

Anita Singhmar MSc RD, North Peel Family Health Team; Ariellia Rodrigues MSc RD, Wise Elephant Family Health Team; Rain Lu MSc RD, Queen Square Family Health Team; Gwen Simms RD, Central Brampton Family Health Team; Jennifer MacTavish RD & Jocelyn Rowe NP, Brockton and Area Family Health Team; Carolyn Tereszowski MSc RD, Jane Glassco MD & Denise Pitre MD Loyalist Family Health Team; Tammy Burgess RD, Halton Hills Family Health Team; Nicki Mills RD & Minna Stephen RN, Haliburton Highlands FHT; Rupinder Dhaliwal, RD FDC Metabolic Syndrome Canada

Background

Effective collaboration within interprofessional primary care teams is essential to provide optimal patient care. The CHANGE program, **C**anadian **H**ealth **A**dvanced by **N**utrition and **G**raded **E**xercise, is an evidence-based diet and exercise program aimed at reversing metabolic syndrome and reducing cardio-metabolic risk in primary care settings. Developed by experts at Metabolic Syndrome Canada (www.metsc.ca), the CHANGE program utilizes the complimentary skills of a Family MD/Nurse Practitioner, dietitian and exercise specialist to provide an individualized plan aimed to reduce the components of metabolic syndrome through close follow up over 12 months (see Figure 1 for Program Overview).

Given the need for group based diet and supervised exercise visits, innovative collaborations with community partners are needed for space.

Program evaluation metrics on diet, physical activity and outcomes relevant to cardio-metabolic risk are collected regularly and shared with each participating Family Health Team (FHT). Patient and staff experiences are also obtained.

Funding grants are needed for program scale up, evaluation and development of toolkits.

