The Impact of Patient-Centered Therapeutic Lifestyle Coaching
On Outcomes In A Community-Based Cardiac Rehabilitation Program [CRP]

Introduction: Recent research has shown that patients with heart disease are less likely to comply with physical activity and other therapeutic lifestyle recommendations than individuals without heart disease. Cardiac patients appear to require more patient-centered strategies if positive lifestyle behaviors are to be adopted and sustained.

Purpose: To determine the influence of multifactorial patient-centered cardiac rehabilitation [CR] on Behavioral, Clinical, Health, and Economic outcomes.

Design: This is a nonrandomized one-group study of Phase II outcomes; each patient served as their personal control subject.

Methods: Eighty-two [82] patients [46 men, 36 women (44%)], including 34 [41%] having comorbid diabetes mellitus, mean age 60 years served as subjects. They were enrolled in a multifactorial cardiac rehabilitation program at the Marshall University Diabetes Exercise and Cardiopulmonary Rehabilitation Center. Patients were screened and risk stratified prior to program entry with a medical profile that included a history, physical, multi-stage exercise test, pulmonary function test, lipid profile, CBC, HbA_{1c}, anthropometric measures, and risk factor analysis. Selected measures were repeated at 12 weeks. Clinical interventions included closely supervised exercise, smoke cessation, and nutritional counseling. Our staff of graduate assistants served as therapy assistants, permitting unique compliance monitoring strategies and more extensive one-on-one supervision in exercise and lifestyle counseling sessions. Weekly educational sessions were an important program component; a variety of topics related to heart disease, risk factor management, and lifestyle strategies were presented. Guest speakers included physicians, nurses, exercise physiologists, podiatrists, registered dietitians, pharmacists, physical therapists, and other health professionals. Social events [e.g., picnics, holiday luncheons] as well as fun competition events [e.g., Wellness Challenge], were also scheduled to enhance group camaraderie.

Results: Significant improvements were observed in the Behavioral Domain for dietary [P<.001] and medication [P<.05] compliance, and Beck Depression Inventory [P<.002]. Clinical Domain variables improving significantly [P<.001] were: 6MDW, exercise frequency, exercise duration, weight and BMI, HbA1c, total SC, LDL-C, triglycerides, and TSC/HDL. Three *Metabolic Syndrome* variables improved: waist [P<.03}, triglycerides [P<.001], and fasting BG [.002]. Health Domain changes reflected improved QOL perceptions in Physical Functioning [P<.001], Role Emotional [P<.03], Vitality [P<.01], Social Functioning [P<.03], and Health Transition [P<.001]. The Economic Domain showed significant reductions in Medications [P<.03], ER Visits [P<.05], Hospital Admissions [P<.001], and MD Visits [P<.002].

Conclusions: A multifactorial CRP using unique patient-centered strategies significantly impacted Behavioral, Clinical, Health, and Economic outcomes. Reduced health care system dependence was seen with significant reductions in ER visits, hospital admissions, and MD visits.