ABSTRACT
Background: Maintenance (phase III/IV) cardiac rehabilitation (CR) is recommended to promote maintenance of benefits achieved during Phase II, yet there has been no meta-analysis to date. The objective of this study was to determine the effects of maintenance CR on any outcome, with consideration of sex.

Methods: Medline, Pubmed, Embase, Lilacs, PsycINFO, CINAHL, and Emcare were searched for articles from inception to January 2020. Randomized controlled trials on the effects of maintenance CR (≥6 months, regardless of setting) in cardiovascular disease patients who had graduated from CR (≥6 weeks), with a control or comparison arm were included. Citations were processed by 2 authors independently. Methodological quality was assessed using Cochrane’s Risk of Bias tool (v1), and level of evidence evaluated with GRADEPro. Outcomes were quantitatively synthesized with meta-analysis where possible.

Results: 819 citations were identified, with 10 trials (21 papers) meeting inclusion criteria (5238 participants; 859 [16.4%] female). Results showed maintenance CR resulted in lower low-density lipoprotein cholesterol (mean difference [MD]=−0.58; 95% confidence interval [CI]=−1.06–0.10; very low-quality evidence; I²=95%) and greater quality of life (MD=0.28, 95% CI=0.05–0.52; low-quality evidence; I²=0%) when compared to usual care; no significant effects were observed for adverse events, functional capacity, or other risk factors. Qualitatively, included trials revealed better muscle strength, medication adherence, social support and cognition, as well as lower depressive symptoms with maintenance CR. Outcomes for women and sex differences were mixed.
Conclusions: Maintenance programs appear to sustain patient’s quality of life, but more focus on women’s outcomes is needed. Consideration of accessibility to these services is warranted, given the benefits of phase II CR, and that patients often pay out-of-pocket.