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# Effectiveness of a Primary Care Nutrition Education/VLCD Diet Program

Jessica Vitale, Ayesha Baig\*\*, Connor McElwee\*\*, Ketav Patel\*\*, Cynthia Cheng\*

# Disclosures

- None.

- In 2017–2018, the age-adjusted prevalence of obesity in adults was 42.4%.<sup>1</sup>
- That same year, 13% of adults in the U.S. had diabetes, and another 34% were considered pre-diabetic.<sup>2</sup>
- Previous study, n=76, 12 weeks: Medical Nutrition Therapy (MNT) program for prediabetes resulted in decreased HbA1c, LDL, TC and overall risk of developing diabetes.<sup>3</sup>
- Jefferson currently has an MNT program with virtual classes to assist patients with managing their diet, exercise, medication changes and understanding the physiology/psychology of obesity and their conditions.
- Better knowledge of the effects of MNT programs can help broaden their services to more patients.

# Objectives & Hypothesis

- Research Question
  - What is the effect of a Medical Nutrition Therapy (MNT) program on management of weight loss, blood pressure, glucose and cholesterol?
- Hypothesis
  - Patients who complete the MNT program will have improved weight management, blood pressure, blood glucose and cholesterol.

# Approach & Results

- Study design: **Medical Chart Review**
- Population/Study Sample: **Patients enrolled in Jefferson's MNT program**
- Intervention: **Jefferson's Medical Nutritional Therapy Program**
- Outcome: **Weight changes (lbs, %), blood pressure, blood glucose, HbA1c, cholesterol, length in program**
- Data source and collection: **EPIC**
- Analysis: **TTEST**

# Approach & Results

TTESTS for variable change  
N = 33

Percent weight change:

- 10% weight loss in Year 1
- 6% weight regain in Year 2

Increase in HDL

Variable: HDLDiff

N	Mean	Std Dev	Std Err	Minimum	Maximum
5	-13.2000	13.4425	6.0117	-34.0000	-2.0000

Mean	95% CL Mean	Std Dev	95% CL Std Dev
-13.2000	-29.8910	3.4910	13.4425

DF	t Value	Pr >  t
4	-2.20	0.0931

Variable: PCTWTCHGYR1

N	Mean	Std Dev	Std Err	Minimum	Maximum
14	0.0975	0.0812	0.0217	-0.0169	0.2361

Mean	95% CL Mean	Std Dev	95% CL Std Dev
0.0975	0.0506	0.1443	0.0812

DF	t Value	Pr >  t
13	4.49	0.0006

Variable: PCTWTCHGYR2

N	Mean	Std Dev	Std Err	Minimum	Maximum
10	-0.0567	0.0571	0.0181	-0.1674	0.0343

Mean	95% CL Mean	Std Dev	95% CL Std Dev
-0.0567	-0.0976	-0.0158	0.0571

DF	t Value	Pr >  t
9	-3.14	0.0120



# Conclusions

- Our findings show that adherence to the MNT program resulted in 10% weight loss in 1 year, which is consistent with current research.
- There was a 6% gain of weight in the 2 years out from the program, but overall, there was still a 4% decrease in weight compared to before the program.
- There was increase in HDL, but no change in LDL and TC levels; all results need confirmation with a larger sample size.

# Future Directions

- First year SI students
  - Finishing retrospective data collection from the hospital MNT program
  - Design of a prospective outpatient program
    - No medical weight loss supplement, more focused on the nutrition classes/student health coaching, wearable technology, daily reminders with MyFitnessPal app

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- Dr. Cynthia Cheng, *Jefferson Department of Family and Community Medicine*
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