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## Title

Metabolic Rehab in Primary Care: Evaluating the CHANGE Protocol

# **Priority 1 (Research Category)**

**Clinical trial** 

## Presenters

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## Abstract

Context: Metabolic syndrome (MetS) refers to a combination of factors (dyslipidemia, elevated glucose and triglycerides, high blood pressure, and high abdominal fat distribution) that increase the risk for cardiovascular disease (CVD) and diabetes (DM), among other diseases . In Canada, 20% of adults have MetS. MetS is of great importance as it precedes DM and CVD by several years. Progression of MetS to DM and CVD can be significantly reduced by dietary modification and exercise.

Objective: The primary purpose of this trial was to test the effectiveness of Metabolic Rehab to increase physical activity, improve diets, reduce obesity and reverse MetS among adult patients when implemented in typical primary care settings within Alberta.

Design: A cluster randomized control trial (cRCT) of 16 PCNs within Alberta (pre/post design).

Participants: N= 750 participants were screened into the RCT; N=674 participated in the RCT in either intervention (n=354) or control n=(320).

Intervention: Metabolic Rehab is an evidence-based lifestyle intervention protocol (the CHANGE Protocol) delivered in primary care for patients with MetS. This protocol is a personalized approach to nutrition and exercise modification supported by an interprofessional team. The protocol's principles are: 1) individualized, graded nutrition and exercise intervention; 2) supervision and implementation of the program in a collaborative fashion between health professionals.

Outcome Measures: The primary outcome is reversal of metabolic syndrome (binary – yes/no) and the secondary outcome is Cardiovascular Risk (as measured by the PROCAM).

Results: Patients had a 23% chance of reversing MetS, depending on the severity of their initial MetS based on Multivariate Logistic Regression. Physical activity levels increased in both total amount and intensity in the intervention group; the same pattern was not observed in the control group. Patients reported that they enjoyed the program and liked the depth of information that was provided in their sessions; the individualized nature of the program was helpful. Patients and health professionals also

reported that the intervention led to increased health, along with additional unexpected positive benefits.

Conclusions: Metabolic Rehab is an effective lifestyle intervention that reverses MetS; greater integration of Metabolic Rehab into primary care can proactively treat the symptoms that later manifest in CVD, DM, and other chronic health conditions.