Addressing Diabetes Disparities on the South Side of Chicago: Engaging Students in Service and Scholarship

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University of Chicago
Medical Education Grand Rounds
University of Pittsburgh
• Diabetes disparities

• Our work on Chicago’s South Side

• Involvement of trainees
NATIONAL TRENDS IN DIABETES PREVALENCE
County-level Estimates of Diagnosed Diabetes among Adults aged ≥ 20 years: United States 2004
County-level Estimates of Diagnosed Diabetes among Adults aged ≥ 20 years: United States 2005

www.cdc.gov/diabetes
County-level Estimates of Diagnosed Diabetes among Adults aged ≥ 20 years: United States 2007

Percent

www.cdc.gov/diabetes
County-level Estimates of Diagnosed Diabetes among Adults aged ≥ 20 years: United States 2008
County-level Estimates of Diagnosed Diabetes among Adults aged ≥ 20 years: United States 2009
DIABETES DISPARITIES: CHICAGO
Racial/Ethnic composition in Chicago
Diabetes mortality in Chicago
Potential years of life lost in Chicago
Diabetes Health Disparities

• 2 types of disparities:
  – Health care
  – Health status
Diabetes Health Disparities

• 2 types of disparities:
  – Health care $\rightarrow$ Health systems change
  – Health status $\rightarrow$ Systems change outside HS
Diabetes Health Disparities

• 2 types of disparities:
  – Health care → Health systems change
    • PROCESS measures
  – Health status → Systems change outside HS
    • OUTCOME measures
Diabetes Disparities: Health Systems Contributors

• Differential Access
  – Insured vs. Uninsured
  – Tiers of Insured

• Differential Treatment
  – Quality Improvement
  – Provider bias/cultural competency
Diabetes Disparities:
Non-Health Systems Factors

• Patients
  – Knowledge, attitudes, beliefs and behaviors

• Families/Social networks
  – Social norms, social support

• Communities/Social determinants
  – Built environment, food deserts, resources
Improving Diabetes Care and Outcomes on Chicago’s South Side

- Community + Healthcare systems
- QI + Disparities
- Geographic areas
- Chronic care model
The Chronic Care Model

Community Partnerships

Quality Improvement

Patient Activation

Provider Training

Community

Health Systems

Patient

Practice Team

Productive Interactions
Quality Improvement

- Nurse care management
- Diabetes group visits
- Care coordination
- Population Management
- TEAM-BASED CARE
The Chronic Care Model

Community

Quality Improvement

Provider Training

Patient Activation

Productive Interactions

Community Partnerships
Provider Intervention

- Provider communication training
  - Cultural competency
  - Behavioral change
  - Motivational Interviewing
  - Patient/provider communication and Shared Decision-Making

- Continuing medical education (CME)
  - Updates on management of diabetes, hypertension, hyperlipidemia, etc.
Community Partnerships

Quality Improvement

The Chronic Care Model

Community Health Systems

Patient

Practice Team

Patient Activation

Provider Training

Productive Interactions
Patient Activation

- Patient communication training
  - Culturally tailored diabetes education
  - Shared decision-making
  - 2-3 hr classes x 10 weeks

- Community linkages

- Results:
  - 86% attended ≥ 70% classes
  - Improved self-efficacy, self-mgmt
  - Mean HbA1c: 8.3 → 7.2

- Transition to support groups:
  - Mental health practitioners
  - Group-led focus

- Peer health educators
Leveraging Technology to Enhance Patient Self-Care and Health Care

- Interactive text message reminders w/ nurse care managers

- Improvements in:
  - Diabetes self-efficacy
  - Diabetes self-care
  - Quality of life
  - Diabetes control
  - Health care costs
Quality Improvement

Community Partnerships

Patient Activation

Provider Training

The Chronic Care Model

Community

Health Systems

Patient

Practice Team

Productive Interactions
Community Outreach and Education

• Regular Source of Care
  – Urban Health Initiative
  – Over 4,000 pts connected to primary care providers

• Public Education
  – Television, Radio, Print
  – Community health venues
  – Center for Community Health & Vitality
Community Partnerships

