Presentation Outline

• Part I – Overview of Cancer Disparities in the US
• Part II – Combating Cancer Disparities in South Carolina: MUSC Hollings Cancer Center Cancer Disparities Program
Part I

• Overview of Cancer Disparities in the US
What is the Body Mass Index (BMI)?

\[
BMI = \frac{\text{weight (lb)} \times 703}{\text{height}^2 \text{ (in}^2\text{)}}
\]

OR

\[
BMI = \frac{\text{weight (kg)}}{\text{height}^2 \text{ (m}^2\text{)}} \quad \text{(metric)}
\]
What is the Body Mass Index (BMI)?

Calculated BMI: 24.7

Normal BMI: 18.5-24.9

Height (IN): 71

Weight (LB): 177
What is the Body Mass Index (BMI)?
What is the Body Mass Index (BMI)?
Prevalence of Self-Reported Obesity Among Non-Hispanic White Adults by State, BRFSS, 2011-2013

Source: Behavioral Risk Factor Surveillance System
Prevalence of Self-Reported Obesity Among Hispanic Adults by State, BRFSS, 2011-2013

Source: Behavioral Risk Factor Surveillance System
Prevalence of Self-Reported Obesity Among Non-Hispanic Black Adults by State, BRFSS, 2011-2013

Source: Behavioral Risk Factor Surveillance System
The Obesity-Cancer Link

- Raised calorie intake
- Raised saturated fat intake
- Reduced fruit and vegetable intake

- Reduced physical activity

Obesity

**Proposed mechanisms**

- Hormonal stress
- Oxidative stress
- Inflammatory mediators
- Unknown factors

Raised cancer risk
The Obesity-Cancer Link (continued)

• Fatty tissue expresses and releases pro-inflammatory cytokines
• These cytokines have been associated with obesity
• Cytokines are also associated with many chronic diseases, such as cancer (as well as diabetes and cardiovascular disease)
More Pounds = Greater Risk of Dying from Cancer

Healthier Lifestyles May Prevent 340,000 U.S. Cancers a Year: Study

- Regular exercise, balanced diet, limited alcohol help ward off disease, researchers find

Cancer Incidence and Mortality in the US, 2015

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate (26%)</td>
<td>Breast (29%)</td>
<td>Lung &amp; bronchus (28%)</td>
<td>Lung &amp; bronchus (26%)</td>
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<tr>
<td>220,800</td>
<td>231,840</td>
<td>86,380</td>
<td>71,660</td>
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<td>Colon &amp; rectum (8%)</td>
<td>Colon &amp; rectum (9%)</td>
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<tr>
<td>69,090</td>
<td>63,610</td>
<td>26,100</td>
<td>23,600</td>
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<td>Urinary bladder (7%)</td>
<td>Uterine corpus (7%)</td>
<td>Pancreas (7%)</td>
<td>Pancreas (7%)</td>
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<td>56,320</td>
<td>54,870</td>
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<td>Thyroid (6%)</td>
<td>Leukemia (5%)</td>
<td>Ovary (5%)</td>
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<td>42,670</td>
<td>47,230</td>
<td>14,210</td>
<td>14,180</td>
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<td>Non-Hodgkin lymphoma (5%)</td>
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<td>Leukemia (4%)</td>
<td>Leukemia (4%)</td>
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<td>39,850</td>
<td>32,000</td>
<td>Esophagus (4%)</td>
<td>Uterine corpus (4%)</td>
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<td>Kidney &amp; renal pelvis (5%)</td>
<td>Melanoma of the skin (4%)</td>
<td>Urinary bladder (4%)</td>
<td>Non-Hodgkin lymphoma (3%)</td>
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<td>38,270</td>
<td>31,200</td>
<td>11,510</td>
<td>8,310</td>
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<td>Oral cavity &amp; pharynx (4%)</td>
<td>Pancreas (3%)</td>
<td>Non-Hodgkin lymphoma (4%)</td>
<td>Liver &amp; intrahepatic bile duct</td>
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<td>32,670</td>
<td>24,120</td>
<td>11,480</td>
<td>7,520</td>
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<td>Leukemia (4%)</td>
<td>Leukemia (3%)</td>
<td>Kidney &amp; renal pelvis (3%)</td>
<td>Brain &amp; other nervous system</td>
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<tr>
<td>30,900</td>
<td>23,370</td>
<td>9,070</td>
<td>6,380</td>
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<td>Liver &amp; intrahepatic bile duct (3%)</td>
<td>23,290 (3%)</td>
<td>All sites (3%)</td>
<td>All sites (3%)</td>
</tr>
<tr>
<td>25,510</td>
<td>All sites (100%)</td>
<td>312,150</td>
<td>277,280 (100%)</td>
</tr>
<tr>
<td>All sites (100%)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Excludes basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder.

