



## Remote, Home-Based Delivery of Cardiac Rehabilitation

*This model of care shows promise to increase rural Veterans' access to care and services, and is recommended for replication at other facilities.*

### Medical Issue

Coronary heart disease is the result of plaque buildup in the arteries, which can lead to decreased blood flow to the heart. Smoking, high blood pressure, cholesterol, diabetes, family history, age, weight, sedentary lifestyle and other factors contribute to heart disease risk, which may lead to a cardiac event. Following a cardiac event, like a heart attack or surgery (i.e., stent or bypass surgery), patients are often referred to cardiac rehabilitation as part of their recovery process.

Cardiac rehabilitation is an essential component of cardiovascular disease management and focuses on lifestyle modifications and risk reduction of future events. Cardiac rehabilitation improves function and quality of life and reduces secondary cardiovascular events and mortality.

### Access Challenge

Cardiac rehabilitation continues to be vastly underutilized despite the known benefits. Approximately 10% of eligible Veterans participate in cardiac rehabilitation and only 28% of Veterans Affairs (VA) facilities offer in-person cardiac rehabilitation services.<sup>1</sup> Veterans often face barriers to attending cardiac rehabilitation due to limited transportation options, geographic barriers, availability of programs, and financial barriers. Rural Veterans are more likely to have limited access to cardiac rehabilitation services.<sup>1</sup>

### Solution

The Office of Rural Health's Promising Practice Home-based Cardiac Rehabilitation Program was developed in 2010 at the Iowa City VA Health Care System to address access barriers for rural Veterans to cardiac rehabilitation services. Veterans first meet in-person at a VA facility with a cardiac rehabilitation specialist with subsequent sessions conducted at home. This model eliminates the need to travel multiple times a week to a rehabilitation facility and is tailored to the Veteran's schedule and home environment. The weekly scheduled video and/or phone appointments provide individualized discussion on curriculum that addresses risk factors (i.e., tobacco use and high blood pressure, proper nutrition, exercise progression, medication adherence, and stress management).

The program has been found to be effective and comparable to traditional in-person programs when evaluating patient outcomes and program cost.<sup>2</sup> Since the initial development, the program has been adopted at over 37 VA facilities across the country.

A recent evaluation of the program demonstrated significant improvements in Veterans' function, eating habits, confidence, depression, and weight loss. Veterans report high patient satisfaction with the program.

To learn more about HBCR and other home-based rehabilitation programs, please [watch this video](#).

<sup>1</sup> Schopfer DW, Takemoto S, Allsup K, Helfrich CD, Ho PM, Forman DE, Whooley MA. (2016). Cardiac Rehabilitation Use Among Veterans with Ischemic Heart Disease. *JAMA, Internal Medicine*, 174 (10). 1687-1689.

<sup>2</sup> Wakefield, BJ, Drwal, KR, Scherubel, MN, Klobucar, T, Johnson, SR, & Kaboli, PJ (2014). Feasibility and effectiveness of remote, telephone-based delivery of cardiac rehabilitation. *Journal of Telemedicine and eHealth*, 20(1): 32-38.

The Office of Rural Health (ORH) works to see that America's Veterans thrive in rural communities. To support the health and well-being of rural Veterans, ORH and its Veterans Rural Health Resource Centers establish and disseminate initiatives that increase access to care for the 2.7 million rural Veterans enrolled in the U.S. Department of Veterans Affairs' health care system. Key focus areas include programs that address workforce shortages, transportation, primary care, mental health, telehealth, and specialty care.