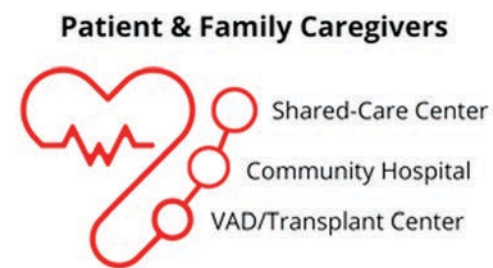


Taking Your Heart Failure Program to the Next Level



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Heart failure remains a major clinical and public health problem across the United States. Heart disease is the leading cause of mortality and morbidity, as well as a primary driver of health care resource use, and heart failure (one of the most prevalent cardiac clinical conditions) undoubtedly remains a major challenge for health systems. Additionally, according to a 2021 American Heart Association (AHA) Statistical Update, it was found that about 6 million people, or approximately 1.8% of the total 2020 United States Census population, have been affected by heart failure.¹

According to The Society of Thoracic Surgeons Intermacs[®] 2020 Annual Report, by the year 2030, a projected one in thirty-three adults will suffer from heart failure.² According to the AHA, to help combat this increasing incidence of heart failure, utilizing heart failure clinics can reduce mortality by 20% to 30% and reduce hospital readmissions for heart failure patients by 23% to 70%.¹ However, despite education targeted at cardiovascular disease prevention and awareness geared towards minimizing heart failure risk factors, a recent study reports that heart failure hospitalizations are on the rise among young adults.³ Furthermore, advances in medical therapy mean that more patients are living longer with more cases of end-stage heart failure and advanced disease.

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Heart failure is complex and progressive, and management should involve a multidisciplinary team that manages the patients in a guideline-directed, technology-enabled, and coordinated approach for individualized patient care, what would be considered the gold standard of heart failure care. The foundation of a successful heart failure clinic consists of a physician champion, a cardiology nurse practitioner (NP), and access to case management/

social workers, dietitians, and pharmacists. In addition, it is important to have adequate facilities and infrastructure for noninvasive testing, coronary angiograms, device therapy evaluation, and myocardial biopsy testing, as well as the ability to offer medical management, a care coordination strategy, and education for all the stages/classes of heart failure. As important as optimization of heart failure resources and structured follow-up protocols are, collaboration with other providers is of equal importance. Shared decision-making is fundamental in heart failure care to ensure that decisions are aligned with patient values, goals, and preferences, especially as treatment options increase. A shared decision-making tool for setting self-care goals and standardized evidence-based protocols should be developed and implemented to assist with these decisions.

When a patient continues to have symptoms despite the provider's best efforts at guideline-directed medical therapy (GDMT), or there is a need to decrease doses of medications due to low blood pressure or other prevailing symptoms, then it is in the heart failure patient's best interest to be referred for advanced heart failure care. Readmission within 6 months is also a strong indicator that the heart failure patient is at increased risk for adverse outcomes.⁴ Research shows that approximately half of the patients who have been hospitalized for heart failure will die or be readmitted within 6 months.⁴ These individuals must be considered for advanced heart failure care.

While many hospitals and health systems have implemented outpatient heart failure clinics with the goals of improving patient outcomes, reducing mortality, and reducing readmissions, timely referral remains an important issue to overcome. Ideal timing means an expeditious referral for successful outcomes, which could depend on how early in the disease process the patient is referred to an advanced heart failure specialist for evaluation of advanced therapies (Table). An advanced heart failure clinic is one that can offer mechanical circulatory support (MCS) and transplant. A prompt

referral practice is supported by the American College of Cardiology, noted in a recent report detailing guidelines for timely patient referral to a center specializing in transplantation and left ventricular assist devices to treat advanced heart failure.⁵ Heart failure clinics should have referral partnerships with advanced heart failure programs, as the clinical course of the disease is typically dynamic, with dips and plateaus. Additionally, patients who were not considered candidates a few years ago may be considered for transplant or MCS today, or if not a candidate, they may now qualify for ventricular assist device (VAD) destination therapy, because of the advances made in medical therapy and technology. MCS patients can also have excellent outcomes when compared to medical therapy, and these results have become an important option when considering the treatment of patients with advanced heart failure.