©2015, American Cancer Society, Inc., Surveillance Research
Cancer Incidence and Mortality in US Hispanics/Latinos, 2012

2012 Estimates

Estimated New Cases*

<table>
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<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate 15,400 (29%)</td>
<td>Breast 17,100 (29%)</td>
</tr>
<tr>
<td>Colon &amp; rectum 5,900 (11%)</td>
<td>Colon &amp; rectum 4,800 (8%)</td>
</tr>
<tr>
<td>Lung &amp; bronchus 4,700 (9%)</td>
<td>Thyroid 4,800 (8%)</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis 3,400 (6%)</td>
<td>Lung &amp; bronchus 4,200 (7%)</td>
</tr>
<tr>
<td>Liver &amp; intrahepatic bile duct 3,100 (6%)</td>
<td>Uterine corpus 4,000 (7%)</td>
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<tr>
<td>Non-Hodgkin lymphoma 3,000 (6%)</td>
<td>Non-Hodgkin lymphoma 2,700 (5%)</td>
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<tr>
<td>Leukemia 2,300 (4%)</td>
<td>Kidney &amp; renal pelvis 2,300 (4%)</td>
</tr>
<tr>
<td>Urinary bladder 2,200 (4%)</td>
<td>Uterine cervix 2,100 (4%)</td>
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<tr>
<td>Stomach 1,700 (3%)</td>
<td>Ovary 2,000 (3%)</td>
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<tr>
<td>Pancreas 1,500 (3%)</td>
<td>Leukemia 1,800 (3%)</td>
</tr>
<tr>
<td>All sites 53,600 (100%)</td>
<td>All sites 59,200 (100%)</td>
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Estimated Deaths

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<th>Male</th>
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<tbody>
<tr>
<td>Lung &amp; bronchus 3,200 (18%)</td>
<td>Breast 2,400 (15%)</td>
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<tr>
<td>Colon &amp; rectum 1,900 (11%)</td>
<td>Colon &amp; rectum 2,100 (13%)</td>
</tr>
<tr>
<td>Liver &amp; intrahepatic bile duct 1,800 (10%)</td>
<td>Prostate 1,600 (9%)</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>Pancreas 1,200 (6%)</td>
</tr>
<tr>
<td>Stomach 900 (5%)</td>
<td>Pancreas 1,200 (6%)</td>
</tr>
<tr>
<td>Leukemia 900 (5%)</td>
<td>Ovary 1,000 (6%)</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis 700 (4%)</td>
<td>Liver &amp; intrahepatic bile duct 900 (6%)</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma 700 (4%)</td>
<td>Kidney &amp; renal pelvis 700 (4%)</td>
</tr>
<tr>
<td>Brain &amp; other nervous system 500 (3%)</td>
<td>Non-Hodgkin lymphoma 600 (4%)</td>
</tr>
<tr>
<td>Uterine corpus 500 (3%)</td>
<td>Ovarian corpus 500 (3%)</td>
</tr>
<tr>
<td>All sites 17,400 (100%)</td>
<td>All sites 15,800 (100%)</td>
</tr>
</tbody>
</table>

* Excludes basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder. Estimates are rounded to the nearest 100.
Trends in Incidence and Death Rates for all Cancers Combined Among Hispanics

Source: Surveillance, and End Results Program, 2012

Hispanic Epidemiological Paradox
- Strong Social Support
- Less acculturated in US

Source: Surveillance, and End Results Program, 2012
### Cancer Incidence and Mortality* in US Blacks, 2013

