

Lifestyle Intervention & Primary Care Integration: A Feasibility Study

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Introduction

- Our current health care system allocates limited time for physicians to offer thorough consultation in lifestyle and behavioral change.
- We propose a cost-effective plan to complement and improve adherence to treatments: a Healthy Eating and Lifestyle Management Education (HEAL ME) curriculum to train medical students to become Health Coaches (HCs).
- When patients are given a scientific understanding of their own condition, we predict improved adherence and greater potential for behavior change.
- We explore whether mobilization of medical students to serve as Health Coaches in a local Federally Qualified Health Center is a viable, low-cost means of improving community health literacy.

Objectives

- The first aim of this pilot study was to assess the process with which the health coach model may be integrated into the primary care clinic in a manner that does not increase costs or obstruct usual clinic functions. To do this we will seek provider input through informal interviews at the conclusion of the program.
- Explore the process of training medical students to serve as health coaches.
- Identify improvements in patient health behaviors and self-management of chronic disease through a pre-post survey of self-reported behaviors.

Methods

Study Design

- 100 patients who were overweight, had diabetes, and/or hypertension were referred by physicians.
- 72 patients were overweight by body mass index, and 21 patients were obese.
- Of all patients with a diagnosis of either overweight or obesity, 75 had a diagnosis of type 2 diabetes, hypertension, or both.
- Before each HC session, each patient completed a survey (Likert Scale) to report lifestyle habits.
- Health coaches performed 15-minute motivational interviewing sessions to discuss the patient's current health and establish a plan.
- In 3 weeks, the survey was administered over the phone.

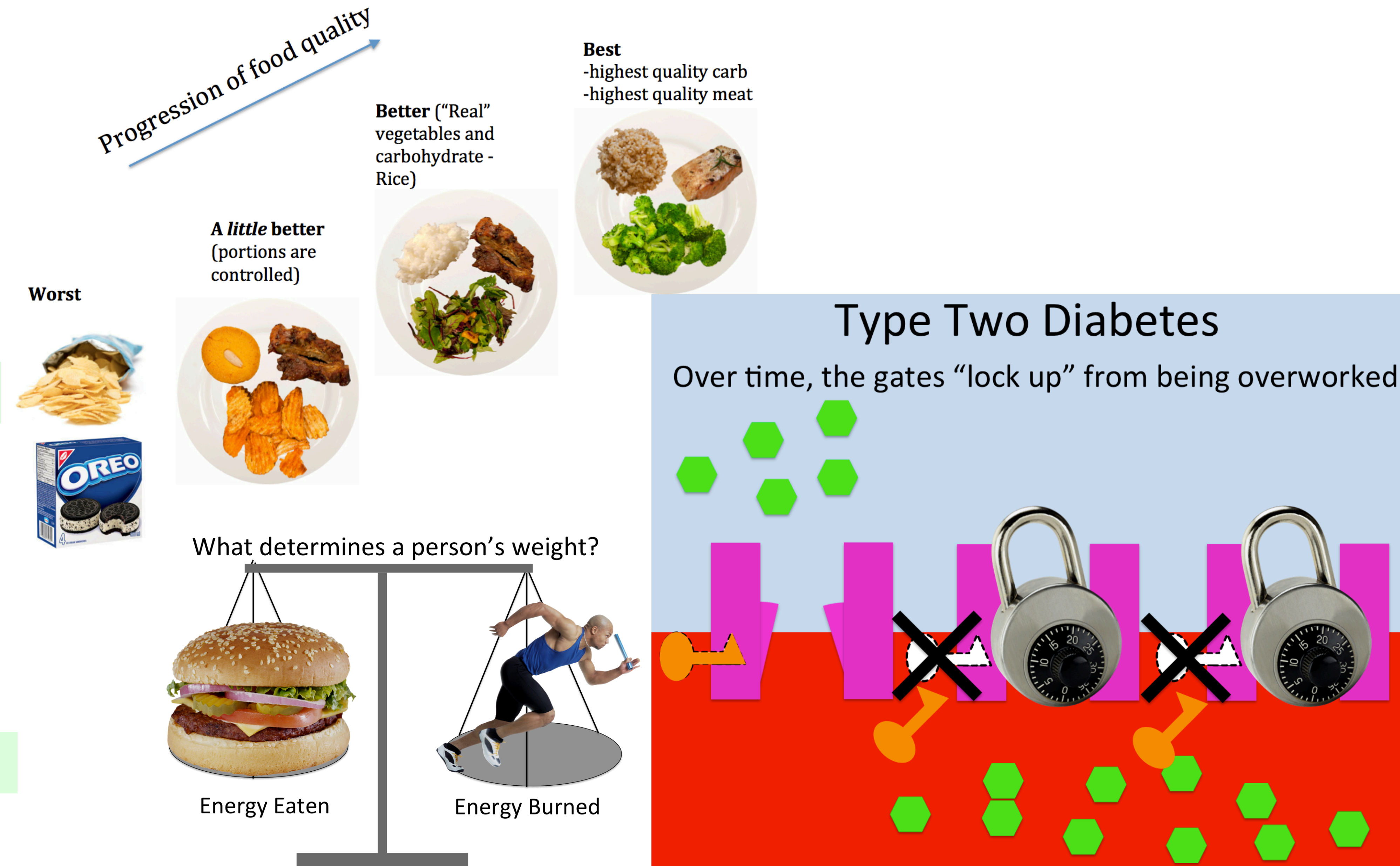
HEAL ME Curriculum for Training of Health Coaches

