

TITLE: Virtual care outperforms in person care in a community-based full meal replacement intensive lifestyle program during the COVID-19 pandemic.

AUTHORS: Matthew Skeldon¹, David Harris^{2,3}, Robert Dent^{2,4}, Judy Y Shiau²

AFFILIATION:

¹ *Division of General Internal Medicine, Department of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada*

² *LEAF Weight Management Clinic, Division of Endocrinology and Metabolism, University of Ottawa, Ottawa, Ontario, Canada*

³ *Richmond Metabolic & Bariatric Surgery Program, Richmond, British Columbia, Canada*

⁴ *The Ottawa Hospital Weight Management Clinic, University of Ottawa, Ottawa, Canada*

Objective: To assess outcomes of a full meal replacement (FMR) intensive lifestyle intervention (ILI) program at a community weight management clinic and determine weight loss predictors.

Methods: A retrospective cohort study was undertaken involving 234 patients who started the program between January 1, 2016 and March 3, 2021. During the 24 week program, patients spent 12 weeks on FMR with Optifast® 900, before transitioning back to food for the remainder, with weekly follow up with a physician and group sessions with a dietitian. Visits were in person prior March 2020 and virtual afterward.

Results: Patients' average age was 47.5 years and 73.5% were female. Average weight loss was 14.3%. Significant associations included patients who attended classes virtually lost more weight (15.7% vs. 13.9%, $p = 0.0319$), patients on a GLP-1-RA (Glucagon-like Peptide-1 Receptor Agonist) prior lost less weight (11.4% vs. 14.6%, $p = 0.0248$). Other significant associations between groups were: HbA₁C (Hemoglobin A₁C) at baseline, weight change by midpoint of program, and classes attended.

Conclusion: The virtual FMR ILI achieved significantly more weight loss compared to in person care. More research is needed to determine how to best stratify care as virtual or in-person using an FMR

treatment protocols.