Heart Failure, Management of (in Community)

Site Applicability

All VCH Community & Primary Care Settings

Practice Level

Basic skills for the following professions (Where the term "all disciplines" is used within this document, it is understood that interventions will be within respective scopes of practice):

- NP, RN, LPN
- RD
- OT
- PT
- RT
- SLP
- SW

Need to Know

This document is for use as a resource in guiding clinical practice for the management of clients with heart failure in the community. Clients may already be known or newly referred through established criteria. The management of heart failure is complex and requires a multi-disciplinary approach in collaboration with the client and care-givers.

Heart failure (HF) is a major health concern in Canada. It is the number one cause of hospitalizations in adults over 65 years of age. The number of people living with HF is expected to continue rising as the population ages, consequently increasing the already heavy burden of heart disease on our health care system.

Recent improvements in the diagnosis and therapies available to manage HF have made it possible to improve prognosis and quality of life in individuals with this condition. HF care is largely dependent on clients' and their families' understanding of and participation in optimal care. Home health professionals are in a key position to support clients and families with self-management of HF.

Types of Heart Failure

Heart failure is a complex syndrome of abnormal heart function which leads to signs and symptoms of poor cardiac output. (Arnold, JMO et. al. 2006)

- **Left ventricular heart failure:** inability of the left ventricle to pump an adequate volume of blood into the systemic circulation, which causes blood to back up into the lungs and poor forward flow to the body
- **Right ventricular heart failure:** inability of the right ventricle to pump an adequate volume of blood into the pulmonary vessels which causes blood to back up in the venous system and poor forward flow to the lungs. Right ventricular HF is usually a result of long-standing left ventricular HF.

Heart failure can present as either:

- **Systolic heart failure:** systolic function is affected. This results in the inability of the heart to effectively eject blood. In these clients, a low "ejection fraction" (EF) – that is less than 40% is documented. The EF is the amount of blood ejected from the ventricle with each beat. A normal ejection fraction is greater than 50%.
- **Diastolic heart failure:** diastolic function is affected. This results in the inability of the heart to relax properly, hence it does not fill completely. This results in a normal EF because greater than 50% of blood is still ejected from the heart, but the volume is considerably less due to small size of the ventricle chamber. Diastolic heart failure is often caused by hypertension, causing the muscle to become overdeveloped and stiff.

HF, whether right or left sided; or systolic or diastolic can have periods of stability or exacerbation depending on specific presentation and pathologies. Often these periods are termed:

- **Chronic heart failure:** Long-term condition in which the client has periods of stability, however over time, the heart progressively loses its pumping ability. The body tries to compensate for heart failure by retaining salt and fluid as well as initiating vasoconstriction. At first this is successful, however this situation is not normal and eventually the body decompensates.
- **Acute decompensated heart failure:** critical condition often seen in clients with chronic heart failure in which circumstances (some examples include infection, failure to take medication as ordered, renal failure, fluid retention) cause the heart's pumping action to suddenly worsen because the body cannot compensate for the change; resulting in symptomatic hypotension, pulmonary edema, signs and symptoms of shock.

Causes of Heart Failure

The two main causes of heart failure are **coronary artery disease** (CAD) and **chronic hypertension**.
Other common causes include:

- Valvular heart disease
- Congenital heart disease
- Severe pulmonary disease
- Arrhythmias

Signs and Symptoms of Heart Failure

Clients with HF experience exacerbations (referred to as decompensated heart failure) followed by periods of wellness.
Decompensated HF leads to low cardiac output and pulmonary and/or venous congestion and eventually requires medical attention.
Signs and symptoms of decompensated HF could include one or more of the following:

SIGNS (Objective)	
1. Confusion	8. Frothy, bloody or watery sputum
2. Tachycardia	9. Tachypnea
3. Irregular pulse	10. Ascites
4. Symptomatic hypotension e.g. dizziness (many treated HF clients have asymptomatic hypotension, which is usually considered to be normal).	11. Cachexia 12. Abdominal distension 13. Diaphoresis
5. Increasing peripheral edema	14. Cold, clammy peripheries
6. Bibasilar crackles on chest auscultation	15. Hypoxia
7. Pulmonary edema	16. Syncope