A discrepancy remains between those in need of heart transplant and those receiving one, and the number of patients treated with MCS exceed those treated with transplantation.⁶ While MCS contributes to successful outcomes, Centers for Medicare & Medicaid Services reports approximately 195 facilities have met facility standards to have the designation for destination therapy VADs.⁷ Since VAD implant centers are typically not conveniently located to the patients that they serve, a model of "shared care" should be developed (Figure).⁸ A "shared-care" model consists of a nontransplant center that is geographically positioned closest to the VAD implant patient, and collaborates and coordinates the care of the VAD patient with the implanting VAD center, thus providing for the patient's continued care.

Shared care is typically led by a heart failure-trained cardiologist working collaboratively with the patient's primary cardiologists for a carefully coordinated partnership, one that strives to improve patient access to care and quality of life, with a shared overarching goal of improving clinical outcomes.⁸

Determining if Your Heart Failure Program is Ready to Take on a Greater Advanced Heart Failure Population

Is your heart failure program capable and equipped to manage and care for these more advanced heart failure patients? Furthermore, how can you make the business case for developing into an advanced heart failure clinic? Several assessment

* Interagency Registry for Mechanically Assisted Circulatory Support

Table. Common indicators* for referring patients to an advanced heart failure clinic:

•	Left ventricular ejection fraction ≤25%
•	New York Heart Association Class III-IV functional status with persistent symptoms
•	≥2 hospital admissions and/or emergency department visits in the last year
•	High risk biomarker profile
•	Continued symptoms despite guideline-directed medical therapy
•	Reduced end-organ perfusion (renal function, hepatic function)
*Not an all-inclusive list.	

and planning considerations must be addressed before determining the financial implications and feasibility of providing advanced heart failure care.

The first step is to conduct a market analysis. Evaluate the current heart failure population within your service area, taking note of where these patients are going for treatment and how far away they are traveling. Other important data to review are the volume of relevant inpatient and outpatient cardiovascular procedures and surgeries, readmission data, and physician referral data, especially for out-of-network referrals for extracorporeal membrane oxygenation (ECMO), VAD, or heart transplant. Determining volume projections is a crucial first step in developing the business case and thus the financial viability of an advanced heart failure program, making it an undeniable key component of success.

Once the potential volume has been determined, review your current infrastructure not only at the heart failure clinic(s), but at the acute care facility as well. A high-level assessment of current specialties and subspecialties, services, and capabilities is needed, and a gap assessment should be developed. Another important inventory involves an assessment of your facilities' testing modalities such as cardiac magnetic resonance (MRI) capabilities and laboratory assay testing. A review of staffing in medical specialties such as nephrology, pathology, and infectious disease is vital to ensuring that there are no gaps in needed services or that no additional physicians and/or staff are needed. Location is another important consideration. Determining the existence of any gaps in the service area and whether the advanced heart failure clinic is co-located with other multispecialty clinics can reveal numerous advantages. Lastly, a deep dive into current advanced heart failure clinic inpatient and outpatient operations is necessary, as it is a means to ensure they are optimized and operating efficiently, are using standardized evidence-based protocols,

have developed triggers for referrals, have shared decision-making tools, and can confirm that there is a robust inpatient heart failure consulting service.

Despite advances in failure therapies, up to 10% of this population will progress to an advanced stage of the disease.⁹ As heart failure is associated with significant mortality and morbidity, particularly among those aged 65 and older,⁴ advanced heart failure patients will experience the chronic nature of living with this disease. **Unfortunately, referrals for advanced heart failure evaluation often come too late or not at all.** Simple strategies are still needed for optimizing timely referrals for the evaluation of these patients.

Shared decision-making can be challenging but is integral for any advanced heart failure program with increased treatment options. Corazon believes that designing and establishing a highly collaborative heart failure program that coordinates all providers involved in heart failure care at various levels can ultimately improve patient outcomes and ensure that limited resources are effectively allocated. To expand and build a successful advanced heart failure program, Corazon recommends that current heart failure care operations have any persistent gaps in care addressed prior to the development of an advanced heart failure program. The location of the advanced heart failure clinic must also be closely considered.

Developing an advanced heart failure clinic can differentiate your program, but various supporting elements are necessary as well. To have a successful advanced heart failure program, consider market access and referrals, financial accountability, programmatic infrastructure, quality and outcomes management, and most importantly, intradepartmental and interhospital collaboration. Widening your focus to include these elements will build your ability to offer a strong, well-structured program. ■

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