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

Background

Diabetes for Life (DFL) is a five-year grant funded initiative of The Merck Foundation. 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 Objective:  
- 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 II 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 patients were enrolled in the Diabetes for Life project (DFL) study between December 2009 and January 2013. A comparison group of 61 patients 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 489 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 takes approximately 25-45 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, and 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 practice 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 variables. The relationships of demographic characteristics (i.e., 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:

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 analyses is warranted to substantiate sound project conclusions.

<table>
<thead>
<tr>
<th>Clinical Measure</th>
<th>Intake Mean</th>
<th>Follow-Up Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholesterol</td>
<td>182 ± 3</td>
<td>166 ± 0.05 **</td>
</tr>
<tr>
<td>A1C</td>
<td>7.5</td>
<td>6.0</td>
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</tbody>
</table>

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