SYMPTOMS (Subjective)	
1. Fatigue	11. Paroxysmal nocturnal dyspnea
2. Alteration in cognition	12. Constipation
3. Depression	13. Indigestion
4. Palpitations	14. Anorexia
5. Dizziness	15. Nausea and/or vomiting
6. Chest pain	16. Weight gain
7. Cough	17. Abdominal bloating
8. Dyspnea	18. Abdominal pain
9. Wheezing	19. Activity intolerance
10. Orthopnea	20. Weakness
	21. Blurred Vision

Precipitating Factors/Triggers for Decompensated HF

Being familiar with the precipitating factors in exacerbation of HF forms the basis of supporting clients in their self-management. Common precipitating factors or triggers in decompensated HF are:

1. Drug therapy
   a. Non-adherence
   b. Inappropriate medications (e.g. Non-steroidal anti-inflammatory agents)
2. Increased metabolic demands
   a. Infections (e.g. influenza, pneumonia, UTI, sepsis)
   b. Anaemia
   c. Tachycardia (HR greater than 100/min)
3. Fluid overload (increased preload)
4. Poor understanding of or non-adherence to:
   a. Self monitoring for weight and symptoms
   b. Salt restrictions
   c. Fluid restrictions
5. Increased afterload (= resistance against which heart must pump blood)
   a. Hypertension
   b. Vasoconstriction
6. Impaired contractility
   a. Coronary ischemia or myocardial infarction
   b. Pump failure
   c. Medications that weaken heart's contractility (negative inotropes)
   d. Arrhythmia (bradycardia or tachycardia)
   e. Malfunctioning pacemaker
   f. Electrolyte imbalance
7. Smoking
8. Alcohol/substance abuse

Commonly used Drugs in HF

There are many pharmacological options used to manage heart failure. Below are the drugs most commonly used in many long-term clients along with their common contraindications. Health care providers involved in medication management will need to familiarize themselves further with these medications.

1. **Diuretics** – Used to relieve congestion and edema. Examples of diuretics include:
   a. Furosemide
   b. Metolazone
   c. Spironolactone
2. **Angiotensin Converting Enzyme (ACE) Inhibitors** – Antihypertensive agents that have been shown to improve survival in clients with HF. If contraindications exist, the doctor may attempt a similar agent called an Angiotensin Receptor Blocker (ARB). Examples of ACE Inhibitors include:
   a. Ramipril
   b. Enalapril
   c. Captopril

   Examples of ARBs include:
   a. Candesartan
   b. Losartan

Some common contraindications include:
a. Dry cough after administration
b. Renal dysfunction
c. Angioedema
d. Allergy

3. **Beta Blockers** – These agents lower the blood pressure and heart rate and have been shown to improve length and quality of life. Clients often feel more fatigued when first starting on a beta blocker, however it is important they stay on them. This usually improves with time (sometimes as long as 3 months) and reassurance for the client. Beta blockers should not be stopped suddenly.

   Examples of beta blockers include:
   a. Bisoprolol
   b. Carvedilol
   c. Metoprolol

   Some common contraindications include:
   a. Reactive airways disease (e.g. Asthma)
   b. Cocaine use
   c. Severe fluid overload
   d. Bradycardia
   e. Allergy

Self-Management Support in HF

HF is a chronic disease which cannot be cured, yet it can be managed through education, action planning and problem solving support, all tailored to the needs and capacities of the individual client and/or the caregiver. The essential elements of self-management include:

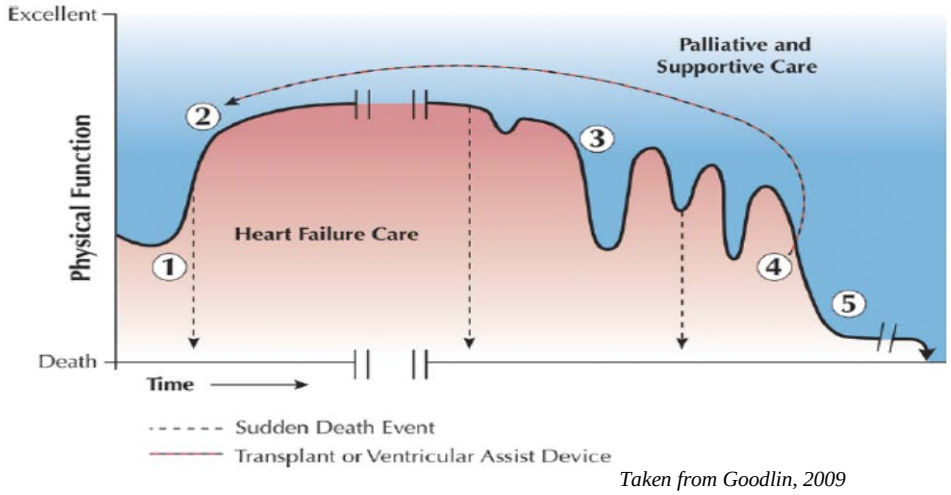
1. Fluid restriction – to minimize fluid retention.
   a. 1.5-2L per day (6-8 cups) is recommended.
   b. Review daily fluid intake. Measure volume of cups/bowls.
2. Sodium restriction
   a. No more than 2g per day as sodium causes fluid retention.
   b. Understanding food labels
3. Daily weight – where feasible to monitor and document slow or rapid changes.
   a. A weight gain of 4lbs (2kg) in 48 hours or
   b. 5lbs (2.5kg) in a week needs to be reported to appropriate health care provider.
4. Reporting changes in symptoms early to appropriate health care provider.
5. Understanding and adherence to prescribed medications.
6. Recognizing and avoiding triggers.
7. Participation in regular activity.

Transitioning to Palliative Care in Heart Failure

Discussions regarding goals of care and/or advanced care planning should take place once a relationship is established with the client. (Goodlin, 2009; Turris and Rauscher, 2005) and at the earliest opportunity. The clients' understanding of their disease progression and prognosis should be established each time goals of care / advanced care planning are discussed. Goals of care should be re-assessed and re-discussed with each change in client's condition.

Deciding when to make a referral to palliative care is not straightforward. Referrals should be made when a client is deemed to have a prognosis of less than one year, however this is often difficult to ascertain. A client with heart failure may experience many exacerbations followed by periods of wellness. Their physical functioning can plateau at a lower level after each exacerbation or with optimization of treatment heart failure can improve. Their declining health is therefore unpredictable as the diagram below illustrates. Indicators suggestive that the clients' heart failure is declining are: increasing frequency of hospital admissions for heart failure, increasing fatigue, decreasing response to heart failure medication, nausea and poor appetite / early satiety, and/or declining activity level as determined by using the scale (see Appendix C).

As with any client with a chronic disease having a regular GP fosters the development of a good relationship. GPs are essential when transitioning to palliative care to ensure timely access to medical care and medications used for palliation.



Taken from Goodlin, 2009

Equipment and Supplies

- Pulse Oximeter (optional – if available)
- Scale (optional – can be useful if client has not purchased one)
- Community Heart Failure Information Package

Practice Guideline

Assessments, Interventions and Self-Management

Assessment of the client will depend on whether or not they have recently been discharged from hospital. The table below refers only to clients who have been referred to VCH Community Care within established criteria.

Recent heart failure exacerbation leading to hospitalization	Newly referred clients with chronic, stable heart failure (i.e. no recent admission)
RN should visit client within one week of discharge and then determine schedule based on the client's condition and ability to self-manage. **All disciplines** to ensure that a follow up visit with the GP/NP is arranged within 2 weeks of discharge.	**All disciplines** to ensure the client receives weekly visits for 2 weeks and at one month after referral **or** as clinically appropriate. Continued follow-up is tailored to client clinical status / need for further self management education and support.

Within the context of community care clients with heart failure require on-going holistic assessments conducted by all disciplines within their respective scopes of practice. All disciplines will complete one of the core assessment tools based on their role requirements using a systematic approach i.e. Head to Toe with systems review. A more in depth assessment related to heart failure should be conducted with in their scope of practice. In depth cardiac assessment includes:

Medical Emergencies that Require Immediate Action

1. Decreased level of consciousness
2. Central cyanosis.
3. Severe respiratory distress.
4. Severe unrelieved abdominal pain.
5. Acute confusion.
6. Suicidal ideation.
7. New chest pain or unrelieved with routine medications.
8. Multiple firings of implantable cardioverter defibrillator (ICD).

