

## Rehabilitative Care for Congestive Heart Failure

### *A Guide for Ontario Health Teams*

#### Congestive heart failure: A priority population for OHTs

Heart failure is the fourth most common reason for inpatient hospitalizations in Ontario<sup>1</sup> and has the highest readmission rate to acute inpatient care within 30 days of discharge.<sup>2</sup> Although congestive heart failure is a long-term chronic condition that usually gets worse over time,<sup>3</sup> effective management (which includes cardiac rehabilitation) can improve the lives of individuals with the condition.

#### Cardiac rehabilitation for individuals with congestive heart failure

→ For COVID-19 specific information, see page 3

Cardiac rehabilitation is an evidence-based and coordinated group of activities to preserve and improve the physical and psychosocial functioning of individuals in their community, and to address the underlying cause of congestive heart failure.<sup>4, 5, 6, 7</sup>

#### **Cardiac rehabilitation is provided by skilled interprofessional team members.**

Specialized knowledge in cardiac conditions and profession-specific treatment are important aspects in providing an appropriate, client-centred program for individuals with heart failure.<sup>8, 9, 10, 11</sup> Depending on the program and setting, different health professionals are involved. The type of regulated health care professionals required will depend on the complexity of patients served, the services offered and the size of the program.<sup>9</sup> Their roles may include the following:

Assessing and recommending the appropriate level of physical activity and/or exercise program based on individual's medical condition

- *Physical therapists*<sup>12, 13, 14, 15, 16, 17, 18, 19, 20</sup>
- *Kinesiologists*

Providing patient education to address disease management, medication management and lifestyle changes<sup>13, 15, 21</sup>

- *Physicians*
- *Pharmacists*
- *Physical therapists*
- *Nurses*
- *Registered dietitians*
- *Kinesiologists*

Discharge planning following an acute hospital stay or to facilitate long-term planning or home treatment follow-up<sup>15, 22, 23, 24</sup>

- *Nurses*
- *Occupational therapists*
- *Social workers*

Addressing health behaviour changes and improving emotional well-being

- *Health professionals with cognitive behavioural therapy training*<sup>13</sup>, which may include *psychologists, social workers, nurses or occupational therapists*

#### About these guides

The GTA Rehab Network's [Guides for Ontario Health Teams \(OHTs\)](#) have been developed to illustrate the role of rehabilitative care in providing connected care for OHT priority populations.

Using evidence-based information, the guides highlight practical examples of how rehabilitative care is integral to achieving positive patient outcomes for individuals seen by primary care, admitted to hospital, or living at home.

They also outline some key considerations for OHTs to support the planning and provision of integrated care for these populations.

**Cardiac rehabilitation is provided in settings across the continuum of care.** The phases of cardiac rehabilitation align with the journey of care of individuals with congestive heart failure:<sup>6</sup>

- *Inpatient care or after a change in cardiac condition:* Rehabilitative care focuses on early mobilization, pre-discharge planning, referral to community resources and patient education.<sup>8, 12, 13</sup>
- *Early post-discharge period:* Individuals with other medical comorbidities may need inpatient rehabilitative care.<sup>25</sup> Supporting individuals during their transition home to ensure they attend medical appointments is crucial to their recovery. Follow-up through phone or home visits is recommended for individuals discharged home as they often feel isolated.<sup>6</sup>
- *Exercise training and long-term follow up:* Core components of outpatient cardiac rehabilitation are outlined in many guidelines. The components include (but are not limited to) addressing health behaviour change and education, cardiovascular risk factor management and cardioprotective therapies.<sup>4, 5, 6, 9, 10, 12, 13, 14</sup>

