



NEWS ALERT

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Low-tech, Low-cost Cardiac Rehab Saves Lives but is Underutilized

WALTHAM, MA (August 3rd, 2009)—A landmark study analyzing more than 600,000 Medicare patients hospitalized for acute coronary conditions and/or coronary revascularization procedures (PCI and CABG) demonstrated that those who enrolled in a cardiac rehabilitation program had substantially lower mortality than those who did not. Additionally, the study confirmed that more than one-third of appropriate patients eligible for cardiac rehabilitation were not referred for this life-saving therapy.

Of patients enrolled in cardiac rehabilitation, the mortality rates were 2.2% vs. 5.3% at 1 year and 16.3% vs. 24.6% at 5 years.¹ This substantial absolute (8.3%) and relative (34%) risk reduction equals or exceeds the benefit of most established and accepted drug and procedural interventions for such patients, and adds to the large body of literature proving the value of cardiac rehabilitation on quality of life, functional capacity, depression, health care utilization, and coronary risk factor modification.

This study, performed by the research group led by Jose Suaya, MD, PhD, evaluated long-term follow-up in a large and broadly representative number of patients nationwide. Importantly, the group utilized three sophisticated analytic techniques to address many problems that prior, smaller studies have encountered in trying to evaluate important questions involving the use and benefit of cardiac rehabilitation. For example, more profoundly ill patients or patients with poorer access to medical care may not enroll in programs, giving a potentially exaggerated estimate of the effect of cardiac rehab on mortality. Suaya's et al. thorough analytic approaches confirm the profound benefit of cardiac rehabilitation, and after accounting for confounding factors, demonstrate a 21%-34% relative reduction in five-year mortality among participants in cardiac rehabilitation. Importantly, there was a dose response relationship as well: patients who attended 25 or more sessions had approximately 20% lower five-year mortality than those who attended 24 or fewer sessions.

In this context it is important to understand why so many patients who could benefit from cardiac rehabilitation do not get referred to such programs. The American Heart Association, via its "Get With the Guidelines" program, has developed and implemented practical quality improvement databases and tools for hospitals to measure and improve the evidence-based care they provide to

their patients. Recently, a group led by Todd Brown, MD, MSPH evaluated care of 72,817 patients discharged from participating US hospitals after MI, PCI, or CABG.² Despite the fact that participating physicians and hospitals were committed to quality improvement, and by many prior measures were more likely than other institutions and physicians to employ evidence-based therapies, overall referral rates ranged from 53% of those diagnosed with MI, to 58% of those after PCI, to 74% of those after CABG. Analysis by institution revealed wide discrepancies: 35% of hospitals referred < 20% of patients, and only 22% of hospitals referred \geq 80%. Patients with the modifiable risk factors of hypertension and smoking were more likely to be referred, and those with co-morbidities such as COPD and prior TIA or stroke were less likely. Clearly, most physicians and hospitals need to develop the mind set and infrastructure to ensure that 100% of appropriate patients receive referral to cardiac rehabilitation, just as they are doing for aspirin and other pharmacotherapy.

These recent studies should be a call to action. Health care providers and hospitals can now be confident that cardiac rehabilitation is a life-saving intervention that should be provided to all of appropriate patients. Barriers to referral should be eliminated; referral rates and enrollment monitored, and our patients reassured that participation in cardiac rehabilitation will improve their quality and quantity of life.

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1. Suaya JA, Stason WB, Ades PA, Normand SLT, Shepard DS. Cardiac Rehabilitation and Survival in Older Coronary Patients. *J Am Coll Cardiol* 2009;54:25-33.

2. Todd M. Brown, MD, MSPH, Adrian F. Hernandez, MD, MHS, Vera Bittner, MD, MSPH, Christopher P. Cannon, MD, Gray Ellrodt, MD, Li Liang, PhD, Eric D. Peterson, MD, MPH, Ileana L. Piña, MD, Monika M. Safford, MD, Gregg C. Fonarow, MD on behalf of the American Heart Association Get With The Guidelines Investigators. Predictors of Cardiac Rehabilitation Referral in Coronary Artery Disease Patients-Findings From the American Heart Association's Get With The Guidelines Program. *J Am Coll Cardiol*. 2009;54:515-21.