

Implementation of a Diabetes Education Program in the Correctional Setting: A Project Proposal

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Introduction & Background

- Diabetes affects 37.3 million people - 11.3% of the U.S. population
- Annually in the U.S., diabetes leads to 102,188 deaths - 31 per 100,000
- Diabetes costs \$327 billion annually – the costliest chronic condition
- 51.7 percent of diabetics ever participated in diabetic education
- Studies on incarcerated adults are lacking, and when carried out, research in the correctional setting is challenging
- Incarcerated adults with diabetes demonstrate poor disease control, which is associated with increased complications
- Health literacy is limited among incarcerated individuals
- 72% of incarcerated young men suffer from limited health literacy
- Health literacy is important to good patient outcomes
- Data on diabetic education in incarcerated adults is sparse
- Diabetic education is effective in improving many diabetic outcomes
 - Glycated hemoglobin, blood pressure, lipid levels, body weight, diabetic knowledge, quality of life, and self-management behaviors
- Diabetic education optimally contains education on the disease, including diet, exercise, medication management, and goal setting

Problem Statement & PICOT

The lack of diabetic knowledge among incarcerated adults may contribute to limited engagement in diabetic self-management behaviors and poor diabetic outcomes within the correctional setting.

(P) Within a population of incarcerated male adults, how does the provision of (I) diabetic education and counseling by a certified trained nurse, compared to (C) the current, conventional practice of no formal diabetic education, affect (O) diabetic self-care activities over an observed period (T) of three to four months?

Significance

- The patient is responsible for positive diabetic self-management
- The nurse's role in motivating and educating the patient is paramount to good health outcomes
- Nurses comprise 48 percent of diabetic educators
- Implementing a nurse-run diabetic education program in an underserved population significantly enhances the profession

Project Description & Design

Theoretical Frameworks

- PDSA Quality Improvement Model
- Nola Pender's Health Promotion Model

Objectives

- Aim - to increase diabetic knowledge among incarcerated adults
- Objectives – to conduct the following:
 1. Baseline assessment
 2. Educational intervention
 3. Effectiveness assessment
 4. Dissemination

Methodology

- Target population - all incarcerated diabetics
- Sample – volunteers from a medium-sized Midwestern all-male correctional institution
- Convenience sample and no control group will be utilized
- Recruitment – all diabetics will be offered a handout with signups available in the clinic, pill line, and glucose testing line
- Pre-test/post-test quality improvement project

Timeline



Instrumentation – data will be self-reported on anonymous forms

- Demographic survey - biographical data and self-reported glycated hemoglobin
- DSMQ - Sum score, dietary control, physical activity, glucose management, and physician contact
- Educational intervention – 4-one-hour classes and one individual counseling session
- Post-intervention questionnaire – Evaluation of the course and self-reported glycated hemoglobin
- DSMQ and self-reported glycated hemoglobin
- Data will be aggregated and analyzed for changes resulting from the intervention using a paired t-test to compare scores before and after diabetic education.

Human Subject Protection

1. Otterbein IRB
2. Human Subjects Research Review Committee
3. Written consent
4. Anonymous data collection
5. Aggregated data

Unanticipated Barriers/Challenges

- Timeline of implementation was delayed – administrative changes and COVID-19 restrictions

Budget

Activity	Cost
Project manager's time	No cost
Photocopying	\$200
Food and drink	\$250
Office supplies	\$50
Total cost	\$500

Forms



Outcomes & Evaluation

Data Analysis and Results

- Demographic & pre-intervention DSMQ data will be recorded in Excel.
- After the education intervention, the post-intervention survey and DSMQ data will be recorded in Excel.
- Pre-and post-intervention DSMQ data and glycated hemoglobin scores will be evaluated using the Excel t-Test: Paired Two Sample for Means tool.
- Project success occurs if the aggregate data on the DSMQ and glycated hemoglobin show statistically significant improvements.

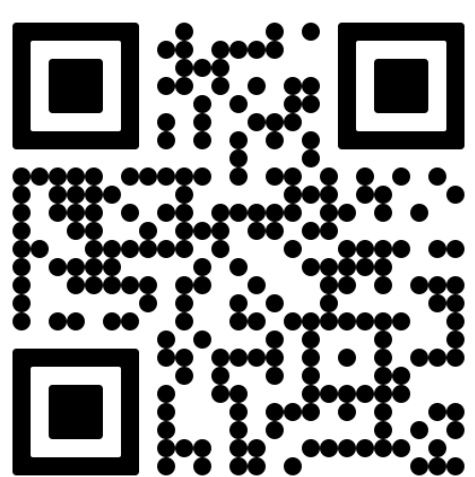
Incurred barriers

- Project approval
- Staff and patient resistance
- Compliance with class attendance

Conclusion & Recommendations

- Diabetic education improves health outcomes.
- The literature on diabetic education in the correctional setting is sparse.
- In general, incarcerated adults demonstrate low levels of health literacy.
- Project implementation in a correctional setting is challenging.
- Positive results can impact how diabetes will be managed.
- Future projects
 - 1. Methods to expand and modify diabetic education in corrections
 - 2. Longer-time frames to study the effects of diabetic education

Abstract



References