- Five Washington University medical students received a 2-hour training.
- Coaches were trained in Motivational Interviewing and in the Transtheoretical Model of Behavior Change¹ to build proficiency in behavioral counseling for weight loss and management obesity, hypertension, and diabetes.
- The curriculum was designed to balance the concept of motivational "hand holding" and empowerment with scientific evidence.
- In conventional nutrition education, advice to patients is often sterilized and taken out of the context of the patient's history, culture, and community.
- The HEAL ME curriculum is built upon the theory that when a patient's path to health is properly delineated based on his personal preferences, values, and circumstances, the failure of self-management goals is less likely.

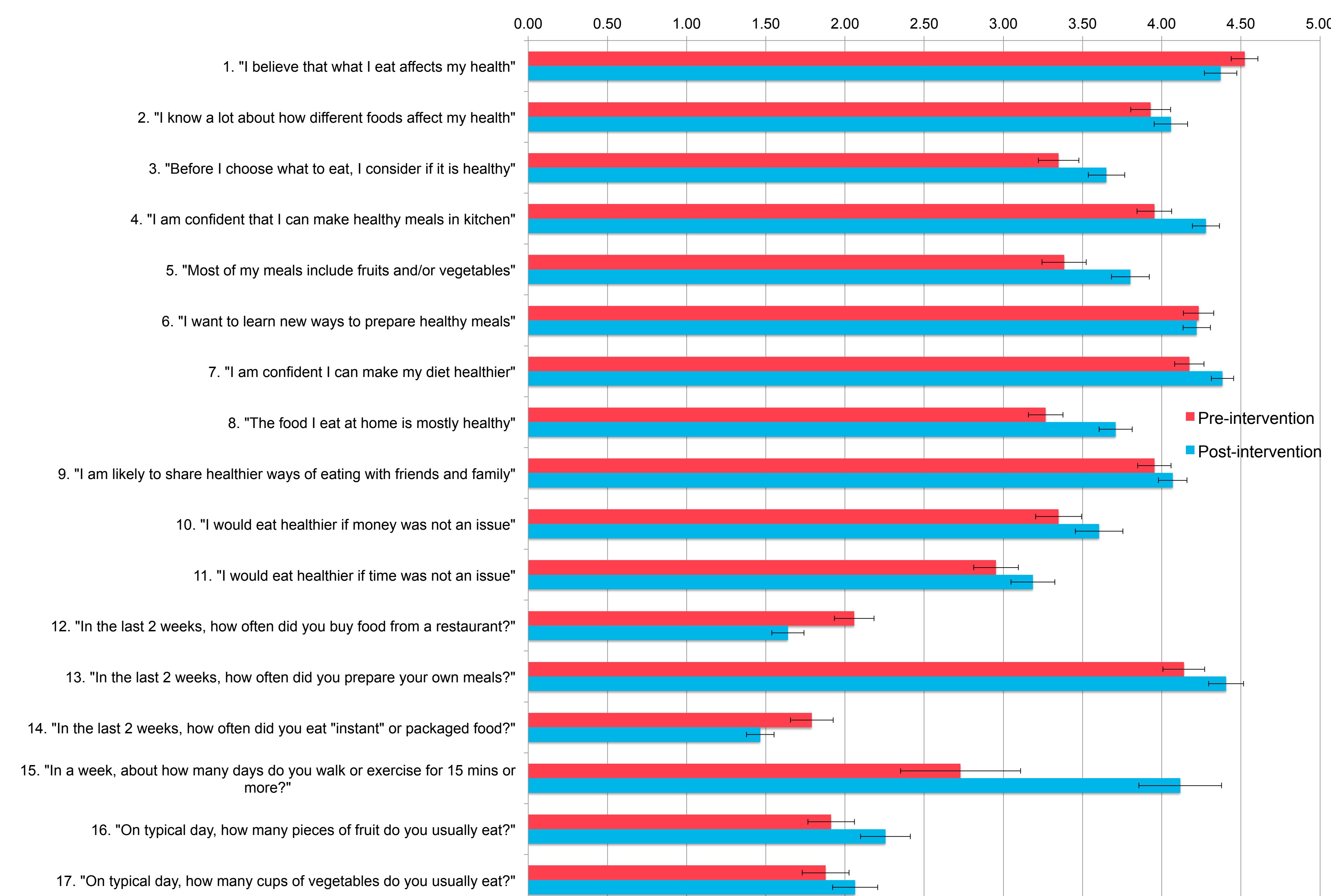
HEAL ME Curriculum for Educating Patients

