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Scoping Review of Clinical Targets for Bariatric Surgery and the Need for Standardization

Introduction: Obesity remains a global epidemic, and bariatric surgery is the most effective treatment in patients with obesity and related comorbidities. However, a paucity of evidence exists supporting specific targets for weight loss, and a wide range of criteria defining an optimal clinical outcome after bariatric surgery have been utilized. This scoping review aims to examine the varying definitions of optimal outcomes after surgery and the evidence supporting these definitions.

Methods: We conducted a scoping review of PubMed, Scopus, Web of Science, and Cochrane Library. Studies were included if they stated a weight loss goal for patients undergoing a surgical weight loss procedure. We excluded results that were duplicates of full guidelines, studies that used the bariatric surgery as a bridge to therapy (e.g. transplantation), if articles had incorrect and or missing surgical interventions, if weight loss targets were not defined, or if the study was not in English.

Results: 5783 studies were identified, after duplicates were excluded, 4573 abstracts were screened with. 153 undergoing full text review. 94 studies were deemed relevant for inclusion. Studies utilized 17 unique clinical targets for a successful bariatric surgery and 24 studies (26%) used more than one definition. Only 30 studies (28%) used a citation in supporting their selected endpoint. Only 15 (15%) justified lack of citation with reasons including generation of a receiver-operating curve, the selected definition representing a "common" or "well established" endpoint in the literature, using BMI cutoff based on definitions for obesity, or arbitrarily set cutoffs based on the studied population.

Conclusions: No agreement exists regarding a definition for optimal clinical outcome following bariatric surgery, and little high-level evidence supports the array of definitions reported. Future studies should clarify the association of the commonest definitions for optimal clinical outcomes following bariatric surgery and remission of obesity-related comorbidities.