#### 2013 Estimates

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
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</thead>
<tbody>
<tr>
<td>Estimated New Cases</td>
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<td></td>
<td>Estimated Deaths</td>
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<tr>
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<td>Prostate</td>
<td>Breast</td>
<td>Lung &amp; bronchus</td>
<td>Lung &amp; bronchus</td>
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<td>35,430 (37%)</td>
<td>27,060 (33%)</td>
<td>9,430 (29%)</td>
<td>6,830 (21%)</td>
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<td>Prostate</td>
<td>Lung &amp; bronchus</td>
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<td>10,980 (13%)</td>
<td>4,980 (15%)</td>
<td>6,080 (19%)</td>
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<tr>
<td></td>
<td>Colorectum</td>
<td>Colorectum</td>
<td>Colorectum</td>
<td>Colorectum</td>
</tr>
<tr>
<td></td>
<td>9,280 (10%)</td>
<td>8,830 (11%)</td>
<td>3,600 (11%)</td>
<td>3,250 (10%)</td>
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<tr>
<td></td>
<td>Kidney</td>
<td>Uterine corpus</td>
<td>Liver &amp; intrahepatic bile duct</td>
<td>Pancreas</td>
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<tr>
<td></td>
<td>4,400 (5%)</td>
<td>5,690 (7%)</td>
<td>2,240 (7%)</td>
<td>2,390 (7%)</td>
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<tr>
<td></td>
<td>Liver &amp; intrahepatic bile duct</td>
<td>Thyroid</td>
<td>Pancreas</td>
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<tr>
<td></td>
<td>3,270 (3%)</td>
<td>3,850 (5%)</td>
<td>2,110 (6%)</td>
<td>1,500 (5%)</td>
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<td>Non-Hodgkin lymphoma</td>
<td>Kidney</td>
<td>Stomach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,960 (3%)</td>
<td>3,030 (4%)</td>
<td>1,100 (3%)</td>
<td>1,330 (4%)</td>
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<td></td>
<td>Pancreas</td>
<td>Pancreas</td>
<td>Leukemia</td>
<td>Myeloma</td>
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<tr>
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<td>2,670 (3%)</td>
<td>2,930 (4%)</td>
<td>1,040 (3%)</td>
<td>940 (3%)</td>
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<tr>
<td></td>
<td>Oral cavity &amp; pharynx</td>
<td>Myeloma</td>
<td>Myeloma</td>
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<tr>
<td></td>
<td>2,460 (3%)</td>
<td>2,590 (3%)</td>
<td>950 (3%)</td>
<td>890 (3%)</td>
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<td>Urinary bladder</td>
<td>Non-Hodgkin lymphoma</td>
<td>Esophagus</td>
<td>Leukemia</td>
</tr>
<tr>
<td></td>
<td>2,380 (3%)</td>
<td>2,590 (3%)</td>
<td>900 (3%)</td>
<td>890 (3%)</td>
</tr>
<tr>
<td></td>
<td>Leukemia</td>
<td>Myeloma</td>
<td>Kidney</td>
<td>Ovary</td>
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<tr>
<td></td>
<td>2,220 (2%)</td>
<td>2,170 (3%)</td>
<td>820 (2%)</td>
<td>1,330 (4%)</td>
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<tr>
<td></td>
<td>All sites</td>
<td>Uterine cervix</td>
<td>All sites</td>
<td>All sites</td>
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<tr>
<td></td>
<td>94,540</td>
<td>2,060 (3%)</td>
<td>32,080</td>
<td>31,910</td>
</tr>
<tr>
<td></td>
<td>All sites</td>
<td>All sites</td>
<td>All sites</td>
<td>All sites</td>
</tr>
</tbody>
</table>

*Excludes basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder.

Note: Percentages may not total 100% due to rounding.

