BC's HEART FAILURE NETWORK
Quality care for quality life.

JANUARY/FEBRUARY 2012

BC's HEART FAILURE NEWS

A NEWSLETTER FOR PROFESSIONALS INTERESTED IN HEART FAILURE

BC'S HEART FAILURE NETWORK ROLLS OUT HEART FAILURE STRATEGY

AS IN MOST WESTERN COUNTRIES, THE BURDEN OF HEART FAILURE (HF) IN CANADA IS INCREASING, PRIMARILY AS A RESULT OF IMPROVED MEDICAL MANAGEMENT, IMPROVED DIAGNOSTICS, INCREASED SURVIVAL AMONG PATIENTS WITH HYPERTENSION AND CORONARY ARTERY DISEASE AND AN AGING POPULATION THAT ARE LIVING LONGER AND BECOMING MORE SUSCEPTIBLE TO HEART FAILURE. THE MOST RECENT ESTIMATES INDICATE THAT THERE ARE ABOUT 500,000 CANADIANS LIVING WITH HF AND 50,000 NEW PATIENTS BEING DIAGNOSED EACH YEAR.

(Ross, Howlett, Arnold, 2006).

BC HF prevalence rates are similar to national data and indicate that more than 90,000 patients are living with HF with this prevalence expected to double by 2030. HF is also one of the most expensive chronic diseases in BC with an annual estimated cost to the health care system of $590M. HF is also the most common cause of hospitalization of people over 65 years of age and has an average one-year mortality rate of 33%. Accurate and timely diagnosis is critical to initiate treatment that will relieve HF symptoms, reduce hospitalizations, diminish costs and improve survival. A provincial strategy to improve HF services and care was developed in 2009 with Health Authorities commencing their implementation strategies in 2010. The three-year provincial strategy, led by Cardiac Services BC (CSBC), is based on an investment of $7.58M.

In addition, a provincial centre has been identified at St. Paul's Hospital with responsibilities to lead acute HF management, collaborate on the development of provincial HF quality indicators, HF resources, guidelines, tools, patient self management resources, education and research.

The main planning objectives for the provincial HF strategy include:

- Clear articulation and agreement on the roles and responsibilities of patients and providers (GPs, internists, specialists, other health providers)
- Development and dissemination of a common understanding of optimal heart failure management for providers and patients
- Facilitation of active self-management of the disease
- Promotion of the appropriate use of technologies in consultations and/or (virtual) care
- Targeting of areas of greatest need
- Development, implementation, measurement and evaluation of adherence to best practice protocols/treatment algorithms.

To provide coordination of HF services in BC, a conceptual model based on the "*hub and spoke*" model was proposed whereby there would be defined services in one location (e.g., spokes) with

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coordinated access to specialized services in other locations (e.g. regional or provincial hubs). The care model is based on the principles of the "*Expanded Chronic Care Model*" that functions to ensure integration across the care continuum, creates supportive environments, activates communities, develops and builds self-management skills, engages proactive community partners and integrates information systems.

To support the implementation of the Provincial HF plan, five working groups have been established that include representation from across the province.

Purpose of each group:

- **Database Working Group** will identify a minimum data set, develop tools for data collection and evaluate key HF measures.
- **Diagnostic Imaging Working Group** will identify requirements for diagnosis and management of HF patients, gaps in imaging and provincial protocols or ordering tests.
- **Resource Development Working Group** will identify and develop HF quality indicators, to standardize HF order sets, protocols, guidelines, to develop tools and resources to optimize HF care and facilitate patients to self-manage their disease.
- **Special Populations Working Group** will identify, develop and implement HF management strategies for specialized populations (specifically, Frail Elderly, South Asians, Chinese and Aboriginal populations)
- **Telecommunications Working Group** will identify, develop and implement strategies to improve access and connectivity to promote optimal HF management.

HEALTH AUTHORITY HF LEADS AND CENTRAL HUBS

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THROUGH THE VISION OF BC'S HF STAKEHOLDERS (THOSE INVOLVED WITH THE HF STRATEGY), THE PROVINCIAL HEART FAILURE STRATEGY HAS MOVED BEYOND A STRATEGY TO BECOME "BC'S HEART FAILURE NETWORK." THE STAKEHOLDERS WITHIN THE NETWORK WILL WORK TOGETHER AT ESTABLISHING RESOURCES, SERVICES AND INFRASTRUCTURE TO DELIVER QUALITY CARE AND QUALITY SERVICES FOR HF PATIENTS ACROSS THE PROVINCE.

