Introduction

- In 2015 it was estimated that 84.1 million Americans (26% population) had pre-diabetes1.
- Self-monitoring of blood glucose has shown to improve HgA1c in diabetic patients with poorly controlled diabetes. Blood has not been fully explored. glucometer monitoring as an intervention for patients with pre-diabetes.

Objective

- The purpose of this study is to demonstrate that use of glucometers in pre-diabetic patients will decrease the progression towards type 2 diabetes.
- Hypothesis: Pre-diabetic patients who are aware of their own blood glucose levels will be more motivated to implement lifestyle modifications to decrease the progression of disease.

Design

- Simple Sample Pretest/Posttest Intervention Pilot Study.

Setting

- Family Health Clinic (FHC) in San Antonio, Texas is a family medicine residency training clinic serving as a predominately urban, low income Hispanic population.

Participants

- Adult patients, age 45-65, male or female, established with FHC (n=30), English or Spanish speaking, HgA1c 5.7-6.4%, with and without previous history of diabetes
- Exclusion criteria includes:
  1. currently on anticoagulants
  2. cognitive impairment

Intervention

- 60-minute educational session provided by licensed dietitian and physician addressing diabetic friendly diet, physical activity, and glucometer use. Intervention materials include glucometer, blood glucose and food logbook, nutrition and physical activity guides.

Preliminary Results

- 18 Participants have been recruited for the study. Preliminary results show that majority of the participants are female (72%), Hispanic (72%) with a mean age of 51. Baseline HbA1C range from 5.7-6.1 with HbA1C of 5.8 in 50%(9). Mean HbA1c has not increased from baseline HbA1c of 5.86 (SD= 0.12).

Conclusion

- This study is a work in progress. Overall patients reported dietary changes, portion control, and walking as key tools. Subjectively they reported feeling more energetic. The results will provide a better understanding of which tools may be useful in slowing, or even preventing the progression of pre-diabetes to diabetes.

Feedback:

- Transportation proves to be a hindrance to patient involvement with study
- Patients took interest in personal nutrition counseling sessions in addition to the group sessions
- Add a control group to the study design: patients who are equipped with interventions vs. those who are not (simply receiving recommendations from their doctor)
- Hold separate group sessions for English vs. Spanish speakers to maximize session flow and time utilization

Enrolled Patients: 18

<table>
<thead>
<tr>
<th>Age, mean (years)</th>
<th>51</th>
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</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female (%)</td>
<td>72</td>
</tr>
<tr>
<td>Male (%)</td>
<td>28</td>
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</tbody>
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Preferred Language

| English (%) | 28 |
| Spanish (%) | 72 |
| Use Metformin (%) | 20 |

References