©2013, American Cancer Society, Surveillance and Health Services Research
Female Breast Cancer Incidence Rates by State, 2010

http://www.cdc.gov/cancer/breast/statistics/state.htm
Female Breast Cancer Death Rates by State, 2010

http://www.cdc.gov/cancer/breast/statistics/state.htm
Prostate Cancer Death Rates by State, 2010

http://www.cdc.gov/cancer/prostate/statistics/state.htm
Obesity and Other Diseases

- Stroke
- Being overweight can lead to high blood pressure and related complications
- Blood vessel damage (arteriosclerosis)
- Heart attack or heart failure
- Kidney failure
Diabetes
Age-Adjusted Prevalence of Diagnosed Diabetes Among U.S. Adults

1995

- White: Missing data
- Light Orange: <4.5%
- Orange: 4.5% - 5.9%
- Medium Orange: 6.0% - 7.4%
- Dark Orange: 7.5% - 8.9%
- Red: ≥9.0%

Age-Adjusted Prevalence of Diagnosed Diabetes Among U.S. Adults

2009

Age-adjusted percentage of adults aged ≥20 years with diagnosed diabetes, 2007

MMWR 58:1259-1263, 2009
Age-adjusted percentage of adults aged ≥20 years who are obese, 2007

MMWR 58:1259-1263, 2009
Counties in the top and bottom two quintiles of both diabetes and obesity, 2007

MMWR 58:1259-1263, 2009
Heart Disease and Stroke
Heart Disease and Stroke Mortality Rates

Counties in southern states have the greatest risk overall.

South Carolina: Heart Disease Death Rate per 100,000, 35+, All Race, All Gender, 2008-2010

South Carolina: Stroke Death Rate per 100,000, 35+, All Race, All Gender, 2008-2010

Legend
- Insufficient Data (0)
- 51.7 - 91.4 (10)
- 91.5 - 99.2 (9)
- 99.3 - 107.2 (9)
- 107.3 - 117.1 (9)
- 117.2 - 155.4 (9)

Social Determinants of Health

• Factors in the social environment that contribute to or detract from the health of individuals and communities

• Social determinants of health may generate hypotheses regarding the pathways between the social environment and health outcomes
Racial Differences in Health Outcomes as a Combination of Socio-cultural and Genetic Factors

African Americans experience early health deterioration as a consequence of the cumulative impact of repeated stressful experiences with social or economic adversity and political marginalization.
• African Americans experience poor health at earlier ages than European Americans
• This deterioration in health accumulates
Social Environment and Stress

- Stressful social interactions impact health outcomes
Relationships among Structural Life Inequalities, Chronic Stress, Negative Behaviors, and Physical and Mental Health Disparities
Chronic Stressors (continued)

• Higher economic status in African Americans appears to be more protective against early mortality than against early morbidity

• Racial differences in health reflect more than differences in economic resources alone
Chronic Stressors (continued)

- African Americans experience earlier deterioration of heath than do European Americans
- The stress of living in a race-conscious society may lead to early health deterioration in African American women through a complex mechanism that involves chronic inflammation
• Racial/ethnic differences in inflammation are small in the late teens and early 20s
• Differences widen rapidly beginning in young adult through middle age
• Racial/ethnic differences are largest between the ages of 35 and 64 years
Chronic Stressors (continued)

• The impact of chronic stress on health has important implications for individuals and for the population as a whole
Wrong Zip Code Can Mean Shorter Life Expectancy

Different neighborhoods in New Orleans had some of the most dramatic differences in life expectancy.

Courtesy of the Robert Wood Johnson Foundation
Part II: Combating Cancer Disparities in South Carolina

- MUSC Hollings Cancer Center Cancer Disparities Program
HCC Cancer Disparities Program
3-Point Action Plan Objectives

1. Conduct cancer disparities activities with partners in South Carolina (SC)

2. Develop specific, targeted research interventions to reduce cancer disparities

3. Increase the number of investigators in SC who conduct cancer disparities research
Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina
  ▪ Community Based Cancer Education and Awareness
Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

Example: Cancer Education Guide (CEG) Training Seminar

An evidence-based 4-hour dynamic, hands-on session using a “Train the Trainer” model developed by the South Carolina Cancer Alliance

- 3-hour component focusing on general cancer knowledge
  - Cancer risk factors
  - Screening guidelines for early cancer detection
  - Cancer treatments
  - Steps to reduce cancer risk by improving overall health
- 30-minute component focusing on prostate cancer knowledge
- 30-minute component focusing on cancer clinical trials information
Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

CEG Service Delivery Area
Evaluating an intervention to increase cancer knowledge in racially diverse communities in South Carolina