- Patients learn the pathophysiology of their current health conditions as well as the clinical rationale for lifestyle modifications.
- Patients are shown animated slideshow presentations to better understand chronic health conditions of DM, HTN, and HL.
- Patients were counseled on portion size, exercise, and meal preparation (portion control and reduced salt, fat, and sugar content)⁴.
- The primary dietary guideline used: limiting each meal to an 8.5-inch diameter plate, of which ½ is composed of vegetables and fruit, ¼ is starch, and ¼ protein².

Methods: Example Nutrition Education Diagrams



Perception of Health Behaviors Before and 3 Weeks After 15-Minute Health Coach Interventions



Results

- Of the 100 patients were enrolled in the study, 86 completed both the intake and outtake survey.
- Of 15 total survey questions detailing the patient's self-perception of health behaviors, the average response for 10 survey questions showed a statistically significant trend towards lifestyle improvement.
- Several physicians consistently reported "success stories" of weight loss, improved blood pressure, or improved A1C for patients who claimed to have adhered to the health coaches' recommendations.
- The medical students reported positive accounts of their experiences as health coaches and voiced appreciation for the opportunity to practice motivational interviewing, gain exposure to the health issues in underserved communities, and play active roles in patient care.
- As expected, medical students quickly adopted the motivational interviewing skills and became relatively proficient in performing brief lifestyle interventions within 1-2 days of practice.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Pre (avg)	4.52	3.93	3.35	3.95	3.38	4.23	4.17	3.27	3.95	3.35	2.95	2.06	4.14	1.79	2.73	1.91	1.88
	±0.08	±0.13	±0.13	±0.11	±0.14	±0.1	±0.09	±0.11	±0.11	±0.14	±0.14	±0.13	±0.13	±0.13	±0.14	±0.15	±0.15
Post (avg)	4.37	4.06	3.65	4.28	3.80	4.22	4.38	3.71	4.07	3.60	3.19	1.64	4.41	1.47	4.12	2.26	2.06
	±0.1	±0.11	±0.12	±0.09	±0.12	±0.09	±0.07	±0.1	±0.09	±0.15	±0.14	±0.1	±0.11	±0.09	±0.26	±0.16	±0.14
Diff.	-0.15	0.13	0.30	0.33	0.42	-0.01	0.21	0.44	0.12	0.26	0.23	-0.42	0.27	-0.33	1.39	0.34	0.19
	p=0.082	p=0.140	p=0.007	p=0.001	p=0.004	p=0.457	p=0.011	p<0.001	p=0.180	p=0.026	p=0.057	p<0.001	p=0.031	p=0.004	p=0.003	p=0.015	p=0.107

Discussion

- Medical students show promise as promoters of health literacy in underserved communities.
- Health coaches report that less than 10% of patients were able to accurately describe the significance of their personal health conditions which often included long-standing diagnoses of diabetes, hypertension, or obesity.
- The 15-minute HEAL ME intervention appeared to have a significantly positive effect (p<0.05) on the most clinically significant health behaviors: physical activity, meal choices and confidence in one's ability to improve one's diet.
- Studies to compare to standard care are needed.

Conclusion

- Health coaches may have a significant impact on clinical outcomes. However, a randomized, controlled study must be performed to fully characterize the benefit of the HEAL ME curriculum compared to standard care.
- The HEAL ME model demonstrates feasibility of implementation in a busy primary care clinic and shows promise as an asset to clinical care based on anecdotal evidence of improved clinical measures such as weight, blood pressure, and hemoglobin A1c.
- We intend to perform a randomized, controlled study of weight, blood pressure, lipid panel, and hemoglobin A1C to more reliably characterize the impact of the intervention on clinical outcomes.

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