Psychosocial/Neurological/Sleep

All disciplines will assess:

a. Client's ability to manage ADLs and need for supports

b. Changes in sleep patterns

c. Client and caregiver/s coping

All disciplines will assess for:

a. Alteration in cognition

b. Depression using appropriate assessment tool

Cardiovascular

1. **Nurse**

a. Monitors resting blood pressure (sitting or lying and standing if able) and heart rate on each visit. Hypotension can be normal when new heart failure treatment is commenced. The key is determining if it is causing symptoms (e.g. dizziness, fainting, lightheadedness, blurred vision).

b. Assess and document client symptoms, including:

- Dizziness
- New or severe fatigue
- Postural drop in blood pressure
- Presence of palpitations
- Resting heart rate and rhythm: Heart rate may be slow if on Beta Blocker therapy and may be fast if an arrhythmia is present.
- New or worsening chest pain
- New or worsening shortness of breath (dyspnea)
- Decreased level of consciousness

c. Notify the GP/NP if:

- **Symptomatic** hypotension is present.
- Postural drop in blood pressure of 20mmHg or more or client is symptomatic
- New finding of heart rate of less than 50bpm.
- Symptomatic bradycardia.
- New finding of heart rate of greater than 100bpm.
- Symptomatic tachycardia.
- New finding of irregular heart rate.

  Note: It is not recommended to stop ACE inhibitors and Beta Blocker medication abruptly. Please discuss with GP/NP/Pharmacist before doing so.

  i. ***Self-management:*** Teach client how to recognize symptoms of low blood pressure and changes in heart rate and rhythm.

  If client has own BP machine encourage to monitor and record daily.

2. **All disciplines**

   a. Determine presence of implantable defibrillator (ICD) and whether functional or not and whether or not it has been checked in the last 6 months. If unsure, the GP/NP should be contacted. Document on care plan.

   b. Assess Fluid Intake – check in/out record or ask client to describe fluid intake and understanding of significance of fluid balance in relation to their symptoms.

      i. ***Self-management:*** encourage clients to limit fluids to 6-8 measuring cups/day (1.5 – 2 L/day).

   c. Assess Sodium (salt) Intake – ask client to describe meals (including pre-packaged), use of salt, ability to read food labels, and understanding of significance of sodium/salt intake and its relationship to fluid balance.

      i. ***Self-management:*** Clients should limit sodium intake to less than 2g/day (1 level teaspoonful = just under 2.4 g of sodium).

      Note: consider referral to Registered Dietitian where available if client is unable to adhere to fluid and sodium restrictions for further education.

   d. Assess ability to perform daily weights and understanding of weight in relation to fluid balance. On subsequent visits assess performance and documentation of weights. Review weight log to assess for trends.

      i. ***Self-management:*** Encourage clients to perform and document weight each day or as often as feasible. A weight gain of 4lbs (2kg) in 48 hours or 5lbs (2.5kg) in a week indicates fluid retention. To accurately perform weights clients should be encouraged to:

      Ensure scale is balanced and on a hard surface (not carpet).Weigh at the same time of the day: first thing in the morning, before breakfast and after the first void and wearing similar weight clothes.

   e. Assess Peripheral Edema using Limb Edema Scale (Appendix D). Make note of affected limb(s) and how far it extends. Assess for dependent edema. **Note:** If the client is bedridden, edema may present in the lower back and abdomen rather than in the limbs. Assess clients understanding of edema and it's relationship to heart failure and also assess clients' skin for signs of breakdown.

      i. ***Self-management:*** Teach client how to assess for edema and when to report findings. Remind them that ankle edema is often worse in the afternoon as their feet have been down all day.

      ii. Teach client to elevate legs when sitting.

Respiratory

1. **All disciplines** assess:

   a. Dyspnea within their scope of practice; identify whether there is an increase at rest, on exertion, laying flat, at night, or a general difficulty sleeping, as these symptoms may signify increasing pulmonary congestion and/or increasing HF.

   b. Presence of cough (persistent, nature, when). If productive, assess sputum nature and colour. This symptom may be related to pulmonary edema (frothy blood tinged sputum) or infection (purulent sputum).

   Liaise with GP / NP if new, unresolving or worsening findings.

