treated with LANCORA™. Cessation of treatment should be considered if any unexpected deterioration in visual function occurs. Caution should be exercised in patients with retinitis pigmentosa.
- In post-marketing experience, cases of impaired ability to drive and use machines due to visual disturbances, mainly phosphenes, have been reported, therefore the possible occurrence of luminous phenomena should be taken into account when driving or using machines in situations where sudden variations in light intensity may occur, especially when driving at night.
- Caution when using LANCORA™ in patients with moderate hepatic impairment.
- Caution in patients with severe renal impairment (creatinine clearance < 15 ml/min).

For more information:

Please consult the Product Monograph at <http://webprod5.hc-sc.gc.ca/dpd-bdpp/index-eng.jsp> for more information relating to adverse reactions, drug interactions and dosing information that have not been discussed here. The Product Monograph is also available by calling us at 1-800-363-6093.

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SAFEGUARD WHAT MATTERS

SOYEZ À L'ABRI

... WITH HOME INSURANCE
FROM THE PERSONAL

... AVEC L'ASSURANCE
HABITATION DE
LA PERSONNELLE

ONE-STOP WATER PROTECTION & DETECTION

The Personal offers a range of protection against water damage, with basic and optional coverage to meet your needs.

Protect your property even more with **H₂O+ Solutions** in addition to our home insurance.

- ▶ Above Ground Water Coverage
- ▶ Ground Water Coverage
- ▶ New! Flood Coverage
- ▶ Alert: Water and freeze detector with smartphone notifications in The Personal App

YOUR PERSONAL CONNECTION TO HOME AND AUTO GROUP INSURANCE

Protecting your home just got easier.
Try our new quote!

- ▶ thepersonal.com/cccn
- ▶ 1-888-476-8737

The Personal refers to The Personal Insurance Company. Certain conditions, limitations and exclusions may apply. The terms and conditions of the coverages described are set out in the insurance policy, which always prevails. Auto Insurance is not available in MB, SK and BC due to government-run plans.

PROTECTION ET DÉTECTION DES DÉGÂTS D'EAU... SOUS UN MÊME TOIT

La Personnelle a bonifié sa gamme de protections contre les dommages causés par l'eau en incluant, en plus de la garantie de base, des protections optionnelles afin de répondre à vos besoins.

Protégez vos biens encore mieux avec les **Solutions H₂O+** :

- ▶ protection pour les eaux au-dessus du sol
- ▶ protection pour les eaux du sol
- ▶ protection pour les inondations – nouveau!
- ▶ programme Alerte, inclus dans l'application La Personnelle. Recevez des alertes sur votre téléphone intelligent si une fuite d'eau est détectée à votre résidence

VOTRE LIEN PRIVILÉGIÉ POUR VOS ASSURANCES DE GROUPE AUTO ET HABITATION

Protégez votre résidence, c'est facile.
Essayez notre nouvelle soumission!

- ▶ lapersonnelle.com/ccciisc
- ▶ 1 888 476-8737

La Personnelle désigne La Personnelle, compagnie d'assurances. Certaines conditions, limitations et exclusions peuvent s'appliquer. Les clauses et modalités relatives aux protections décrites sont précisées au contrat d'assurance, lequel prévaut en tout temps. L'assurance auto n'est pas offerte au MB, en SK ni en BC, où il existe des régimes d'assurance gouvernementaux.



thePersonal
Home and Auto Group Insurer



Canadian
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Assureur de groupe auto et habitation

The right fit.

La bonne combinaison.