The number of people with heart failure is increasing throughout BC. To help meet this challenge, BC's Heart Failure Network generates and shares accurate, current, and relevant heart failure information for health care providers and patients in BC. We will do this primarily through our central, online hub (www.bcheartfailure.ca), which will contain BC and Canadian specific heart failure information including practice guidelines, expert advice and referral information. We're also working to improve access to diagnostics and specialized heart failure care throughout the province. We're called "BC's network" because we work for the people of BC who are living with heart failure to improve their health and well-being regardless of geography or cultural background. We are supported by the Provincial Health Services Authority and all of BC's regional health authorities.

5 THINGS YOU SHOULD KNOW ABOUT BC'S HEART FAILURE NETWORK

1 **WE ARE A COLLABORATIVE, INTERPROFESSIONAL TEAM FROM ACROSS BC.**
Supported by BC's health authorities, we are a BC-wide network of cardiac specialists, nurses, family physicians, and allied health care professionals. This team, along with Cardiac Services BC, created BC's heart failure strategy.

2 **WE ARE COMMITTED TO BROAD EDUCATION & KNOWLEDGE SHARING.**
We provide comprehensive and current information, guidelines, and practice tools for BC health professionals. We also provide accessible, culturally sensitive resources to ensure all patients and families have the opportunity to co-manage their heart failure care.

3 **WE WORK WITH PRACTITIONERS TO STANDARDIZE QUALITY CARE IN BC.**
We provide the latest evidence-based HF literature and evidence-based tools to ensure all practitioners have the information they need to deliver the best quality care no matter where they practice in BC.

4 **WE WORK WITH BC HEALTH AUTHORITIES TO ENSURE EQUITABLE ACCESS TO HEART FAILURE CARE.**
Together, we are increasing human resource capacity and creating supports to ensure all patients in BC have timely access to heart failure diagnostics and speciality care.

5 **OUR ULTIMATE GOAL IS TO IMPROVE THE HEALTH OUTCOMES OF BRITISH COLUMBIANS WITH HEART FAILURE.**
Guided by the BC heart failure strategy, we seek to improve the health and quality of life of all heart failure patients living in BC.

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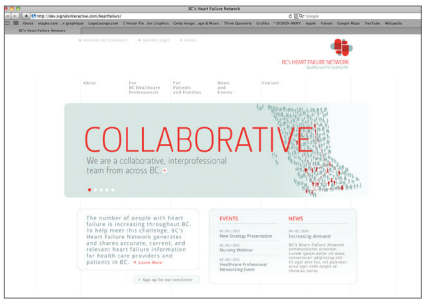
PROVINCIAL HEART FAILURE WEBSITE

BC's Heart Failure website has been created for health care professionals caring for patients with heart failure as well as for patients and families who are living with and co-managing their HF condition. The website is the central repository for all heart failure resources, tools, education material and includes the most up-to-date evidence-based literature on heart failure care. It also functions as the provincial communication tool for all heart failure events, workshops and newly released HF research information. The website went live July



2011 and the site has averaged 450 hits per month from varying regions across BC, Canada and other countries. All health care professionals and people interested in HF are encouraged to sign up on line to receive our e-newsletter and other HF updates: **http://www.bcheartfailure.ca/category/news/**

Current patient education tools available on the website are:
Heart Zones, Sodium restriction, fluid restriction, daily weights, Activity, link:
http://www.bcheartfailure. ca/for-patients-and-families/co-management-resources/

New patient education e-learning module created by Interior Health in collaboration with Cardiac Services BC. Going live at the end of March 2012:
http://www.bcheartfailure.ca/for-patients-and-families/e-learning-module-on-hf/

Research Update

PREVENTING HEART FAILURE HOSPITALIZATIONS: THE NEED FOR A PROVINCIAL STRATEGY

Submitted by: Dr. Sean A. Virani

AVERTING HOSPITALIZATION FOR DISEASE DECOMPENSATION CONTINUES TO BE A CHALLENGE FOR HEART FAILURE (HF) CARE PROVIDERS. ACUTE DECOMPENSATED HEART FAILURE (ADHF) IS A MAJOR PUBLIC HEALTH CONCERN WHICH IS ASSOCIATED WITH SIGNIFICANT MORBIDITY, MORTALITY AND HEALTHCARE UTILIZATION.

