Overcoming Social Determinants of Health: The University of Alabama at Birmingham Experience

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Professor of Gynecologic Oncology
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University of Alabama at Birmingham
African American Population

Prepared by the Geography Division in cooperation with the Data Preparation Division.
U.S. DEPARTMENT OF COMMERCE, Economics and Statistics Administration, Bureau of the Census

Percentage of total population
- 50 or more
- 25 to 50
- 12 to 25
- 6 to 12
- 1 to 6
- Less than 1
- U.S. average 12
African American Population

PERCENT OF TOTAL

- 50 or more
- 25 to 50
- 12 to 25
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UAB COMPREHENSIVE CANCER CENTER

NCI A Comprehensive Cancer Center Designated by the National Cancer Institute
The Unequal Burden of Cancer

Cancer Mortality Rates, All Sites, All Races, US, 2009 (National Rate = 173.1)

Mississippi Delta and Alabama Black Belt
## Demographics

<table>
<thead>
<tr>
<th></th>
<th>Per Capita Income</th>
<th>% Poverty</th>
<th>% AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Belt</td>
<td>$12,612</td>
<td>34%</td>
<td>64%</td>
</tr>
<tr>
<td>Delta</td>
<td>$12,650</td>
<td>31%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Alabama Black Belt
Mississippi Delta
The Deep South Network for Cancer Control

NCI Funded – Community Network Partnership

2000 – 2013

Edward E. Partridge, MD – Principal Investigator
Theoretical Framework

- Coalition Development Model
- Community Empowerment
- Community Health Advisor
Established an Academic – Community Based Organizational Structure

CNP 2000-Present

Links UAB/UMMC to the community

- 556 CHARPs trained (volunteer)
- Over 251 local Community Partners
- County coordinators (part-time paid)
- Regional coordinators (full-time paid)
- Program manager
- Investigators
Recruitment, Training, and Maintenance

- 8 weeks - 2 hours/week training
  - Cancer education
  - Core leadership skills
- Graduation ceremony
- Monthly maintenance meetings
Target Cancers

- Breast
- Cervix
- Colorectal
## Alabama Breast and Cervical Cancer Early Detection Program

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Type</th>
<th># Screened</th>
<th># Cancers</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 – 64</td>
<td>First Screen</td>
<td>30,641</td>
<td>534</td>
<td>1/57</td>
</tr>
<tr>
<td></td>
<td>Normal CBE</td>
<td>28,695</td>
<td>182</td>
<td>1/158</td>
</tr>
<tr>
<td></td>
<td>Abnormal CBE</td>
<td>1,946</td>
<td>352</td>
<td>1/6</td>
</tr>
<tr>
<td>50 – 64</td>
<td>Rescreen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal CBE</td>
<td>64,992</td>
<td>298</td>
<td>1/218</td>
</tr>
<tr>
<td></td>
<td>Abnormal CBE</td>
<td>1,348</td>
<td>108</td>
<td>1/12</td>
</tr>
<tr>
<td>40 – 49</td>
<td>Abnormal CBE</td>
<td>4,833</td>
<td>335</td>
<td>1/14</td>
</tr>
</tbody>
</table>
Disparities in Mammography Screening Between White and African American Women with Medicare

Alabama
Black Belt Counties

Cancer 107:2006
Cervical Cancer Mortality Impact of Deep South Network for Cancer Control

Pre-DSN (1995-1999) 129 patients
    DSN county CC rate/non-DSN county CC rate
    (HR = 2.0  95% CL  1.10,3.72)

Post-DSN (2000-2005) 175 patients
    (HR = 0.54  95% CL  0.35,0.87)

ASCO Abstract
Current Activities
Deep South Network

• Outreach Counties
  - Reach the previously unreached

• Research Counties
  - Individual weight loss
  vs
  - Individual weight loss + community strategies
Reach 2010

CDC – Funded Project
Mona Fouad, MD, MPH – Principal Investigator

Objective: Assess the impact of a theory-based, culturally relevant intervention designed to increase mammography screening among African-American women in eight underserved counties in Alabama
Results

143 Community Health Advisors
1,531 rural African American women

Proportion never screened: 14% to 4%
Proportion infrequently screened: 16% to 20%
Proportion adhering to guidelines: 70% to 76%

(all p values <0.0001)

AJPH, Dec 2010
No Previous Mammogram

211 women (14%) of group – baseline

After intervention

• 48 (23%) had mammogram but not in previous year
• 102 (48%) had mammogram in last year
• 71% total

AJPH, Dec 2010
**Purpose:** To evaluate the effectiveness of a community-based intervention strategy using Community Health Advisors (CHAs).

