Family Education Diabetes Series (FEDS): A Community-Based Participatory Research Collaboration to Reduce Health Disparities

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Introduction

• American Indians (AIs) are 3-10 times more likely to be diagnosed with type 2 diabetes
• Prevalence rates range from 20 to >50% across AI tribes and age groups
• Most community members are uninsured or underinsured (esp. outside of reservations)
• Low income, urban-dwelling adult AIs are the highest risk (and largest) subgroup

Purpose of the Study

• To use Community-based Participatory Research (CBPR) in partnership with the AI community to reduce health disparities
• To collect pilot data on the FEDS initiative

Method

Research Questions:
1. Do participants evidence change in their physical health, as measured by metabolic control (A1c), blood pressure, and weight?
2. Do participants evidence improved knowledge and understanding about diabetes, as measured by the Diabetes Knowledge Test?
3. Do participants evidence improved disease management behaviors, as measured by care records and logbook data that track frequencies of blood-sugar testing, foot-checks, and participation in exercise?

Participants: (N=52)
• Male (22%) & Female American (78%)
• Indians with type II diabetes (N=40)
• Family members of the participants (N=12)
• Ages 18 and older: Mean = 55 years old
• Annual household income = $20,000

Methods:
• Data gathered at baseline, 3-month and 6-month (end of intervention) intervals
• Hemoglobin A1c, BP, knowledge of diabetes and BMI measured

Description of Intervention

• Community-Based Participatory Research (CBPR) is: A form of social inquiry that involves an active collaboration between researchers and subjects wherein hierarchical differences are flattened and all participants work together to create knowledge and effect change
• FEDS Initiative: Partnership between UMN & St. Paul Area Council of Churches’ Department of Indian Work (DIW)
• Intervention Components:
  1. Designed and implemented through a democratic and collaborative partnership between patients, family members, and providers
  2. Engages low-income, urban-dwelling AIs and their families in an active forum of education, fellowship, and support
  3. Intervention is held at the Department of Indian Work (DIW) every other week for 32 weeks and covers 16 sessions (see FEDS session topics)
  4. The three hour meetings begin with members checking/record each other’s weight/BMI, blood pressure, blood sugars, and conducting foot checks
  5. Meals consistent with AI culture/traditions are prepared and shared communally, along with discussions about ingredients and indicated portion sizes.
  6. Educational activities include didactic and experiential components taking place in talking circles, small and large group discussions, and a variety of lively activities (e.g., traditional music, dancing and aerobics, impromptu theater/role-plays). Didactic discussions (see Figure 1) are led by a combination of professional and lay community members.

Results

• Results show decreases in weight, decreases in hemoglobin A1c, and increases in disease management for patients with diabetes
• Average weight loss was approximately 10 pounds
• At 6 month follow-up mean weight continued to reduce significantly
• Family members participating in the FEDS also show decreases in weight

Implications for Providers

• There is support for using a CBPR approach in partnership with patients, family members and providers in reducing health disparities
• CBPR projects have the potential to solve problems within a specific community, so that the “local” practical problem is addressed directly and in-context and should be considered by other providers.

Session Topics

1. Introduction: Diabetes as a Disease & Diabetes in the AI Community
2. Dietary Guidelines & Portion Sizes
3. Exercise & Physical Activity
4. Obesity & Weight Control
5. Living with a Chronic Illness
6. Blood Glucose Monitoring & Control
7. Eyes and Teeth: Dental Care / Retinopathy
8. Blood Pressure & Cholesterol
9. Heart Disease & Stroke
10. Stress Management & Strategies
11. Foot Care & Wound Care
12. Medical Services & Supplies
13. Depression and Anxiety
14. Working with your Doctors
15. Sticking with it: Staying Motivated & Family/Social Support
16. Review: Putting it all Together