2. **Nurses and RTs** and PTs assess for hypoxia. Perform pulse oximetry if available (see "Oximetry Management Guideline") and chest auscultation at each visit. Assess for:

   a. Tachypnea – an early sign of decreased cardiac output and/or increased pulmonary congestion.

   b. Peripheral / central Cyanosis – a sign of hypoxia

   c. Adventitious breath sounds (crackles or wheezes) – may be a sign of left ventricular failure causing pulmonary congestion and/or pulmonary edema.

d. Oxygen desaturation to less than 88% during rest or on ambulation – warrants further assessment.

3. If O_2 saturation is below 88%, and this is a new finding, the GP/NP should be notified. **Nurses** should consider **RT** referral (if available) for in depth assessment of respiratory function, especially if client has co-morbidities that may be exacerbating HF symptoms and vice versa (e.g. COPD). A referral to the Home Oxygen Program should be considered (See Home Oxygen Program Guidelines). Consider cardiorespiratory assessment.

Gastro-intestinal

1. **All disciplines** assess for changes in appetite, presence of nausea and/or vomiting, or right upper abdominal discomfort, as these symptoms may be indicative of worsening congestion in intra abdominal cavity (i.e. ascites).

Liaise with GP / NP if new, unresolving or worsening findings.

Medications

1. **All disciplines** (within scope of practice)
   a. On initial visit and periodically, thereafter, review client's ability to manage medications, preferred schedule and system for taking them. Assess whether client/family/caregiver is adhering to medication recommendations. If client is not managing well, consider referral to nursing
   b. Assess whether client or primary caregiver understands medications' purposes and key side effects and provide teaching as needed.
   c. When indicated complete a medication history from all available sources (eg. client, caregiver, discharge summary, pharmanet) and reconcile with the physician.
   d. Assess client self-management skills using accepted tools (Community Heart Failure Information Package)
2. **Nurses** monitor medication changes and side effects. Liaise with GP/NP as needed regarding medication changes and update medication record as needed.

Activity

1. **All disciplines** assess
   a. Client's activity level and symptoms including fatigue, activity intolerance and weakness, using the New York Heart Association (NYHA) Classification of Heart Failure Symptoms (see Appendix C)
   b. Level of participation in and/or motivation to participate in physical activity.
2. Clients who are stable should be encouraged to undertake physical activity daily as it increases cardiac function, increases availability of oxygen to the body tissues, improves endurance and quality of life. Clients may start with a minimum of 5-10 minutes of physical activity 2-3 times/day. Some activities may include:
   a. Walking on level surface
   b. Stationary bicycle with no resistance is a good option if available
   c. Engaging in a structured cardiac exercise therapy program where feasible should be recommended and facilitated by **all disciplines**.
   d. Consider referral to a physiotherapist to develop an individualized exercise program

Infection Prophylaxis

Infections could seriously aggravate HF.

1. **All disciplines** should recommend clients be immunized annually against influenza and ensure pneumococcal pneumonia vaccination is up to date, to reduce the risk of respiratory infections. See Influenza and Pneumococcal Immunization Guideline.
2. **All disciplines** should caution clients with valvular heart disease who require dental or other surgical procedures to check with their GP/NP re: endocarditis prophylaxis guidelines

Smoking

1. **All disciplines** counsel current smokers regarding smoking cessation and advise all clients to avoid exposure to second-hand smoke. Regularly assess readiness to quit and if trained, conduct Brief Intervention or Motivational Interviewing to facilitate smoking cessation.
2. **All disciplines** support clients who wish to quit smoking to join a smoking cessation program or give information and refer to an appropriate health care provider. Resources include QuitNow www.quitnow.ca, the BC Lung Association, the Canadian Cancer Society or GP/NPs.
3. **All disciplines** should advise clients who smoke that medications such as Nicotine Replacement Therapy and other aids are available and to discuss their use with their GP/NP/Pharmacist.

Alcohol

1. **All disciplines** should counsel clients to avoid excessive alcohol consumption because alcohol depresses heart function and may cause or worsen an irregular heart rhythm. If the client wishes to drink, alcohol should be limited to 1 drink/day for women and 2 drinks/day for men. Remind clients alcohol counts as part of their daily fluid intake. http://carbc.ca/AlcoholRealityCheck.aspx
2. **All disciplines** should teach clients that alcohol may change how medications work and affect other medical conditions.

