



Observational Outcomes of a Multicomponent Diabetes Management Program in Inmate Populations

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Background



- Diabetes Mellitus (DM) is a chronic medical condition affecting approximately 29.1 million individuals in the United States (Centers for Disease Control and Prevention, 2014).
- Management of DM and associated complications constitutes an annual cost of more than 245 billion dollars (National Diabetes Statistics Report, 2014).
- The Incidence of DM in correctional facilities is less than that of the general population; however, aging inmate populations has led to an increase in the incidence of DM in this setting (Binswanger, Krueger, & Steiner, 2009).
- Treatment of inmates diagnosed with DM is costly and places financial strain on correctional healthcare systems (Stal, 2012).
- Increased financial burden has prompted correctional facilities to re-evaluate chronic disease management, with the goal of developing innovative approaches to care delivery to enhance outcomes and decrease financial burden (Perry, Bennet, & Lapworth, 2010).

Purpose

This study serves as a qualitative analysis of one prison's approach to diabetes management

The aim is to analyze observational data provided by healthcare workers overseeing the management program, as a qualitative measure of the program's overall efficacy.

- The particular correctional facility utilizes a multicomponent approach to diabetes management incorporating self-management education, lifestyle modification, and behavioral change strategies, as recommended by the American Diabetes Association's guidelines for diabetes management in correctional institutions (2014).
- The goal of this approach is to enhance glycemic control, improve patient knowledge, increase participation in care, and reduce overall healthcare expenditure while simultaneously preparing the inmates to successfully manage their DM following re-entry into the community.

Methods

Evaluation of the diabetes management program's efficacy took place by collecting and analyzing subjective observational outcome data.

Data were provided by healthcare professionals working within the prison health setting who have observed the health outcomes associated with the program.

Data Collection:

- Face to face interviews
- Utilization of a standardized questionnaire
- Total of five healthcare professionals interviewed (83% response rate)

Data Analysis:

- Content Analysis (Krippendorff, 2013)
- Responses assessed for trends/variations
- Identification of key words/themes

Participant Interview Guide

1. Describe the approach taken to diabetes management in this clinical setting.
2. Tell me about the criteria that exist for participation in this program.
3. Explain the techniques utilized to encourage self-management strategies.
4. Describe the techniques incorporated to encourage adoption of lifestyle modification.
5. Explain the incentives that exist to encourage active participation in diabetes management.
6. How have these incentives proven to be effective?
7. Describe the role or expectations of the inmates in regards to participation in this program.
8. Describe the role or expectations of the medical staff in regards to this program.
10. Describe a typical plan of care for an individual enrolled in this diabetes management program (How often do appointments occur; How long are they; What is discussed; etc.)
11. How do you feel inmates perceive this program?
12. How has this program contributed to the management of diabetes?
13. Tell me some of the direct health benefits that have been observed related to this approach.
14. Describe some of the indirect benefits that have been observed related to this approach?
15. In what ways has this management program assisted inmates in their transition back into their communities?
16. Have any negative or unanticipated outcomes occurred as a result of this management approach? Please explain.
17. Describe any revisions that have been made to the program since implementation.
18. Is there anything else you would like to share about the diabetes management program?

Results

Themes Identified

Key Interventions:

- Clearly defined expectations
- Multidisciplinary education
- Frequent/Routine follow-up
- Emphasis on self-management strategies
- Lifestyle modification
- Incorporation of Incentives/penalties
- Group support

Direct Health Outcomes Observed:

- Weight loss
- Enhanced glycemic control
- Enhanced blood pressure control
- Decreased pharmacologic needs
- Enhanced knowledge regarding DM and disease management

- #### Indirect Benefits Observed:
- Increased energy
 - Enhanced mood
 - Improved self-esteem
 - Improved behavior/interpersonal relationship skills
 - Decreased use of financial resources

Unintended Outcomes:

- Transitions to higher security level
- Abuse of incentives
- Perceived as unfair

Lessons Learned:

- High rate of success due to increased environmental control
- Minimize incentives to discourage abuse and promote wellness
- Encourage participation of all

Conclusions

Chronic disease management remains a challenge for both healthcare professionals and those diagnosed with the disease. Many barriers exist hindering appropriate disease management such as lack of patient understanding, limited patient engagement, and high costs associated with treatment. Management programs focusing on education and self-management strategies shift patients from passive recipients of healthcare services to active participants in care. This transition has demonstrated profound success in the inmate population and similar programs may be adapted outside of this setting or applied to the management of other chronic diseases.

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