THE EFFECT OF TELEPHONE SUPPORT INTERVENTIONS ON CORONARY ARTERY DISEASE (CAD) PATIENT OUTCOMES DURING CARDIAC REHABILITATION: A SYSTEMATIC REVIEW AND META-ANALYSIS

Ahmed Kotb, George A. Wells, Shu-Ching Hsieh. University of Ottawa Heart Institute, University of Ottawa

Background Cardiac rehabilitation is offered to individuals after cardiac events to aid recovery and reduce the likelihood of further cardiac illness. However, patient participation remains suboptimal and the provision of high quality care to an expanding population of patients with chronic heart conditions is becoming increasingly difficult. As a result, the feasibility and effectiveness of using telehealth interventions to deliver care have recently been considered.

Objectives To determine the effect of telephone support interventions compared with standard post-discharge care on coronary artery disease patient outcomes.

Methods We searched The Cochrane Library, MEDLINE, EMBASE, and CINAHL. Reference lists of included studies were also checked. No language restrictions were applied. Selection criteria: We included randomized controlled trials that directly compared telephone interventions with standard post-discharge care in adults following a myocardial infarction, angina or a revascularization procedure.

Data collection and analysis Studies were selected independently by two reviewers. Data were extracted by a single reviewer and checked by a second one. Where appropriate, outcome data were pooled and analyzed using a random effects model. For dichotomous variables, odds ratios (OR) and 95% confidence intervals (CI) were derived for each outcome. For continuous variables, standardized mean differences (SMD) and 95% CI were calculated for each outcome.

Results Thirty-two studies met the inclusion criteria. No difference was observed in mortality between the telephone group and the group receiving standard care (OR 1.02 (0.69, 1.62)). The intervention was however significantly associated with fewer hospitalizations than the comparison group (OR 0.62 (0.40, 0.97)). Significantly more participants in the telephone group stopped smoking (OR 1.40 (1.08, 1.82)); had lower LDL levels (SMD $-0.19$ ($-0.39$, $-0.00$)); lower SBP (SMD $-0.22$ ($-0.36$, $-0.07$)); and higher physical composite scores for quality of life (SMD 0.15 (0.01, 0.30)). However, no significant differences were observed for medication adherence (OR 0.78 (0.78, 1.28)); and the mental composite score for quality of life (SMD $-0.00$ ($-0.19$, 0.18)).

Conclusions Regular telephone support interventions may help increase the uptake of secondary prevention and reduce further hospitalization.