Transitioning to Palliative Care

1. **All disciplines** assess client's understanding of stage of disease and goals of care in relationship to declining health regularly with the client and their family. These should be documented and communicated clearly to the GP/NP and other team members.
2. **Nurses** complete palliative care assessment tool when indicated.
3. **All disciplines** utilize the Advance Care Planning brochure:
   - VCH Advance Care Planning brochure
   - VCH Advance Care Planning Brochure – Aboriginal Health.

   To order a number of copies please send an email request to advancecareplanning@vch.ca
4. **All disciplines**: Once it has been determined by the GP/NP or specialist that the client is approaching the end stages of heart failure and may be entering the Palliative Care phase (with a prognosis of 1 year or less), all disciplines should ensure that the GP/NP or specialist has discussed deactivation of Implantable Defibrillator (if client has one) with the client and caregiver. If not, the GP/NP should be contacted.
5. **All disciplines** should consider discontinuation of weight documentation and vital signs as the client approaches end-of-life and comfort care measures are initiated.
6. **All Disciplines** Initiate palliative assessment tool.
7. **All Disciplines** Refer to other community palliative care resources.

Expected Client/Family Outcomes

Client/Family/Caregiver:

- Are involved in the care planning process.
- Works towards minimizing risk factors for HF decompensation
- Takes daily weights and records on client's weight log.
- Adheres to salt and fluid restrictions and seeks help to re-evaluate intake when weight gain experienced.
- Demonstrates ability to read and understand food labels.
- Monitors dyspnea, activity tolerance, and edema and knows when and who to contact for health concerns.
- Administers medications as prescribed and demonstrates adequate knowledge of names, doses, frequency, purpose, and main side effects of each of the medications.
- Consults with GP/NP before changing any of the medications or taking any over-the-counter drugs or herbal remedies.
- Gains more confidence in the self-management of HF. Family/Caregiver gains more confidence in supporting client in their self-management of HF.
- Reports improved quality of life related to improved HF management.
- Overall reduced readmission to hospital for HF.
- Experiences timely and appropriate end-of-life care and support.
- Are included in the decision-making process regarding the purpose and goals of care.
- Are aware of community resources and supports.

Client/Resident Education:

Community Heart Failure Package (FE.780.C66)

Client education will be tailored to the needs of the client/family. Education topics may be presented to client/family and they can be given the opportunity to decide what they would like to learn on a given day. All disciplines should provide appropriate education in areas outlined below – see Appendix A for checklist to monitor progress:

- What is Heart Failure?
- Symptoms of Heart Failure
- Fluid and salt restriction
- Importance of measuring daily weight
- Medications
- Activity (Exercise) recommendations
- Minimizing of risk factors
- When to report a problem and who to report it to
- Advance care planning

These topics can be accessed by downloading the Client Information Package

Evaluation

Client/Family/Caregiver:

- Report increased confidence in self-managing their HF.
- Monitor symptoms regularly and report changes appropriately.
- Adhere to salt and fluid restrictions.
- Adhere to schedule and system for taking medications and seek assistance from designated nurse or GP/NP before making changes to prescribed medications.
- Balance activity and rest.
- Understand indicators and options when transitioning to palliative care.

Documentation

1. All medications will be documented in the medication profile in PARIS or in approved documentation record / tools.
2. **All disciplines** should refer to Documentation of Medication/Treatment Orders Recommendations to guide their practice.
3. **All disciplines** should refer to Documentation of Medication Administration and Dispensing – Record (MAD-R) to guide their practice.

Core Assessment Tool:

- Interdisciplinary Assessment (IA) (PARIS)
- Cardio respiratory assessment (PARIS)

Care Plan:

- Need, goal and intervention for supporting client in HF trajectory
- Resource material being used in self-management support
- Education topics
- Review date

Progress notes/case notes (see Appendix B)

- Changes in client condition
- Presenting signs and symptoms
- All response and outcomes to treatment
- Guideline variances encountered and follow-up actions
- Evaluation of care provided, teaching, and self-management support
- ICD documented in Care Plan