At present, there are in excess of 90,000 British Columbians living with HF, all of whom are at risk for hospitalization given the natural history of their disease process. In fact, approximately three-quarters of all patients admitted to hospital with ADHF have an established HF diagnosis. Once admitted to hospital, these individuals have a one year mortality of 33% and a risk of re-hospitalization for HF at one year of 24%. In 2009, the cost of hospitalization related to HF in BC topped out at over $300 million dollars per year[1].

It is estimated that improved care processes including adherence with prescribing evidence-based therapies for HF (e.g. beta blockers and inhibitors of the renin-angiotensin-aldosterone system), heart failure education and systematic out-patient follow-up through HF clinics could avert up to 50% of hospitalizations attributable to HF. In 2010, only 64% of eligible British Columbians with a diagnosis of HF received an ACE-inhibitor or angiotensin receptor blocker, while only 40% of eligible patients received a beta-blocker[1]. Under prescribing of these efficacious evidence-based therapies remains a major barrier to better outcomes in HF patients and an important determinant of hospitalization for ADHF.

In the last few years a number of clinical trials have been undertaken to evaluate the efficacy of novel pharmacological agents to improve clinical outcomes and rehospitalization among those admitted to hospital with ADHF. Regrettably, none of these trials were able to demonstrate positive results and a few were stopped early with the suggestion of harm. As such, at present, the best way to mitigate the poor outcomes associated with ADHF is to prevent the index hospitalization all together.

Improved out-patient monitoring of HF patients at high risk for hospitalization (e.g. those with low ejection fraction or advanced functional symptoms) is an important and innovative strategy that is gaining momentum and one that has the potential for significantly impacting HF hospitalization. With enhanced technology and remote monitoring, HF care providers can now follow important haemodynamic and clinical variables in their patients who have been implanted with a defibrillator (ICD), biventricular pacemaker (also known as cardiac resynchronization therapy, CRT) or both (CRT-D). Trends in fluid status can be identified early and appropriate medical therapies can be adjusted so as to avert a hospitalization. Moveover, patients with stable parameters on remote monitoring may not require as frequent follow up as those with instability, thereby creating capacity within the system and decreasing healthcare utilization.

> Improved out-patient monitoring of HF patients at high risk for hospitalization is an important and innovative strategy that is gaining momentum.

The recent PARTNERS-HF trial[2] was a prospective observational study of remote monitoring in patients with NYHA functional class III symptoms who had previously received a CRT-D device. The study was designed to evaluate the accuracy of a novel diagnostic algorithm in determining the likelihood of hospitalization for pulmonary edema among study participants within the next 30 days. The algorithm used in the study was based upon a number of important variables including fluid

status, autonomic function, patient activity and arrhythmia burden. Compared to patients with a negative diagnostic, those with a positive diagnostic were 5.5 fold more likely to be admitted to hospital with pulmonary edema within 30 days. The authors concluded that remote patient monitoring utilizing this technology could identify individuals at high risk for disease decompensation, thereby allowing clinicans to intervene early and prevent hospitalizations.

Remote monitoring to avert HF hospitalization is a quickly expanding field. Technological advancements include complex algorithms that integrate clinical variables such as weight and blood pressure[3], as well as newer and smaller intracardiac haemodynamic monitoring systems[4-5]. In the CHAMPION trial[4], study participants that received an implantable pulmonary artery pressure monitoring device and who were followed remotely had a 39% reduction in heart failure related hospitalizations compared to control patients at 15 months. The HOMEOSTASIS trial[5] showed that remote monitoring of patients with advanced HF implanted with a direct left arterial pressure sensor resulted in improvements in a variety of clinical and patient related outcomes. Even more compelling was that any changes to therapy that occurred as a result of remote monitoring data were patient self-managed, including up-titration of diuretics.

Admission to hospital for HF is associated with poor patient related and healthcare system related outcomes. Thoughtful application of new monitoring technologies along with the optimal use of existing treatment strategies and care processes is paramount to decreasing the burden of HF hospitalization in BC.

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End of Life Care

HOW TO INITIATE THE END OF LIFE CONVERSATION WITH YOUR CLIENT

Submitted by: Dr. Romayne Gallagher

A recent article on the barriers to end-of-life (EOL) conversations in heart failure[1] revealed some ongoing paradoxes about attitudes to EOL conversations. Healthcare professionals want the patients to ask the questions and patients want the providers to take the lead. Both recognize the value of the conversations but providers don't always have the confidence and patients don't always want to hear them. Thus there results an "elephant" in the room between the provider and the patient that does not get addressed.