**Methods:**
- *Target population* – the ASCUS-LSIL Triage Study (ALTS).
- *Design:* Two matched communities were randomly assigned either intervention or control group: 359 were in the intervention group (CHA care) and 273 in the control group (standard care). *CHAs* – 30 volunteers recruited and trained to implement the intervention.
CRIS Study (con’t)

• **Results:** Adherence rates for scheduled clinic visits were significantly higher in the intervention group (80%) compared to the control group (65%) (p < 0.0001).

• **Conclusion:** Volunteer CHAs can be trained to serve as research partners and be effective in improving the retention and adherence of minority and low-income women in clinical trials.

Comparative Community Outreach to Increase Cervical Cancer Screening in Mississippi Delta

Castle P, Partridge E, Scarinci I, et al

Objective – Increase participation in cervical cancer screening in Mississippi Delta

*Prev Med* 52 (2011)
Map showing cancer incidence rates in Mississippi counties. Rates are color-coded with the following legend:

- **13.8 to 28.8**
- **11.6 to 13.7**
- **9.9 to 11.5**
- **9.0 to 9.8**
- **8.1 to 8.9**
- **6.6 to 8.0**
- **3.7 to 6.5**
- **Suppressed**

* All races national average 4.5 per 100,000
§ Black national average 11.3 per 100,000
† White national average 3.9 per 100,000

Data have been suppressed to ensure confidentiality and stability of rate estimates.

Comparative Community Outreach to Increase Cervical Cancer Screening in Mississippi Delta

• Door-to-door feasibility study of women without Pap in >3 years

• Offered cost-free choice of clinic based Pap or home self collection with HPV testing

*Prev Med 52:2011*
Consenting Women
(n = 119)

- Pap Test – 35.3%
  (n = 42)
- Self Collection &
  HPV Testing – 64.7%
  (n = 77)

- Completion – 40.5%
  (n = 17)
- Completion – 80.5%
  (n = 62)

p = 0.0001

Prev Med 52 (2011)
Community Health Advisors in Action Program (CHAAP)

Fouad, Ethnicity & Disease, Volume 20, Spring 2010
Objective

To facilitate access to care and to ensure adherence to diagnostic follow-up of positive breast cancer screening or prescribed treatment for confirmed cancer among low income women.
Roles of Patient Navigators

- identify sources of health care in the community;
- link patients with a healthcare provider;
- guide patients through the healthcare system;
- identify barriers to follow-up or treatment, and
- overcome these barriers.
Cancer Patients Barriers

- Access/Transportation
- Financial/Insurance Issues
- Lack of Information/Education
- Fear/Emotional Issues
- Hospital navigation
- Social Support Issues
- Cultural Beliefs/Attitudes

Percent of Participants with Barriers
### Results

#### Adherence outcomes by county

<table>
<thead>
<tr>
<th>County</th>
<th>Number of patients</th>
<th>Scheduled</th>
<th>Attended</th>
<th>Not attended</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dallas and surrounds</td>
<td>21</td>
<td>181</td>
<td>179</td>
<td>1</td>
<td>0.6%</td>
</tr>
<tr>
<td>Jefferson and surrounds</td>
<td>81</td>
<td>514</td>
<td>444</td>
<td>24</td>
<td>4.7%</td>
</tr>
<tr>
<td>Montgomery and surrounds</td>
<td>31</td>
<td>438</td>
<td>424</td>
<td>10</td>
<td>2.3%</td>
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<tr>
<td>Sumter and surrounds</td>
<td>14</td>
<td>251</td>
<td>239</td>
<td>8</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>147</strong></td>
<td><strong>1,384</strong></td>
<td><strong>1,286</strong></td>
<td><strong>43</strong></td>
<td><strong>55</strong></td>
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_Ethnicity & Disease, Volume 20, Spring 2010_
IMPaCT – Improving Minority Participation in Clinical Trial Navigation

Morehouse School of Medicine / Tuskegee University / UAB Comprehensive Cancer Center Partnership

NCI Funded

Edward Partridge – Principal Investigator (2000-2010)

African American women trained to discuss clinical trials and to overcome barriers to participate
### Accrual to Clinical Trials
#### CCSG - 2005

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>US</th>
<th>Alabama</th>
<th>Cancer Cases</th>
<th>Clinical Trial Accrual</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>74.3%</td>
<td>70.4%</td>
<td>78.3%</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>12.3%</td>
<td>26.2%</td>
<td>20.3%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Asian</td>
<td>4.4%</td>
<td>1.0%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>15.1%</td>
<td>2.7%</td>
<td>0.7%</td>
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## Accrual to Clinical Trials
### CCSG - 2010