Assessing an Intervention to Improve Clinical Trial Perceptions Among Predominately African-American Communities in South Carolina

Marvella Ford, Amy Wahlquist, Rashell Blake, CoDaniele Green, June Streets, Ebonie Fuller, Erica Johnson, Melanie Jefferson, James Etheredge, MPA, Heidi Varner, Shannon Johnson, Saundra Glover, PhD, David Turner, PhD, Elizabeth Garrett-Mayer, PhD

(1) Medical University of South Carolina, Voorhees College; (2) Voorhees College; (3) South Carolina State University; (4) Georgetown University; (5) Ridgeville, South Carolina; (6) South Carolina Cancer Alliance; (7) University of South Carolina

Submitted 1 August 2011, revised 14 February 2012, accepted 20 March 2012.

Progress in Community Health Partnerships: Research, Education, and Action
Objective 2: Develop Specific, Targeted Research Interventions to Reduce Cancer Disparities

- Collaborative Intervention Research Initiatives
Objective 2: Develop Specific, Targeted Research Interventions to Reduce Cancer Disparities

- Improving Resection Rates Among African Americans with Non-small Cell Lung Cancer (NSCLC)
  5RO1MD005892-04 (MPIs: Ford and Esnaola)
  • Evaluates the impact of a patient navigation intervention in reducing potential barriers to surgical cancer care and improving rates among African Americans with early stage NSCLC

- SC Cancer Disparities Research Center (SC CaDRe)
  5P20CA15707104 (PIs: Ford and Salley)
  • Identifies factors that may influence participation in a breast cancer genetic research study

- Optimizing Survivorship and Surveillance after Treatment for Colon Cancer
  5R21CA152865 (PI: Ford, Co-Is: Zapka and Sterba)(ended 8/31/14)
  • Investigate the role of multilevel factors on participation of colon cancer survivors in guideline-based post-treatment surveillance and care.
HCC Cancer Disparities Program  
3-Point Action Plan Objectives

Objective 3: Increase the Number of Investigators in SC Who Conduct Cancer Disparities Research

- DoD Collaborative Undergraduate HBCU Student Summer Training Program in Prostate Cancer Research (PI: Ford, Coordinator: Cannady)
- P20 SC CaDRe HBCU Student Summer Cancer Research Training in Breast and Prostate Cancer Research (PI: Ford, Coordinator: Cannady)
- MUSC HCC Cancer Research Training
- Student Forum of the National Conference on Health Disparities (Chair: Ford, Co-Chair: Greene, Coordinator: Cannady)
Objective 3: Increase the Number of Investigators in SC Who Conduct Cancer Disparities Research

DoD Collaborative Undergraduate HBCU Student Summer Training Program in Prostate Cancer Research

- **Partnership with:**
  - Claflin University
  - South Carolina State University
  - Voorhees College

- A 10-week program that runs concurrent with the MUSC Summer Undergraduate Research Program (SURP)

- **Funds 4-6 students/summer**
  - Breast and Prostate Cancer Training Curriculum (2 seminars/week)
  - Weekly GRE Preparation Course
  - Cultural Activities
Objective 3: Increase the Number of Investigators in SC Who Conduct Cancer Disparities Research

Student Forum of the National Conference on Health Disparities

• Open to:
  • Undergraduate Students
  • Graduate Students
  • Professional Students

• Research Forum that consists of:
  • Oral and poster presentations centered on health disparities research
  • Roundtable discussion
    • Finding Funding/Fellowship Opportunities
    • Mentoring and Networking
    • Professional Ethics

• Keynote Lecture
Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

Objective 2: Develop Specific, Targeted Research Interventions to Reduce Cancer Disparities

Objective 3: Increase the Number of Investigators in SC Who Conduct Cancer Disparities Research
EXPANSION OF CANCER DISPARITIES RESEARCH

- Cancer Immunology
- Cancer Control
- Developmental Therapeutics
- Cancer Genes & Molecular Regulation
QUESTIONS?