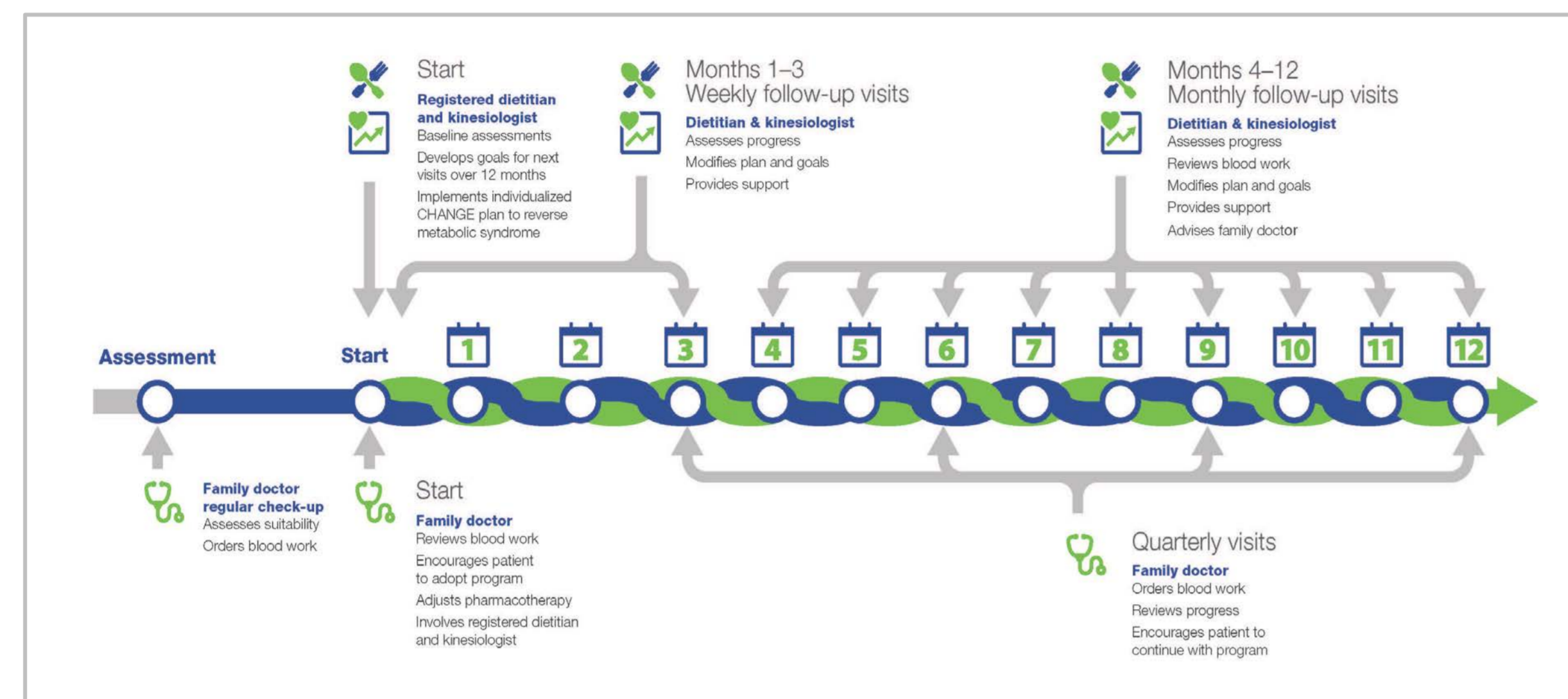


Figure 1. CHANGE Program Overview

Results

Team based approach

Since 2017, 321 patients from 9 FHTs across ON have been placed on the CHANGE Program (see Figure 2 for list of FHTs). **Registered Dietitians** at each of the FHTs are responsible for identifying suitable participants, coordinating the assessments and follow up sessions along with the exercise specialist, delivering the nutrition component of the program and group sessions, communicating with the Family MDs/NPs. Seven of the FHTs have a **Registered Kinesiologist** on their team and in 2 FHTs, **Registered Nurses** are responsible for delivering the exercise component. **Family MDs** and/or **Nurse Practitioners** are responsible for confirming participant suitability, ordering blood work, monitoring pharmacotherapy along with **Clinical Pharmacists** and encouraging program compliance.

