Issues Related to Health Disparities & its´ Role in Self-Management of Type 2 Diabetes

Background

Diabetes for Life (DFL) is a project of the Healthy Memphis Common Table and Memphis Healthy Churches. DFL is a self-management program aimed at reducing health disparities among African Americans with Type II diabetes in Memphis, Tennessee and Shelby County. This program is one of five national sites that constitute The Alliance to Reduce Disparities in Diabetes; a five-year grant funded initiative of The Merck Foundation.

Program Objectives

Objective:
- Implement effective community models of self-management that facilitate lifestyle modification to improve outcomes
- Establish innovative partnerships that promote chronic disease management through measurable outcomes

Learning Objectives:
- Identify barriers to self-management for individuals living with type 2 diabetes
- Discuss innovative resources and strategies to address barriers to self-management for individuals living with type 2 diabetes

Research Hypothesis/Purpose

The purpose of the Diabetes for Life project (DFL) is to reduce health disparities among African Americans with type 2 diabetes in Memphis, Tennessee and Shelby County. The issues that present significant challenges to self-management include the following: need for proven evidence-based chronic disease management programs, increased access/utilization of resources that promote and maintain weight loss & nutritional counseling, case management support for diabetics and their families, and implementation of standard quality management clinical improvement procedures. To reach its overall objective the DFL project has set three goals:

1. Improve diabetes self-management skills of patients enrolled in Diabetes for Life.
2. Implement standard quality management/clinical improvement procedures for the 6 targeted participating primary medical care practices.
3. Ensure the effectiveness of the Diabetes for Life project through evaluation and reporting

Study Design Methods

A total 441 participants were enrolled in the Diabetes for Life project (DFL) study between December 2009 and January 2012. A comparison group of 66 participants was selected that voluntarily were not exposed to support services. DFL participant enrollment consists of referrals from community and target primary medical care practices.

Currently, our study intervention group is comprised of N= 212 participants. A majority of those enrolled are female with a mean age of 54. DFL study participants were selected based on qualifying factors: African American adult over the age 18 and a diagnosis of type 2 diabetes within the last 10 years. Upon meeting general eligibility requirements, the clients participated in the following:

- Referral form collected various clinical measures: Hemoglobin A1C (HbA1C); Anthropometrics; BMI; and Lipid Panels.
- Consent forms, HIPAA authorization form and demographic assessment forms.
- Health behavior survey is administered to the participants which take approximately 35-45 minutes and covers several domains of behavioral and situational factors related to diabetes self-management, such as: health care utilization, trust in health care provider, self-efficacy and perceived competence for diabetes self-management, resources and supports for diabetes self-management, as well as health-related quality of life
- Explanation of the study protocols and the support services available with participation: case management, diabetes self-management education, nutrition and physical fitness education.
- Group education which consists of three 2-hour sessions over a 3 week period (one session per week).

Statistical and/or Analytical Methods Used:

The Diabetes for Life (DFL) utilizes a quasi-experimental design analyzing the differences in outcomes between the clients served in the six targeted clinical practices clients who are not receiving the DFL intervention. The statistical investigation will include baseline to follow-up analyses of behavioral and clinical measures for both groups. Additionally, regression analyses will be conducted to determine if there is a statistically significant relationship between demographic characteristics (e.g., gender, age, education level, marital status, and years since diagnosis) or total minutes of diabetes management education with changes in clinical indicators or scale scores at follow-up assessment.

Results:

Preliminary analysis based on a comparison of baseline and 12-month follow up data from 70 patients provides encouraging results:

- Clinical Outcomes:

Participants showed statistically significant decreases in average total cholesterol and A1C, the gold standard for assessing diabetes management.

Clinical Measure	Intake Mean	Follow-Up Mean
Cholesterol	182.3	160 .00**
A1C	7.5	6.9*

Difference is statistically significant at $p <.05$, ** $p <.01$

- Behavioral Outcomes:
  - A significantly greater percentage of DFL participants reported being more physically active at follow-up than at intake.
  - The number of times participants had their A1C checked or their feet checked for sores increased significantly from intake to follow-up.
- Patient-Doctor Relationship:
  - Participants were also significantly more likely at follow-up than at intake to say that a doctor had told them that diabetes had affected their eyes or that they had retinopathy.
  - At follow-up participants were significantly more likely to report having prepared a list of questions for their doctor and asked questions about things they wanted to know and things they didn't understand about their treatment

Outcomes/Impact:

Statistically significant positive changes were found in each of the following scales:

- Resources and Supports for Self-Management (p<.05)
- Stanford Diabetes Self-Efficacy Scale (p<.001)
- Trust in Health Care Provider (p<.05)
- Diabetes Self-Care Activities (p<.05)
- Perceived Competence for Diabetes (p<.001)

Conclusion:

As the DFL project study is still underway, the preliminary analysis provides promising results; however, further data collection and analysis is warranted to substantiate sound project conclusions.