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Manuscript in preparation
Summary of Experience with Community Health Advisors

1) Promote awareness, change behavior, screening
2) Effectively assist compliance with diagnostic and treatment recommendations
3) Increase minority participation in clinical trials
CMS Innovation Challenge Grant

“Deep South Cancer Navigation Network”
Objectives

• Better health
• Better health care
• At lower cost
## DSCNN Program Overview

<table>
<thead>
<tr>
<th>Focus</th>
<th>First 12 Months</th>
<th>Continuing Phase</th>
<th>Last 12 Months</th>
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</thead>
<tbody>
<tr>
<td>Prevention</td>
<td></td>
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<tr>
<td>Early Detection</td>
<td></td>
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<td></td>
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<tr>
<td>Evaluation &amp; Treatment Planning</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Active Treatment</td>
<td></td>
<td></td>
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<tr>
<td>Post Tx Follow Up</td>
<td></td>
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</tr>
<tr>
<td>Survivorship &amp; Surveillance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palliative &amp; Hospice</td>
<td></td>
<td></td>
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</table>

### Focus Components

- **Diet & Exercise**
- **Tobacco Control**
- **Risk Management**
- **Appropriate Screening**
- **Prompt Evaluation**
- **Accurate Diagnosis**
- **Accurate Treatment Plan**
- **Complete Treatments**
- **Clinical Trials**
- **Stay on Medications**
- **Manage Comorbidities**
- **Regular Surveillance**
- **Manage Comorbidities**
- **Physical Activity / Healthy Diet**
- **Advanced Disease Management & Planning**

### Savings

- **Prevention of Disease**
- **Early Detection**
- **Evidence Based Treatment Plan**
- **Avoid unnecessary ED visits & Hospital stays**
- **Promote health**
- **Promote health**
- **Reduce cost for Advanced Disease care**

### Community Coordinator

- Recruitment & Awareness

### Health System Navigators

- Non-Nurse

### Community Navigators

- Non-nurse

### Advanced Disease

- Community Coordinator (Recruitment & Awareness)

### Diagram Notes

- The diagram outlines the different stages and phases of the DSCNN program, highlighting key areas of focus and components for each phase.

### UAB Comprehensive Cancer Center

- Logo and branding for UAB Comprehensive Cancer Center.

### NCI CCC

- Logo and branding for NCI CCC.
Affiliate Network

11 Sites
(including UAB)
5 States
Targeted Savings

• Reduction in **Emergency Room visits**.
  - unnecessary **hospital days**.
  - unnecessary **ICU days**.

• Encourage earlier adoption of **hospice care**, as appropriate.
  - reduce the use of **therapeutic (curative)** chemotherapy in last 2 weeks of life.

• Provide the **highest quality of life** for people diagnosed with cancer.
Overview

• Award: $15,007,263
• 3 Year Award
• Effective Date: July 1, 2012
• Purpose: To fund Patient Navigation Teams located in each of the 10 affiliate sites.
• Creates approximately 45 new jobs
• Potential savings: $49.8 million
Mid-South Transdisciplinary Collaborative Center for Health Disparities Research (Mid-South TCC)

- **Theme:** Social Determinants of Health Disparities in Chronic Illness: a Life-Course Approach

- **Goal:** Investigate the social, economic, cultural, and environmental factors driving and sustaining health disparities in obesity and chronic illnesses across the lifespan, and develop and implement interventions to ameliorate such disparities.
Research Projects

- **Project 1:** “Examining the Influence of Social Determinants of Health on Gestational Weight Gain and Maternal and Child Outcomes among Black and White women in the Deep South” - Baskin, PhD (UAB); Sanders-Leggett, PhD, MPH (JSU); Owens, MD (UMMC)

- **Project 2:** “Molecular and Social Determinants in Obesity and Metabolic Disorders in Developing Youth “– Sothern, PhD (LSUHSC); Affuso, PhD (UAB); Zabaleta, PhD (Dillard)
Lessons Learned

Task of eliminating disparities – daunting or not?

1. Technical advances to be delivered not so complex
   - tobacco control
   - age appropriate screening
   - healthy diet, physical activity

2. Populations most at risk
   - geographically focused

3. Patient Protection and Affordable Care Act
   - eliminates barrier to access

4. Communities most at risk eager to engage
Easy to More Difficult Challenges

Easy

1. age appropriate screening
2. tobacco control
3. high quality treatment for all

Difficult
4. healthy eating, physical activity
The Keys to Success

- Create trust
- Eliminate bias
- Share power