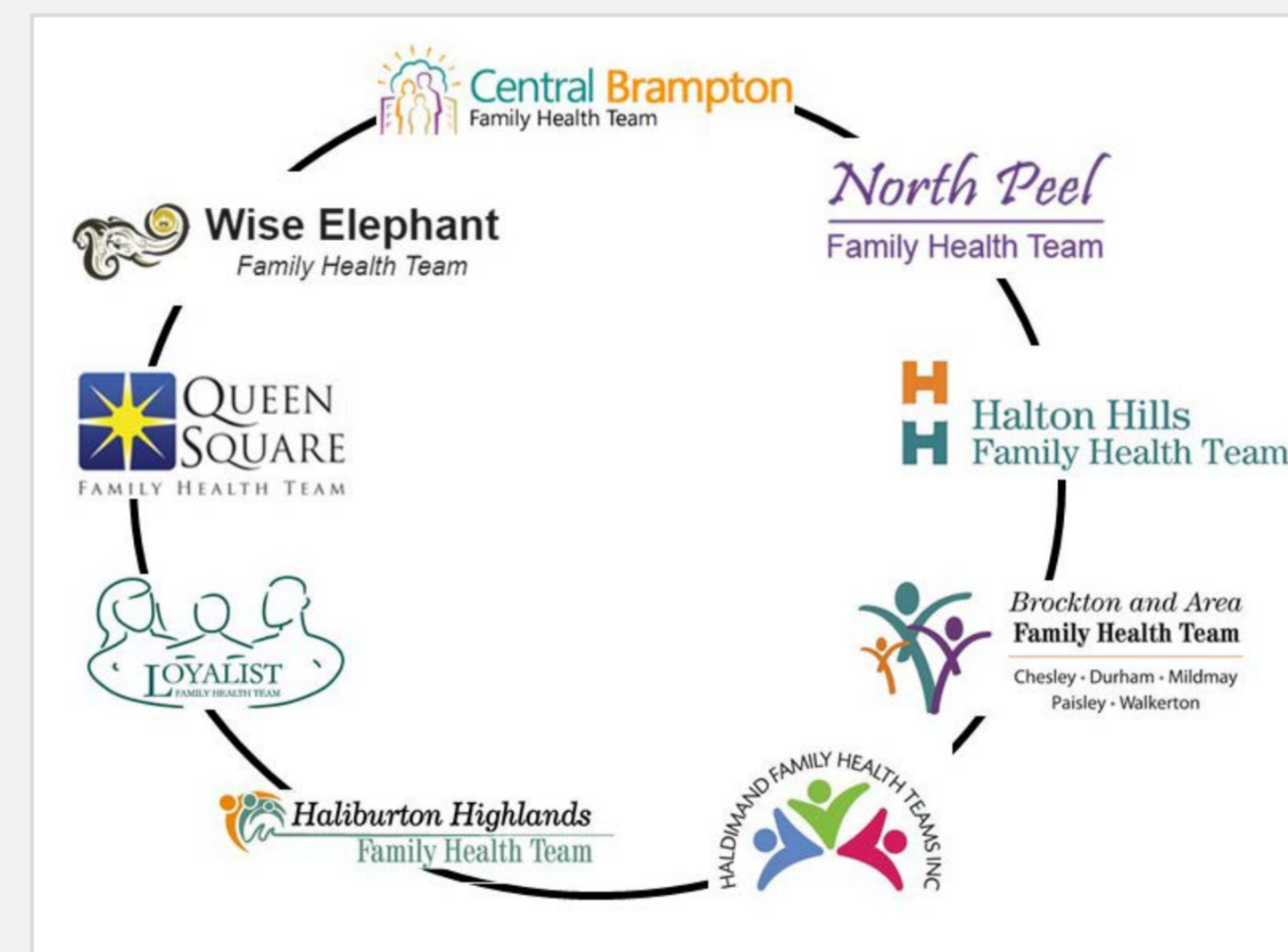


Figure 2. Participating Ontario FHTs

Evaluation Metrics

Consistent with the CHANGE feasibility study published in 2017 (Jeejeebhoy et al CMAJ Open 2017), the CHANGE program across 9 FHTs in Ontario is improving diet indices (Mediterranean diet scores, see figure 3), and cardio metabolic outcomes at 3 and 12 months (see Figure 4). Physical activity metrics are shown in a separate poster. Attendance at dietitian and exercise specialist visits has been 79% and 75% respectively. Results are shown based on data as of August 2019**.

