

Preliminary Analysis of a Pharmacist-Led National Diabetes Prevention Program in a Community Setting

Ryan Templeton, PharmD^{1,2}, Christy Holland, PharmD², Ashley Abode, PharmD²,
Macary Marciniak, PharmD, BCACP, BCPS, FAPhA¹

¹University of North Carolina at Chapel Hill, Chapel Hill, NC; ²Realo Discount Drugs, New Bern, NC

BACKGROUND

- The Diabetes Prevention Program (DPP) study demonstrated that lifestyle modifications were nearly twice as effective in preventing the onset of Type 2 diabetes as metformin alone in high-risk populations.
- The National Diabetes Prevention Program (NDPP) was created by the Centers for Disease Control and Prevention (CDC) to bring the benefits of lifestyle change to the community.
- The goal for the program is for participants to change their diet and physical activity in order to achieve weight loss and prevent diabetes. The goal weight loss is 7% of baseline body weight.
- There are no published reports utilizing the NDPP in a community pharmacy setting

OBJECTIVE

- The objective of this feasibility study was to implement the NDPP curriculum in a community pharmacy setting and assess its effectiveness for helping patients lose weight.

METHODS

STUDY DESIGN

- This was a prospective, observational study. All participants in the program received the benefit of the lifestyle intervention, and there was no randomization and no control.

STUDY LOCATION

- One independent community pharmacy located in New Bern, North Carolina.

STUDY DURATION

- The length of the entire program is one year. Phase I consists of 16 weekly one-hour sessions, followed by Phase II, which consists of monthly one-hour sessions.
- The data for this analysis was taken from Phase I. The program is still on-going.

INCLUSION CRITERIA

- Be at least 18 years of age or older.
- Have a body mass index (BMI) of ≥ 24 kg/m² (≥ 22 kg/m², if Asian).
- Have pre-diabetes or history of gestational diabetes.

PRELIMINARY RESULTS

PARTICIPANT DEMOGRAPHICS

	Participant 1	Participant 2
Age	66	64
Sex	Female	Female
Race	White	White
Baseline body weight (lbs)	293	201
Baseline BMI	48.8	33.4
Number of sessions attended (of 16)	13	14
Total weight lost (lbs)	18.6	20.6
Total % weight loss	6.3 %	10.2 %

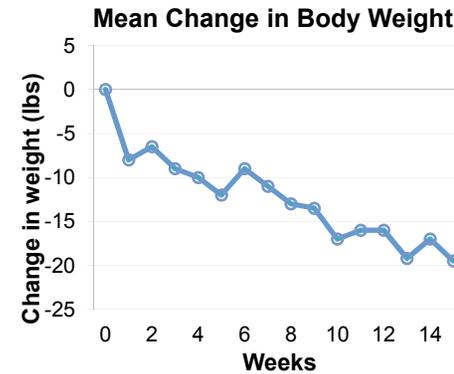


Figure 1. Mean weight loss over time as compared to baseline. n=2

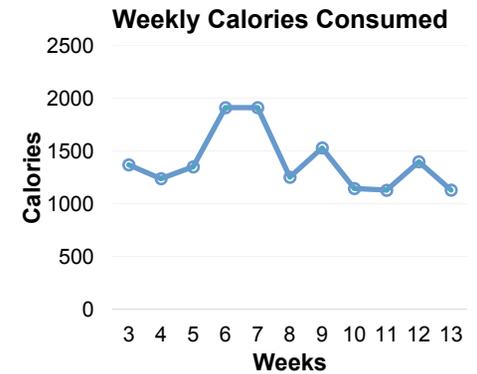


Figure 2. Data collection does not start until Week 3, and participant data after week 13 was incomplete for analysis. n=2

PROGRAM DESCRIPTION

- Twelve participants were identified for participation based on a blood test and/or qualifying risk assessment score. Seven attended the first session, and two remained enrolled to the 16th session.
- Participants were weighed prior to each session using an electronic scale.
- Food and activity trackers were used to log weekly diet descriptions, fat grams, calories, and minutes of physical activity were recorded.

LIMITATIONS

- The size of the class (n=2) was not large enough to perform any statistical analysis for comparison to other studies.
- The data for minutes of physical activity were vastly different between both participants. Physical activity varied from 30 to 2820 minutes per week.
- Fat grams consumed were largely unchanged over 16 weeks, and did not show a clear trend. However, one participant had a large increase during the 6th week.

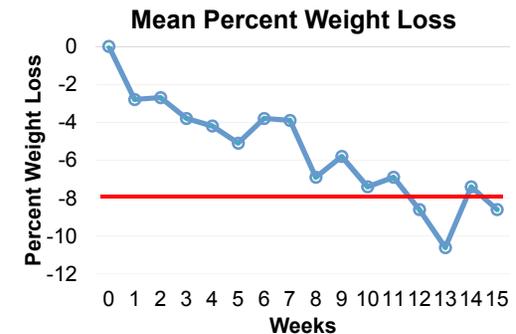


Figure 3. Mean percent weight loss over time as compared to baseline. Red line indicates goal weight loss of 7%. n=2

CONCLUSIONS

- Preliminary analysis has shown that a National Diabetes Prevention Program can help participants lose weight in a community pharmacy setting.
- Fat grams and physical activity showed no clear trend, but calories consumed decreased somewhat over time.
- Barriers to success included loss of participants over time and low session attendance rates.