Related Documents

- Oximetry Management Guidelines for Community Settings and Residential Care
- Home Oxygen Program (HOP) - Health Care Professionals
- Hypertension: 2007 Public Recommendations http://www.heartandstroke.ca/
- Influenza and Pneumococcal Immunization Guideline
- Chronic Disease Self-Management Self-Learning Module, June 2003 http://vch-connect/programs/homehealth/clinicalresources/education/Pages/default.aspx
- Advance Care Planning – VCH Intranet
- Canadian Cardiovascular Society: http://learninghub.phsa.ca/Learner/Home
  - Recommendations on heart failure 2006: Diagnosis and management
  - 2008 Update: Best practices for the transition of care of heart failure patients, and the recognition, investigation and treatment of cardiomyopathies
  - 2009 Update: Diagnosis and management of right-sided heart failure, myocarditis, device therapy and recent important clinical trials
  - 2010 Update: Heart failure in ethnic minority populations, heart failure and pregnancy, disease management, and quality improvement/assurance programs
- www.bcheartfailure.ca
- Moodle link for heartfailure
- Moodle link for self-management

References

Arnold, J.M.O. et al. (2006). Canadian Cardiovascular Society consensus conference recommendations on heart failure 2006: Diagnosis and management. Canadian Journal of Cardiology, 22(1), 23-45.

BC Government Ministry of Health. (2008). Guidelines & protocols: Heart failure care (HF).

Cousins, C. (2003). Heart Failure: Self-learning module. Education Services, Vancouver Community.

Goodlin, S. (2009). Palliative Care in Congestive Heart Failure. J. Am. Coll. Cardiol. 54; 386-396.

Turris, M. and Rauscher, C. (2005). Palliative Trajectory Markers for End-Stage Heart Failure. Or "Oh Toto. This Doesn't Look Like Kancerous!" – pg 17-25. Canadian Journal of Cardiovascular Nursing.

Heart & Stroke Foundation. (2006). Congestive heart failure: An information guide for patients and their families.

The Criteria Committee of the New York Heart Association. Nomenclature and Criteria for Diagnosis of Diseases of the Heart and Great Vessels. 9th ed. Boston, Mass: Little, Brown & Co; 1994:253-256

Seidel, HM et. al. (Eds.). (2006)Mosby's Guide to Physical Examination Volume 6. Mosby Elsevier, St. Louis, Missouri, USA.

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Appendix A – Heart Failure Decision Tool

Heart Failure Signs and Symptoms	Goal	Interdisciplinary Team Members roles	Extra interventions	When to call or visit the GP/NP	Emergency
Neurocognitive ▪ Confusion ▪ Fatigue ▪ Depression	Minimize neurocognitive dysfunction	**Assess client for:** ▪ Ability to manage ADLs and need for supports ▪ Changes in sleep patterns and energy level ▪ Client and caregiver coping ▪ Alterations in cognition ▪ Depression		▪ Not sleeping ▪ Client showing signs of depression ▪ New onset of mild confusion	▪ Acute confusion ▪ Severe depression ▪ Suicidal
Cardiovascular ▪ Arrhythmia ▪ Palpitations ▪ Chest pain	No palpitations or discomfort	**Assess client:** ▪ Level and type of discomfort ▪ Presence of implantable cardioverter/defibrillator (ICD)	At each visit, monitor ▪ BP sitting/lying ▪ BP standing ▪ Heart Rate	▪ Chest Pain (note if new or increased) ▪ New onset of symptoms (palpitations, fluttering, dizziness, syncope) ▪ Symptomatic hypotension (dizziness, syncope, greater than 20mmHg drop in standing BP	▪ New chest pain, or unrelieved with routine medications (eg. nitro spray) ▪ Decreased level of consciousness ▪ ICD firing multiple times
Peripheral edema	Comfortable to mobilize	**Review with client/caregiver:** ▪ Daily weight checks at the same time of the day first thing in the morning and that they are being written down. ▪ Assess Fluid intake and encourage client to limit fluid to 6-8 measuring cups/day (1.5-2L/day).		▪ A weight gain of 4 lbs (2kgs) in 2 days or 5 lbs (2.5kgs) in a week	▪ Have new chest pain, struggling to breathe