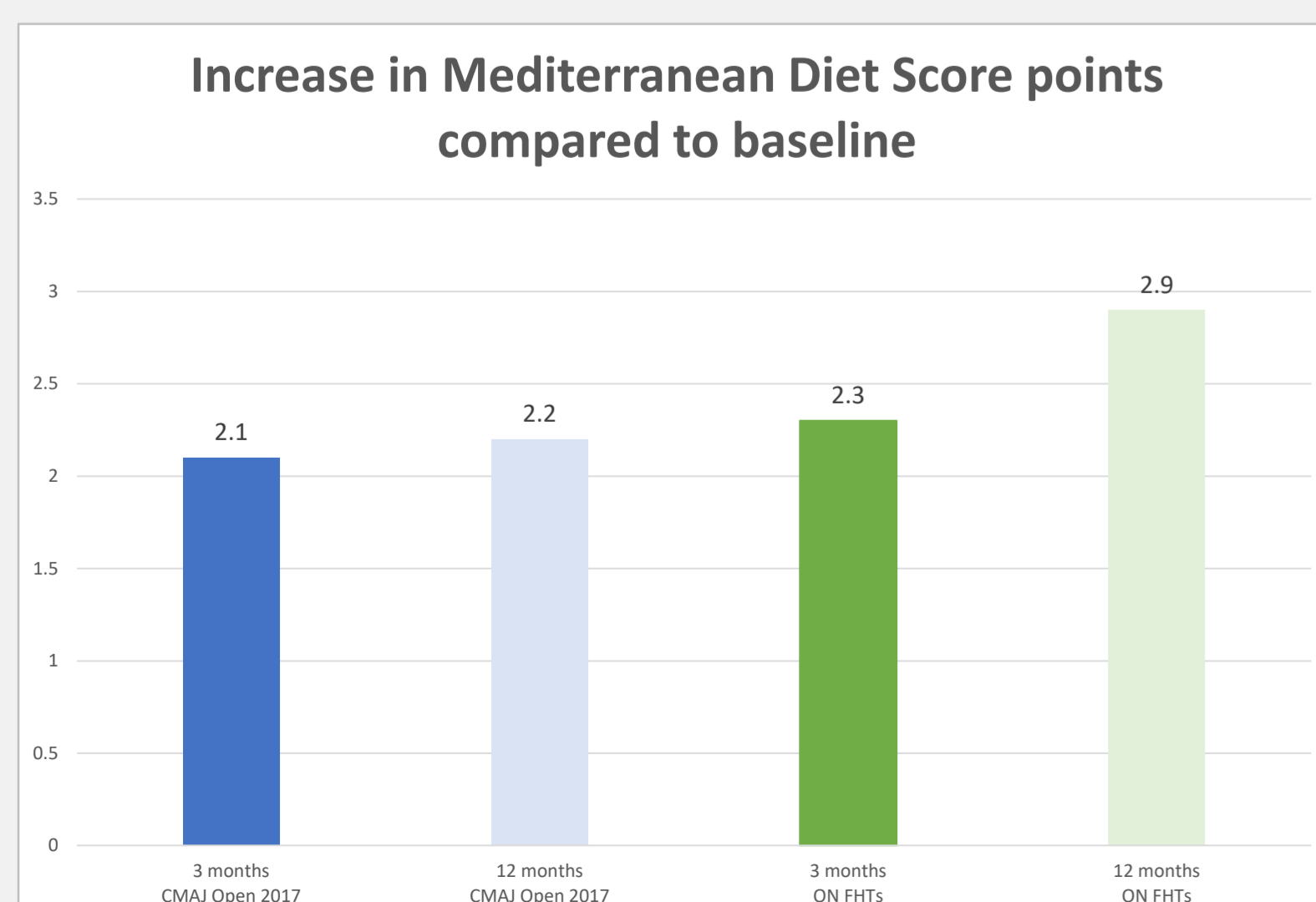


Figure 3. Mediterranean Diet Score changes

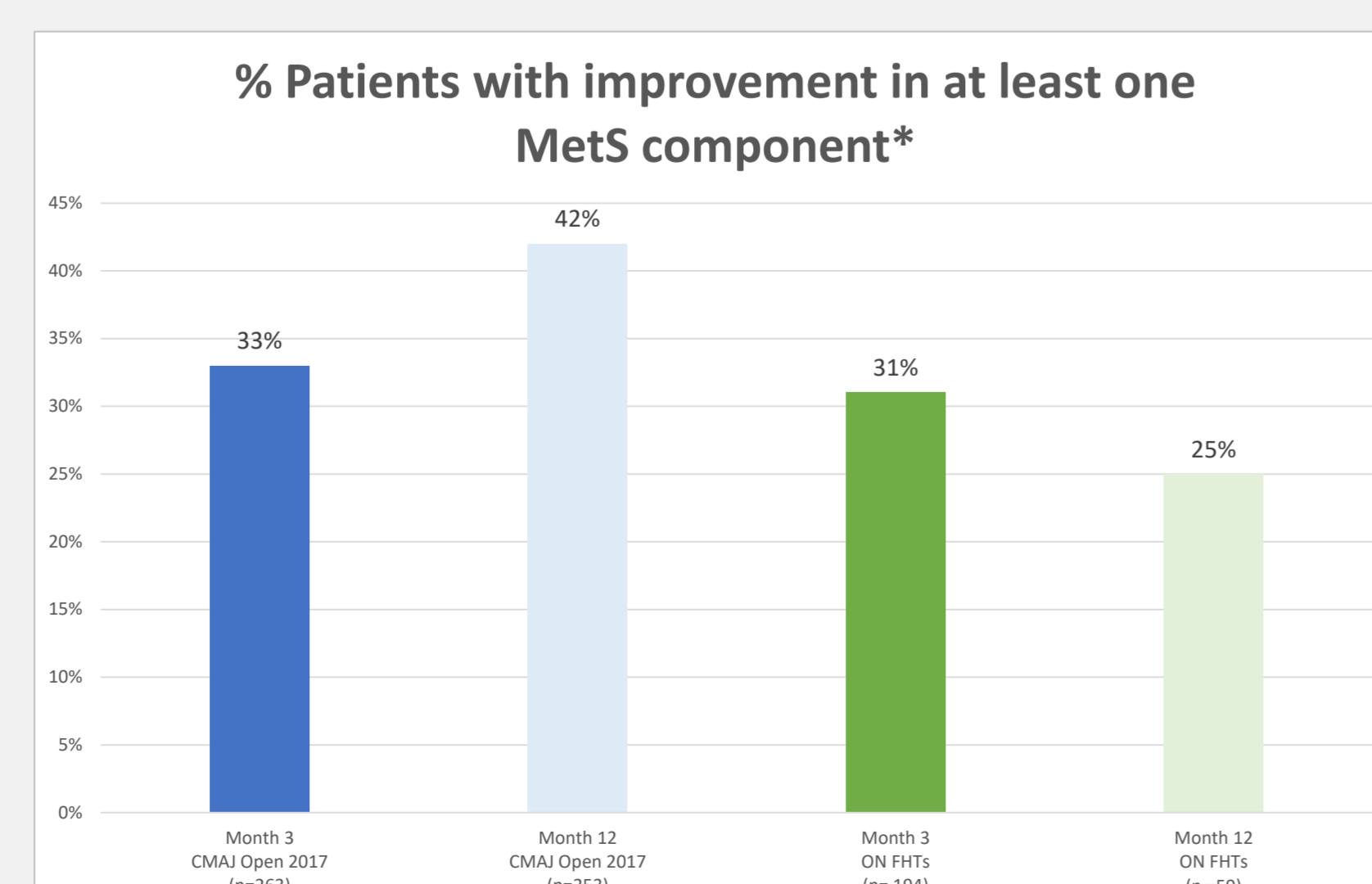


Figure 4. Improvement in MetS components*

*MetS components are high blood pressure, high blood sugars, high triglycerides, low HDL-C and large waist circumference

**results are a snapshot of data as of August 28 2019 and will evolve over time as numbers increase

Results

Patient Experiences

"We are very lucky to belong to the FHT and have been honored to be asked to be in this group"
Brockton Area Sept 2018

"I cannot say enough about how impressed and grateful I am for the warm, constructive support, education and non-judgemental attitude of the team. The approach utilized and engaged the whole person - cognitive, emotional and social dimensions. This approach generates commitment to change. I am very grateful."
Haliburton, May 2019

"The unhealthy eating habits that I had developed over many decades... are not easily "un-learned" and a one-shot visit to a medical professional was not going to change that. The re-programming of my attitudes and mis-information I held about eating are some of the benefits of the CHANGE program for me. A one size fits all advice would not have a long-term effect for me."
Brockton Area Sept 2018

"The CHANGE program has provided the information and incentive to help me modify how I approach food and exercise and has resulted in both weight loss and a reduction in my daily medication and insulin usage."
Kingston Area, Sept 2018

"My diabetes medication dose is cut in half in 3 months by doing more exercise and watching what I eat, I wonder why my doctor did not explain to me this before."
Brampton, January 2019



Figure 6. CHANGE Participants with FHT staff & group sessions

"The dedication, encouragement and commitment to see us succeed in our overall health and well being stands out in this program."
Brampton, June 2019

