Improving the Delivery of Home-Based Cardiac Rehabilitation at a VA Medical Center

Greg Rohrbach, NP-C, David Schopfer, MD, Michael Bettencourt, EP, Kimberly Rush, RN, Mark Pabst, MPH, Mary Whooley, MD

Healthy Heart Program – San Francisco VA Medical Center

Background
• Nationally, less than 10% of all eligible veterans received CR in 2011
• Optimal models for CR delivery are currently being developed
• Home-Based CR is a promising alternative

Intro
This quality improvement project developed and tested a home-based CR program for patients with CVD.

Methods
Office of Rural Health funding received in May 2013 to start a home-based CR program. The Healthy Heart Program is a physician directed, nurse-managed, comprehensive CR program consisting of:
• Post – PCI and CT surgery automatic referrals
• Hospital nurse coordinator/liaison
• Phase I CVD risk factor evaluation/education done at the bedside
• 12 week phase II delivered over the phone
• Phase III monthly f/u calls x 9 months

Personnel
• 1.0 FTE Nurse Practitioner
• 0.6 FTE Registered Nurse
• 0.8 FTE Exercise Physiologist
• 0.25 FTE Registered Dietician
• 0.1 FTE Medical Director

Curriculum
Week 1 – ITP development, exercise prescription/goal setting
Week 2 – Understanding heart disease/self-care management, med adherence
Week 3 – Nutrition & weight management, RD session
Week 4 – Cardiac risk factor management
Week 5 – ITP review/exercise prescription/review goals, strength training
Week 6 – Managing heart symptoms: Response to symptoms
Week 7 – PRN (patient preference: RN, RD, exercise physiologist, psychologist)
Week 8 – Family and social support. Caregiver education and support
Week 9 – PRN (patient preference: RN, RD, exercise physiologist, psychologist)
Week 10 – ITP review/exercise prescription/review goals
Week 11 – PRN (patient preference: RN, RD, exercise physiologist, psychologist)
Week 12 – Long term self-care maintenance plan. Order and review labs
*Review VS, cardiac symptoms and exercise tolerance at each visit

Exclusion Criteria
• Staged PCI with significant remaining lesion
• Decompensated CHF (NYHA IV)
• Unstable angina
• Documented history of non-sustained/sustained VT/VF without definitive treatment (anti-arrhythmic drugs, ICD, ablation)
• Documented history of recurrent syncope without definitive diagnosis and/or presently undergoing workup
• Symptomatic valvular disease
• Severe hypertension (SBP >200 mmHg or DBP >100 mmHg)
• Dementia/cognitive impairment
• Discharge to long term non-hospital Facility (=30 days)
• Significant movement disorder that interferes with exercise training
• BMI < 75 m (post-op) or < 150 m (non-surgical)
• Atrial arrhythmia not rate controlled
• Mobitz Type II or 3rd degree AV block without pacemaker

Results
The Healthy Heart Program has dramatically increased the proportion of veterans participating in CR from <5% in 2011 to 41% in 2016.

Conclusion
➢ A comprehensive CR program was delivered by a Multidisciplinary team using home exercise equipment.
➢ Home-based CR programs at VA medical centers have the potential of optimizing CR enrollment and adherence.

Implications
➢ The future of CR will include alternative models of care delivery that includes a home-based component.
➢ Home-based CR will help to increase the number of participants who participate by expanding the reach of CR beyond the setting of the traditional, supervised structured setting.
➢ A home-based program will be a valuable addition to facility-based programs, as a stand-alone program or adopted into a hybrid program.

Website: http://www.sanfrancisco.va.gov/services/HealthyHeart_.asp