
Cardiac Rehabilitation: An Effective Platform for Secondary Prevention of Coronary Heart Disease

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Evidence from large clinical trials supports the importance of lifestyle modification and drug interventions in the secondary prevention of coronary heart disease. Cardiac rehabilitation (CR) provides exercise therapy, nutritional counseling, and preventive drug prescription. However, there is an insufficient referral to and patient participation in CR programs. To study the benefits of CR in delivery of efficacious therapies, we analyzed data from the American College of Cardiology Evaluation of Preventive Therapeutics (ACCEPT) study. This included medical records of 5553 patients aged 18 to 70 admitted with their first bypass surgery, first angioplasty, acute myocardial infarction, or acute myocardial ischemia to 53 hospitals randomly selected throughout the US in 1996-1997. Of these, 2772 patients were interviewed at least 6-months after discharge. We determined the degree of prescription, patient utilization, and effectiveness of CR 6 months after discharge by studying risk factor modification and adherence to drug therapy in those patients not referred (NoRef, N=1238), referred but did not participate (RefNoPart, N=449) or those referred and participated (RefPart, N=1035). At 6 months after discharge, comparing NoRef, RefNoPart, and RefPart groups, the levels of use of aspirin/anticoagulants (80 vs. 84 vs. 91%, $P=0.0001$), β -blockers (41 vs. 38 vs. 55%, $P=0.0001$), lipid-lowering therapy (47 vs. 50 vs. 60%, $P=0.0001$), and diet counseling (52 vs. 56 vs. 73%, $P=0.0001$), were each significantly higher in the RefPart group. Moreover, there was an improvement in risk factor levels observed by 6 months, with blood pressure $>140/90$ (62 vs. 62 vs. 55%, $P<0.01$), smoking (32 vs. 33 vs. 19%, $P=0.0001$), and LDL-cholesterol $>100\text{mg/dl}$ (74 vs. 77 vs. 69%, $P=0.003$) showing lower levels in CR participants compared to both NoRef and RefNoPart groups. The goal of CR is to prevent disability and death from coronary heart disease. CR appears to be an effective platform for providing proven secondary preventive therapies and is associated with reduced risk factor levels. However, only a minority of patients is properly referred to CR after an acute event or others choose not to participate, affecting the degree of risk factor modification achieved.