

**POPINVITED: ID# 101008**

**Title:**

Nurse Practitioner-Led Diabetes Prevention Program

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**ACCEPTED**

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**Session Title:**

Rising Stars of Research and Scholarship Invited Student Posters

**Slot:**

RS PST1: Sunday, 17 November 2019: 11:45 AM-12:15 PM

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**Applicable Category:**

Clinical, Academic, Students

**Keywords:**

Diabetes Prevention Program, Group education and Prediabetes

**References:**

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### **Abstract Summary:**

Patient education to prevent diabetes has proven effective when provided in a group setting. This DNP project, a single-subject research design, tested the efficacy of Prevent T2D CDC program led by a nurse practitioner. The findings will help clinicians plan programs for disease prevention in their communities.

### **Content Outline:**

1. Introduction
  1. Prediabetes background
  2. Diabetes Prevention Program
  3. Purpose of project
2. Methods/design
3. Findings/discussion

### **Topic Selection:**

Rising Stars of Research and Scholarship Invited Student Posters (25201)

### **Abstract Text:**

#### **Background:**

Prediabetes and its association with obesity is a world-wide health concern. One in three Americans had prediabetes in 2015 and 90% of those adults were unaware. Of the 84 million adults with prediabetes, more than half were under the age of 64. There were slightly more men than women with prediabetes but along racial/ethnicity lines, the numbers are similar. Prediabetes left untreated most often advances to diabetes, putting people at risk to develop microvascular and macrovascular complications. In the United States, the total direct and indirect costs of diabetes was \$245 billion.

In the clinic setting, patient education to promote health and prevent disease is beneficial but often inadequate due to time constraints. The time required to discuss lifestyle behavior changes can be managed more resourcefully within a group setting. The goal of diabetes prevention is to reduce morbidity and mortality, improve quality of life, and ultimately, reduce healthcare costs.

A lifestyle change program to prevent diabetes, based on clinical trials, demonstrated a 58% reduction in the progression of prediabetes to diabetes by 5% to 7% weight reduction and an increase in physical activity. Due to the effectiveness of these lifestyle interventions, the Diabetes Prevention Program (DPP) was jointly developed by the National Institute of Health and the Centers for Disease Control and Prevention (CDC) Division of Diabetes Translation. Researchers and authors of the program hope to see it implemented in communities across the nation before the epidemic of diabetes and obesity intensifies.

### **Methods/Design:**

This DNP project was a community based DPP providing education to individuals to promote self-efficacy. This project tested the efficacy of the *Prevent T2D* program led by a nurse practitioner in a community clinic for underinsured patients. It was held weekly for 16 weeks and followed specific CDC *Prevent T2D* program guidelines. Each subject received incentives at key intervals. The project outcomes were to reduce weight by 5 to 7%, to reduce BMI, to reduce HbA1c level, and to increase weekly exercise to 150 minutes of moderate intensity. These outcomes were compared to the CDC's *Prevent T2D* program objectives: 1) to increase weekly exercise to 150 minutes of moderate intensity, and 2) to lose 5% to 7% of initial weight by the end of six months.

The design of this DNP project was single-subject research using an A-B design. This study had a small number of subjects, N=3 but use of this format allowed better intrasubject control than a group study. This design allowed the project coordinator to identify any extraneous variable more easily and helped identify functional relationships between an independent variable and a dependent variable.

### **Discussion:**

Because the project coordinator of this DNP study is a nurse practitioner in the same community clinic, the subjects from the study agreed to continue with the sessions as outlined in the *Prevent T2D* program. The sessions will be held monthly out to one year. Findings from this study will be shared with the CDC National Diabetes Prevention Program for statistical purposes. The findings will determine the efficiency and financial costs of implementing the *Prevent T2D* program into a community setting by a clinician. The findings of this study will help other providers who may be tasked with implementing health promotion and disease prevention projects in their community.