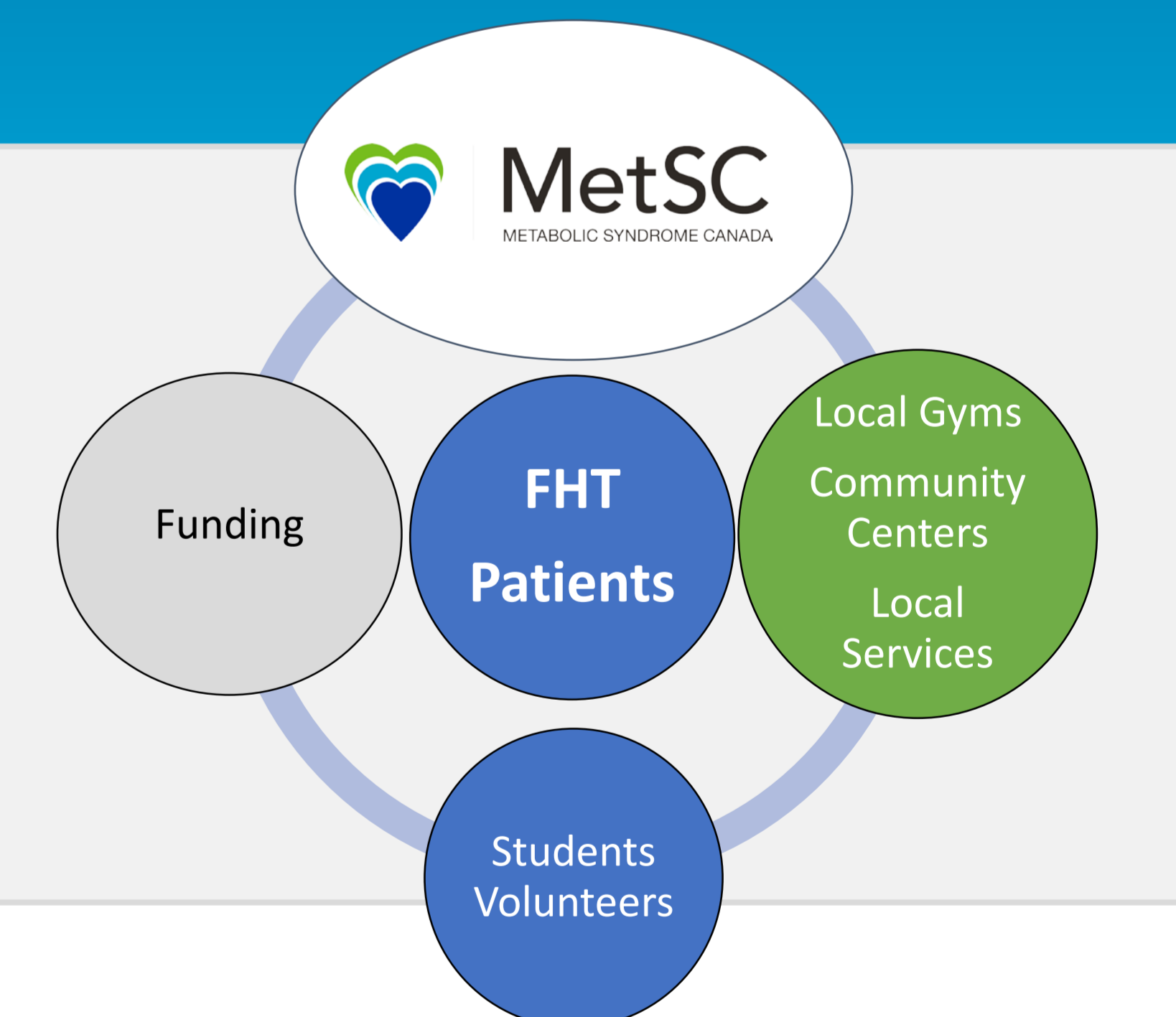
"We strongly recommend friends to join this program. Friends have commented that they are seeing great changes in us. The blood test also shows the improved results. We have told them to talk to their family doctor to get into the program."
Brampton July 2019

Staff Experiences

"It's great to be part of such a proactive initiative in healthcare. I decided to become a Registered Kinesiologist because I knew that there was a void in the healthcare system when it comes to preventing and managing chronic diseases with exercise. Through the CHANGE Program I have been able to work with more than 170 individuals with metabolic syndrome and other health issues. Seeing these individuals progress through the program has been truly rewarding as I am able to see a change in many aspects of their fitness, health, mood and attitude towards exercise and healthy eating. I particularly enjoy seeing the change in participants' confidence levels as they discover that they are capable of much more than they originally thought." - Debbie Valadao, Registered Kinesiologist, CHANGE Program, August 2019

Collaborative Partnerships Created

Participating FHTs and Metabolic Syndrome Canada (MetSC) have created partnerships with local community organizations such as gyms, community rental spaces, schools to hold the groups education and exercise sessions for the CHANGE Program. A funding grant from the Ontario Trillium Foundation is assisting the expansion of the CHANGE Program in the Halton-Peel region. A new nutrition toolkit (NU-CHANGE) for Canadians wishing to change their eating habits to prevent chronic diseases was created and launched with support from the Helderleigh Foundation and is available at www.metsc.ca



Conclusions

Through a collaborative team-based approach to diet and exercise in primary care, ON FHTs have been able to deliver the CHANGE Program to their patients and report improved dietary, physical activity and clinical outcomes related to minimizing cardio-metabolic risk. Patients and primary care team staff involved in the program have also reported positive experiences. Partnerships with non profit organizations, local gyms, community centres, volunteers and students have assisted with the implementation of the CHANGE Program in primary care.

References

- Jeejeebhoy K et al. Family physician-led, team-based, lifestyle intervention in patients with metabolic syndrome: results of a multicentre feasibility project. CMAJ Open 2017 14;5(1):E229-36
- Klein J et al. Patient experiences of a lifestyle program for metabolic syndrome offered in family medicine clinics: A mixed methods study. BMC Fam Pract 2018; 31;19(1):148

In Partnership with: