



# Promoting Diabetes Self-Management among African Americans: An Educational Intervention in Prince George's County, Maryland

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**Presentation for the American Public Health  
Association Annual Meeting**

**November 7, 2007**

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# Purpose

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- To implement an educational intervention to promote diabetes self-management among African American adults 40 years of age and older in Prince George's County, Maryland diagnosed with Type 2 diabetes.



# Goal

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- Increase knowledge about diabetes and improve adherence with recommended standards for exercise, diet, medications and glycemic control among African American adults in Prince George's County, Maryland



# Diabetes - National

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- African Americans twice as likely to have diabetes as whites
- Number affected is increasing
- Higher rates of complications, disability, and mortality
- African American women affected more than men

# Diabetes

## Prince George's County

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- Sixty percent (60%) African American
- Highest per capital income in country
- Eight percent (8%) of adults age 18 and older had diabetes; 6.7% for state
- Mortality rate: 38.6/100,000; 30/100,000 for state

# Diabetes

## Prince George's County

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- Almost 60% are overweight or obese; 54% state
- 21.6% participate in regular exercise
- 22% consume five or more fruits and vegetables; 30% whites



# Research Design

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- Quasi-experimental, pre-test posttest comparison group design
- Non-random convenience sample with participants assigned to the intervention and control groups



# Conceptual Framework

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- Health Promotion Model (HPM) (Pender, Murdaugh, & Parsons, 2002)
- Transtheoretical Model (TM) (Prochaska, DiClemente, & Norcross, 1992).





# Sample

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- African American adult residents (n=400) of Prince George's County, Maryland
- Ages 40 or older
- Diagnosed with Type 2 diabetes



# Research Questions

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- Differences in:
  - knowledge level between the experimental and control group before and after the intervention
  - exercise levels
  - HbA1c
  - weight and BMI
  - self-efficacy



# Intervention

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- Three interactive educational sessions of two hours each held at a time and location accessible and acceptable to participants.
- First location was the local FQHC that has partnered with the research team to implement this project.
- Content includes the disease process, risk factors, potential complications, meal planning, exercise, and prevention of diabetes related complications.



# Recruitment

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- Federally Qualified Health Center (FQHC)
- Flyers distributed at major shopping centers (Wal-Mart, grocery stores, etc.)
- Churches
- Outreach Coordinators



# Intervention

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- Written materials, handouts, and games are used to supplement and reinforce the information presented.
- Healthy snacks and water are provided during each educational session.
- A Patient Navigator attends all sessions



# Intervention

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- Patient Navigators make follow-up phone calls to determine progress with diabetes management
- Assist with educational sessions
- Graduate nurses, undergraduate students



# Data Collection

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- Demographic survey is used to collect general information including weight and Body Mass Index (BMI). (HPM, direct effects)
- Diabetes Knowledge Test
- Diabetes Self-Efficacy Outcomes Expectancies Questionnaire
- Problem Areas in Diabetes Survey



# Data Collection

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- Exercise Benefits/Barriers Scale
- Level of Exercise Stages of Change
- 24 Hour Food Diary
- Changing Behavior for Your Health Instrument





# Data Collection

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- Baseline: beginning and end of the first educational session; demographic, socio-psychological, biological, and physiological measures
- Follow-up
  - Every week for one month
  - Every other week for two months
  - Every month for two months.



# Preliminary Results

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- The majority of participants were obese (BMI 30 or >)
- Age: 51 and older
- Approximately one-third were diagnosed with diabetes only
- All except one was being treated with oral hypoglycemics



# Preliminary Results

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- More than half (54%) had received no prior diabetes education
- A large percentage (82%) had a glucometer at home
- Less than 18% checked their blood sugar once a day



# Preliminary Results

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- More than half (54%) engaged in some form of exercise
- Insurance Status: Medicaid (18%); Medicare (91%)
- Low income (<\$40,000); high school education
- Knowledge increased by almost 10% from pre-test to post-test



# Preliminary Results

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- Several participants indicated that they were unaware of the importance of:
  - portion size
  - eating at regular intervals
  - Exercise
  - foot care
  - checking blood glucose several times a day.



# Lessons Learned

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- African Americans care about their health; however, lack of knowledge is a major reason for not managing their diabetes.
- Many participants indicated verbally and through their responses to the Diabetes Knowledge Test that they were unaware of the impact of lifestyle factors such as diet and exercise on their diabetes.



# Lessons Learned

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- Access to care is a critical variable in self-management of diabetes.
  - Participants who did not have health insurance were reluctant to seek care thereby placing themselves at risk for complications.
  - The grant provided funding for individuals who were uninsured and after encouragement from the Patient Navigators, appointments were made for office visits at the FQHC.