Cardiac Rehabilitation Performance Measures: Hybrid vs. Traditional Cardiac Rehab

Michael McNamara[1], MS, FAACVPR, Carrie Oser[1], MPH, Crystelle Fogle[1], MS, MBA, RD, Trina Filan[1], PhD, Karen Ashworth[2],MS, CEP, Mandy Frickle[2], RN, BSN, CVRN, Susan Mathis[3], RN, RCEP, FAACVPR
[1]Montana Cardiovascular Health Program – Department of Public Health and Human Services, Helena, MT; [2]St. Vincent Healthcare, Billings, MT, [3]Providence St. Patrick Hospital, Missoula, MT

Introduction: The delivery of hybrid cardiac rehab (HyCR) - home-based cardiac rehab (CR) in combination with center-based sessions - has gained popularity, in part due to the impact the COVID-19 pandemic had on traditional, center-based cardiac rehab (TCR).

Purpose: To investigate if performance measure differences exist between patients participating in HyCR and TCR delivery methods.

Design: A cross-sectional study design was used for CR facilities delivering HyCR and TCR participating in the Montana Outcomes Project (MOP).

Methods: The Montana Cardiovascular Health Program provided funding to two CR programs to develop and provide HyCR. Data were collected from January 2020 through September 2020. The performance measures evaluated were: percent of patients who met blood pressure (BP) target (<130/80mmHg) at the end of CR, percent of patients who achieved at least 10% improvement in 6-min walk distance, percent of patients receiving tobacco cessation referral, and percent of patients who improved 1 or more level of severity in the PHQ-9 depression screen over the course of CR. The HyCR data was compared to the data submitted by programs in MT and northern WY who were participating in the MOP. Statistical analyses included Chi-square and ANOVA with p-value of ≤ 0.05 indicating statistical significance.

Results: The HyCR sample consisted of 41 patients compared to 526 in the TCR group. Patients attending HyCR were slightly younger (67.5 vs. 70 years) and had a higher percentage of women represented (36.6% vs. 29.7%). As expected, the TCR averaged significantly more center-based sessions (27.8 vs. 12.1) than those in the HyCR group. More HyCR patients achieved BP control (84.2% vs. 77.3%) and were more likely to receive tobacco cessation referral (100% vs. 83.1%) than the TCR cohort. However, this did not reach statistical significance. Significant improvement in functional capacity, as measured by 6-min walk distance, was seen in the HyCR (89.2%) compared to TCR group (71.3%). While at baseline the HyCR group had a significantly higher average PHQ-9 score (6.8) compared to TCR patients (5.02), the TCR group had a greater improvement in depression scores (72.6% vs. 52.3%) by the end of CR.

Conclusion: The HyCR patients did significantly better than TCR patient in functional capacity improvement over the course of CR. While there was no significant difference in BP control or tobacco cessation referral, there was a trend in that direction favoring the HyCR patients. The TCR patients held a non-statistically significant advantage in depression score improvements by the end of CR.