However, there are skills involved in communicating difficult information and they can be learned and mastered[2] just as coronary angiography can. If a provider does not recognize communication as a skill to be acquired they may have clumsy encounters that seem to support the common myths that talking about death and dying causes anxiety and distress in patients and families.

Many healthcare providers will be very reluctant to discuss prognosis in heart failure because of the uncertainty of the survival especially in advanced heart failure. But patients who are aware of their prognosis are less likely to choose aggressive medical interventions and are open to palliative care involvement earlier in their illness[3]. The best way to open prognosis discussion is by negotiating what information the patient wants about their future.

"Some people like to know all the details, others just want the big picture and some prefer not to discuss it at all. What is best for you?" This allows the patient control over the information they receive. Always preface any prognostic information with an affirming statement such as "we will do all we can to help you live as well as you can for as long as you can".

If the patient wants information you should give it in small chunks such as "Heart failure is an illness that we cannot cure and one day you will die from this illness." Then you can acknowledge upfront the uncertainty of the prediction: "We are generally not very good at predicting how long people will live with heart failure but I would estimate that you have years/months/days. It may be a few years/months/days or it could be up to x years/months/days."

Allow some time for this information to sink in and be aware of the patient/family reaction. Track emotional data as you would clinical data and respond to it[4]. It can be as simple as "this must be hard for you" or if uncertain of their reaction you can ask "how does this make you feel?". Before moving on to any other topic check to make sure the patient has understood what you have discussed. "Does this make sense to you?" and if you are concerned that they really have not understood you can say "Tell me what you would tell your spouse or friend about our conversation."

If the patient does not want information try to elicit why they may be saying this. "Can you help me understand why you don't wish to discuss this?" If concerns are expressed then be sure to acknowledge them. Always leave the door open to discuss in the future by saying "Perhaps we can revisit this later if that is OK with you? And if you decide you wish more information just let me know." If you need a decision to be made and you feel that the prognosis is necessary to make that decision you can ask the patient if there is someone else that should receive this information in order for them to help the patient make decisions. However, if there is no urgent need for the patient to know their prognosis it can be left for another visit.

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Nursing Update

SUPPORTING THE CLIENT'S JOURNEY TO SUCCESSFUL HEART FAILURE MANAGEMENT

The Nanaimo Heart Function Clinic Model

Submitted by: Madelene Daniel

Heart failure is a chronic condition that requires chronic disease management (CDM). People living with heart failure tend to have co-morbid conditions and concerns that go beyond learning about daily weights, sodium monitoring and fluid restriction. As a heart function clinic (HFC) spoke, within Vancouver Island Health and under the auspice of the Provincial HF strategy HUB and Spoke Model of HF service delivery, the Nanaimo HFC, is an excellent example of how a spoke HFC clinic can provide comprehensive HF care within a CDM care model.

Nanaimo HFC, is an excellent example of how a spoke HFC clinic can provide comprehensive HF care within a CDM care model.

CDM is an approach to healthcare that emphasizes helping individuals maintain independence and keep as healthy as possible through prevention, early detection, and management of chronic conditions (Vancouver Island Health Authority [VIHA], 2011). The Expanded Chronic Care Model (ECCM), the model adopted by the Provincial Heart Failure Network, shifts healthcare delivery to a client-centered focus. This model includes the client as an integral part of the care team who collaborates with their healthcare providers in making decisions about their healthcare (Barr et al., 2003). This approach to providing CDM was recently reinforced during the Vancouver Island Health Authorities Patient Journey

Mapping (PJM) experience. Outcomes of the PJM sessions included participants validating their need to be an informed active member of their healthcare team and wanting to be part of the decision making for their healthcare. Furthermore, participants described themselves as co-managers of their chronic condition citing the term self-management as being a "lonely" term.

Cornerstone to effective CDM is self-management support (SMS) – those interventions clinicians provide to increase the client's knowledge and confidence in co-managing their health. It includes regular assessments of client's progress and problems, goal setting, and problem-solving support (Adams, Greiner, & Corrigan [2004] as cited in McGowan [2005]). SMS is a core component and strategy of the ECCM (Barr et al., 2003) and the Nanaimo HFC.