## How cardiac rehabilitation contributes to the care of individuals with congestive heart failure

Acute Care/Inpatient Rehab/Complex Continuing Care
<p><b>Reduces mortality and hospital readmission</b></p> <ul style="list-style-type: none"> <li>– Inpatient occupational therapy services were associated with lower 30-day readmission rates in heart failure.<sup>26</sup></li> <li>– Inpatient cardiac rehab reduced hospitalization and hospital readmission and improved one-year survival rate of individuals with heart failure.<sup>27, 28</sup></li> </ul> <p><b>Improves physical function and emotional well-being</b></p> <ul style="list-style-type: none"> <li>– Inpatient cardiac rehab increased walking distance of individuals with heart failure by 26%.<sup>27, 29</sup></li> <li>– After an inpatient rehab stay, individuals with heart failure had improved outcomes in endurance, sleep, physical functioning, perceived quality of life, anxiety and depression.<sup>29, 30</sup></li> </ul>
Community Rehab (Outpatient or Home)
<p><b>Reduces mortality and hospital readmission</b></p> <ul style="list-style-type: none"> <li>– Exercise-based cardiac rehabilitation (centre-based or home-based) reduced the risk of hospital admissions (any cause or heart failure related).<sup>7, 31, 32</sup></li> <li>– Early rehabilitation within four weeks following an acute care discharge decreased heart failure related hospitalization and bed days one year following rehab.<sup>33</sup></li> </ul> <p><b>Improves physical and functional capacity, emotional well-being and quality of life</b></p> <ul style="list-style-type: none"> <li>– Centre-based and home-based cardiac rehab is beneficial for individuals with heart failure by: <ul style="list-style-type: none"> <li>▪ increasing physical activity<sup>34, 35</sup></li> </ul> </li> </ul>

### Community Rehab (Outpatient or Home)

- increasing walking distance<sup>32, 36</sup> even in older adults with low-to-moderate risk New York Heart Association class II and III systolic heart failure<sup>35</sup>
- improving oxygen consumption,<sup>32, 36</sup> exercise tolerance<sup>32, 33, 37</sup> and pulmonary function<sup>38</sup>
- improving functional status<sup>36, 38</sup>
- improving depression scores<sup>33, 38</sup> and perceived quality of life.<sup>7, 35, 36, 37, 38</sup>

#### Is cost effective

- Several systematic reviews found that:
  - cardiac rehab program participation was cost-effective compared to not participating in cardiac rehab.<sup>39</sup>
  - the exercise program component of cardiac rehab was cost-effective.<sup>39, 40</sup>
  - home-based tele-rehab is less costly and just as effective than centre-based rehab.<sup>41</sup>
  - higher completion and better adherence in home-based cardiac rehab programs.<sup>36, 37</sup>

### Primary Care/Prevention

Although the majority of heart failure research is focused on cardiac rehabilitation treatment in the secondary prevention setting, healthy lifestyle habits have been associated with lower lifetime risk of developing heart failure.<sup>42</sup> Population-level efforts in risk factor prevention and adoption of healthy lifestyle habits are essential to promote overall cardiovascular health and reduce heart failure risk specifically.<sup>42, 43, 44</sup>

## Caring for patients during COVID-19 pandemic and beyond

Individuals living with cardiovascular disease, including heart failure, are at higher risk of complications if they are infected with COVID-19.<sup>45, 46</sup> This concern may have adverse effects on an individual's emotional well-being, level of physical activity to stay healthy and motivation to seek medical care with early signs of heart failure.

As survivors of COVID-19 are more likely to be older and to have pre-existing cardiovascular disease, they may require a longer period of rehabilitation to functionally recover either in an inpatient rehabilitation or community rehabilitation (outpatient or home-based) setting.<sup>47</sup>

Available resources and evolving guidelines on managing COVID-19 and heart failure for patients, health care providers and health system planners can be found on the following websites:

- [Heart and Stroke Foundation](#)
- [CorHealth Ontario](#)
- [GTA Rehab Network](#)

## Recommendations for Ontario Health Teams

- ✓ **Ensure appropriate individuals with heart failure are referred to cardiac rehabilitation.** Despite proven benefits of cardiac rehabilitation, these programs are under-utilized for individuals with heart failure.<sup>48, 49, 50</sup> To address referral gaps and promote equitable access, implementing a systematic referral process from inpatient care should be considered.<sup>50</sup>
- ✓ **Solicit input from individuals with heart failure who received rehabilitative care.** Based on patient experience, identify what is meaningful and effective in shifting lifestyle behaviours to help improve the patient education you provide on heart failure management. Patient experience can also provide insights to shape the design of your cardiac rehab program.

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