- KLEO Community Family Life Center
- Chicago Food Depository
- Save-A-Lot Grocery Store
- Walgreens
- Chicago Park District
- Farmer’s Markets
Prescriptions for Food and Exercise

- Chicago Park District
- Walgreens
- Farmer’s Market
- Food Depository
Food Rx: Farmer’s Market partnership
Food Rx: Farmer’s Market partnership
Save-A-Lot Grocery Store partnership
KLEO Food Pantry partnership
KLEO Food Pantry partnership
COMMUNITY CASE STUDIES


Early Lessons From An Initiative On Chicago’s South Side To Reduce Disparities In Diabetes Care And Outcomes

ABSTRACT Interventions to improve health outcomes among patients with diabetes, especially racial or ethnic minorities, must address the multiple factors that make this disease so pernicious. We describe an intervention on the South Side of Chicago—a largely low-income, African American community—that integrates the strengths of health systems, patients, and communities to reduce disparities in diabetes care and outcomes. We report preliminary findings, such as improved diabetes care and diabetes control, and we discuss lessons learned to date. Our initiative neatly aligns with, and can inform the implementation of, the accountable care organization—a delivery system reform in which groups of providers take responsibility for improving the health of a defined population.

Racial and ethnic disparities in diabetes care and outcomes arise from multiple causes. These include differential access to high-quality health care, healthy food, and opportunities for safe recreation; cultural traditions regarding cooking; beliefs about disease and self-management; distrust of medical care providers; and socioeconomic status. Consequently, the solution must be multifactorial. Improving patients’ knowledge and increasing their motivation to make healthy lifestyle changes will have minimal impact if their limited and practice are encouraging greater interaction and collaboration among health care providers and communities. One driver of this collaboration is the creation of accountable care organizations, as authorized under the Affordable Care Act of 2010. Accountable care organizations are likely to have financial incentives to take responsibility for broad health care outcomes and costs for a defined population. Thus, accountable care organizations are potentially motivated to prioritize evidence-based prevention strategies that build on community resources and create a continuum of care from community settings to...
Provide real-world opportunities to learn about community-level health equity issues

Residential segregation  Community-based organizations
Food deserts       Faith community
Violence/crime      Academic partnerships
Health insurance/Access  Healthcare safety net
Social challenges    Sociocultural institutions
Opportunities for Learners

• Medicine, nursing, public health, culinary

• Medicine
  – Medical students: volunteerism, didactic learning
  – Residents: clinical skills, research involvement
  – Research fellows: independent research projects

• Pritzker Scholarship & Discovery Program
  – Longitudinal experience
Bringing Health Care & Education to the Community
Culturally tailored education and empowerment for African-Americans with diabetes

Ndang Azang-Njaah, MS III
- 3 presentations
- AAMC Diversity Award
Food Rx: Mobilizing outpatient clinics to prescribe healthy food for underserved patients

Katie Raffel, MS IV
- 6 presentations
- 3 publications
Using mobile health to support the chronic care model

Shantanu Nundy, Research Fellow
- 8 presentations
- 7 peer-reviewed publications

Abstract
Purpose:
We pilot-tested a text message-based diabetes care program in an urban African-American population in which automated text messages were sent to participants with personalized medication, foot care, and appointment reminders and text messages were received from participants on adherence.

Methods:
Eighteen patients participated in a 4-week pilot study. Baseline surveys collected data about demographics, historical cell phone usage, and adherence to care diabetes care measures. Exit interview surveys using close-ended and open-ended questions were administered to patients at the end of the program. A 3-month follow-up interview was conducted surveying patients on perceived self-efficacy. Wilcoxon signed-rank tests were used to compare baseline survey responses about self-management activities to those at the pilot’s end and at 3-month follow-up.

Results:
Eighteen urban African-American participants completed the pilot study. The average age was 55, and the average number of years with diabetes was 8. Half the participants were initially uncomfortable with text messages, but later became comfortable with the text messages.
Thank you!

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- NIDDK K24 DK071933
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www.southsidediabetes.org