In the Nanaimo HFC , client experience initially begins with a 1-1.5 hour 1:1 session with the HFC clinic registered nurse. The 1:1 session consists of education on how the heart functions, what is HF, HF medications and discussion and identification of lifestyle changes that need to be managed. In addition, time is spent reviewing the client's personal story, their risk factors, their supports at home and their needs and expectations. The RN begins the session with "We have about an hour and I know what I want to talk about with you today, but what concerns or questions do you have that you want addressed today?" Taking time to listen and understand the clients lived experience creates the foundation for building a trusting Nurse/Client relationship. This trusting relationship is the basis for providing a culturally sensitive environment, supporting the client to feel comfortable in sharing their true feelings and concerns. It also empowers the client to feel confident in their ability to make the necessary life changes and become actively engaged in co-managing their care. Education tools created by the Provincial HF Network Resource Development working group have been adopted by our clinic. Clients are encouraged to use them as references to guide their self care. The second clinic visit follows within 2-6 weeks of the first visit and includes a 30 minute session with the HFC Internist as well as a 15 minute session with the RN who checks vital signs, asks a series of questions and undergoes medication reconciliation. With every clinic visit, the RN reviews how the client is managing their HF and their other chronic conditions on a day-to-day basis. The clinic visit snapshot form is used to capture all changes in care and future tests and is given to the client as a take home information sheet/personalized care plan and serves as a communication sheet for the client to show their primary care providers. A formal physician consultation progress report is also sent to the primary care practitioner.

Taking time to listen and understand the clients lived experience creates the foundation for building a trusting Nurse/Client relationship.

The biggest challenge the Nanaimo HFC faces is the ever increasing number of new referrals. As the need for HF care grows, it will become increasingly more difficult to provide the 1:1 intake education session with the nurse clinician. However having a delivery system that supports the nurse clinician's time to build a trusting relationship and thereby prepare and empower the client to co-manage their condition(s) at home is the goal of CDM and the overall goal of the Nanaimo HFC.

References:

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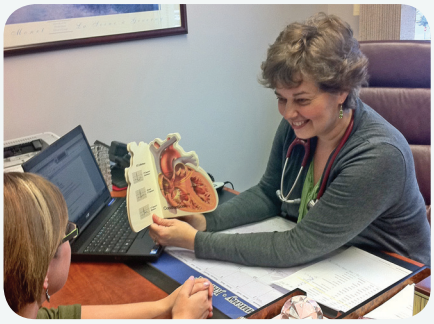
SHOWCASING NORTHERN HEALTH

NORTHERN HEALTH TAILORS HEART FAILURE SERVICES TO WORK WITHIN ITS VAST REGION

Management of Heart Failure (HF) is one of the domains identified in Northern Health's Cardiac & Cerebrovascular Service (CCVS) Framework. Given the geography and demographics of Northern Health (NH), a network that connects and supports practitioners in managing HF patients in their home communities is a priority. As part of the BC Heart Failure Network, Northern Health has taken the exciting opportunity to operationalize our HF network plan. This network, complete with telehealth capabilities, will engage and link a variety of practitioners and optimize care of HF patients across Northern Health region by enhancing access to HF care services, expert consultation, and education.

Milestones for 2011 began with the creation of a Cardiac & Cerebrovascular Working Group with region-wide representation, and the hiring of a Regional Coordinator and a Project Lead for CCVS. As well, the location of our Prince George support centre was confirmed. The Centre will use a shared care concept, working alongside primary care providers to manage complex patients. Working with our IT department, we have built on our Telehealth capacity with the purchase of electronic stethoscopes. In October 2011, in collaboration with the Provincial HF Hub (St. Paul's), we held the first Heart Failure CME within the province of BC (subsequently used as a template for other health authorities' HF CMEs).



In keeping with the provincial strategy and NH's CCVS Framework, another initiative in development and close to implementation is a collaboration with the Medical Office Information System (MOIS) and AMCARE to upload HF data to the Chronic Disease Management Toolkit. MOIS is a locally-developed EMR, and AMCARE stands for Aggregated Metrics for Clinical Analysis Research and Evaluation (a partnership between the University of Northern British Columbia and Northern Health).

Northern Health has also been working collaboratively with provincial committees to create a regional patient-centered care plan that provides access to standardized HF patient care, promotes coordination of care among HF providers and develops regional expertise in the principles of HF management. Additional initiatives planned: Mapping the patient journey; establishing a one-stop 1-800 service and website; and working with SharedCare to develop a program for NH Rapid Access to Consultants' Expertise.

This work will support a system of high-quality, specialized HF patient care which will be part of integrated healthcare services for all Northerners. The next exciting steps include the centre and network going operational in 2012.