Heart Failure Signs and Symptoms	Goal	Interdisciplinary Team Members roles	Extra duties for Nurses	When to call or visit the GP/NP	Emergency
Cardiovascular (cont)		▪ Assess Sodium (salt) intake. Client should limit sodium intake to less than 2g/ day(1 level teaspoon = just under 2.4 g of sodium). ▪ read food labels (caregiver may be doing this) ▪ ability to understand fluid and salt restriction ▪ ability to understand significance of daily weight changes			
Respiratory Any or one of the following: ▪ Bibasal crackles ▪ Frothy sputum ▪ Cough ▪ Orthopnea ▪ Tachypnea ▪ Paroxysmal nocturnal Dyspnea (waking at night with dyspnea)	Breathing comfortably, sleeping well	**Assess client:** ▪ Weight trends ▪ Dyspnea, Identify whether there is an increase at rest, exertion, lying flat, at night. ▪ Presence of cough – is it the same or worse? Is it persistent? Is it productive? ▪ If productive, nature of sputum, is there fever?	RT or RN assess ▪ O_2 saturation if available ▪ Breath sounds	▪ O_2 saturation below 88% (new finding) ▪ Weight gain of 4lb (2kg) in two days or 5lb (2.5kg) in a week ▪ Respiratory distress worsening ▪ Sputum with fever ▪ Appears to be approaching end of life	▪ Decreased level of consciousness ▪ Cyanosis ▪ Severe respiratory distress
Gastrointestinal ▪ Ascites ▪ Abdominal bloating ▪ Abdominal pain ▪ Indigestion ▪ Constipation ▪ Anorexia ▪ Cachexia	No bloating or pain and good appetite	**Assess client:** ▪ bloating or whether clothing is feeling tighter. ▪ Assess for changes in appetite, presence of nausea, and/or vomiting, or abdominal discomfort ▪ Nutritional intake		▪ If bloating is getting worse ▪ Client not eating ▪ Client constipated ▪ Increasing abdominal pain	▪ Severe abdominal pain ▪ Respiratory distress

Appendix B – PARIS Case Note Template Example – suggested headings

HEART FAILURE CASE NOTE TEMPLATE

Clt's Goals

Cardiovascular Vital Signs

BP – sitting or lying and standing – is patient symptomatic?
Heart rate – regular?
Breath Sounds – Crackles? Where?

Chest Pain (0-10) (Related pain, Frequency)

Weight

Edema (Use Edema Scale)

Respiratory Vital Signs

Dyspnea (Time, Frequency, Position)
Respiratory rate

O2 Saturation Level (At rest ≥88%)

Activity Level (Use Activity Scale)

Medications (Reconciliation, Adherence, Changes, understanding)

Nutritional Status (including dietary and sodium restrictions, ?refer to Nutritionist)

Fluid Intake (Amount allowed, Adherence)

Bowel Regularity

Health Education/Clt Knowledge

Clt Concerns/Support

Advance Directive

Physician Contact (if 2 weeks post hospital discharge, GP follow-up appointment arranged)

Appendix C – New York Heart Association (NYHA) Heart Failure Symptom scale

NYHA Heart Failure Scale

Class I	No symptoms and no limitation in ordinary physical activity, e.g. dyspnea when walking, climbing stairs etc.
Class II	Mild symptoms (mild dyspnea and/or angina) and slight limitation during ordinary activity.
Class III	Marked limitation in activity due to symptoms, even during less-than-ordinary activity, e.g. walking short distances (20–100 metres). Comfortable only at rest.
Class IV	Severe limitations. Experiences symptoms even while **at rest**. Mostly bedbound patients.

The Criteria Committee of the New York Heart Association. Nomenclature and Criteria for Diagnosis of Diseases of the Heart and Great Vessels. 9th ed. Boston, Mass: Little, Brown & Co; 1994:253-256

Appendix D – Limb Edema Scale

0	None
+	Slight pitting (2mm), no visible distortion, disappears rapidly
++	A somewhat deeper pit than + (4mm), no distortion and disappears in 10-15 seconds
+++	Noticably deep pit (6mm) that may last more than a minute; the dependent extremity looks fuller and swollen
++++	Very deep pit (8mm) that lasts as long as 2-5 minutes and the dependent extremity is grossly distorted

Seidel, HM et. al. (Eds.). (2006) Mosby's Guide to Physical Examination Volume 6. Mosby Elsevier, St. Louis, Missouri, USA. Pp 480-481)