Research. Educate. Eliminate Cancer Disparities

Courtesy of the Sidney Kimmel Cancer Center
Part II: Combating Cancer Disparities in South Carolina

- MUSC Hollings Cancer Center Cancer Disparities Program
HCC Cancer Disparities Program
3-Point Action Plan Objectives

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Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

CEG Service Delivery Area

CEG Training Sites
Educational/Counseling Model Health Care

Evaluating an intervention to increase cancer knowledge in racially diverse communities in South Carolina

Marvella E. Ford a,b,*, Amy E. Wahlquist b, Celina Ridgeway c, June Streets d, Katie A. Mitchum e, R. Remus Harper Jr. f, Ian Hamilton g, J. James W. Etheredge a, Melanie S. Jefferson a, Heidi Varner h, Katora Campbell g, Elizabeth Garrett-Mayer b

Assessing an Intervention to Improve Clinical Trial Perceptions Among Predominately African-American Communities in South Carolina

Marvilla Ford, PhD 1, Amy Wahlquist, MS 1, Rashell Blake 2, CoDanielle Green 3, June Streets 4, Ebonie Fuller 3, Erica Johnson, MD 1, Melanie Jefferson 1, James Etheredge, MPA 1, Heidi Varner 5, Shannon Johnson 6, Saundra Glover, PhD 7, David Turner, PhD 1, Elizabeth Garrett-Mayer, PhD 1

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Conceptual Framework of the HCC Cancer Disparities Program

Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

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EXPANSION OF CANCER DISPARITIES RESEARCH

- Cancer Immunology
- Developmental Therapeutics
- Cancer Control
- Cancer Genes & Molecular Regulation
Part II: Combating Cancer Disparities in South Carolina

• MUSC Hollings Cancer Center Cancer Disparities Program
HCC Cancer Disparities Program
3-Point Action Plan Objectives

1. Conduct cancer disparities activities with partners in South Carolina (SC)

2. Develop specific, targeted research interventions to reduce cancer disparities

3. Increase the number of investigators in SC who conduct cancer disparities research
Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

- Community Based Cancer Education and Awareness
Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

Example: Cancer Education Guide (CEG) Training Seminar

An evidence-based 4-hour dynamic, hands-on session using a “Train the Trainer” model developed by the South Carolina Cancer Alliance

- 3-hour component focusing on general cancer knowledge
  - Cancer risk factors
  - Screening guidelines for early cancer detection
  - Cancer treatments
  - Steps to reduce cancer risk by improving overall health

- 30-minute component focusing on prostate cancer knowledge
- 30-minute component focusing on cancer clinical trials information
Objective 1: Conduct Cancer Disparities Activities with Partners in South Carolina

CEG Service Delivery Area

CEG Training Sites
Evaluating an intervention to increase cancer knowledge in racially diverse communities in South Carolina

Marvella E. Ford a,b,⁎, Amy E. Wahlquist b, Celina Ridgeway c, June Streets d, Katie A. Mitchum e, R. Remus Harper Jr. f, Ian Hamilton g, J. James W. Etheredge a, Melanie S. Jefferson a, Heidi Varner h, Katora Campbell g, Elizabeth Garrett-Mayer b

Assessing an Intervention to Improve Clinical Trial Perceptions Among Predominately African-American Communities in South Carolina

Marvella Ford, PhD1, Amy Wahlquist, MS1, Rashell Blake2, CoDanielle Green3, June Streets4, Ebonie Fuller3, Erica Johnson, MD4, Melanie Jefferson1, James Etheredge, MPA1, Heidi Varner5, Shannon Johnson6, Saundra Glover, PhD7, David Turner, PhD1, Elizabeth Garrett-Mayer, PhD1

(1) Medical University of South Carolina, Voorhees College; (2) Voorhees College; (3) South Carolina State University; (4). Georgetown University; (5) Ridgeville, South Carolina; (6) South Carolina Cancer Alliance; (7) University of South Carolina

Submitted 1 August 2011, revised 14 February 2012, accepted 20 March 2012.

Progress in Community Health Partnerships: Research, Education, and Action
Objective 2: Develop Specific, Targeted Research Interventions to Reduce Cancer Disparities

- Collaborative Intervention Research Initiatives
Objective 2: Develop Specific, Targeted Research Interventions to Reduce Cancer Disparities

- Improving Resection Rates Among African Americans with Non-small Cell Lung Cancer (NSCLC)
  
  5RO1MD005892-04 (MPIs: Ford and Esnaola)

  • Evaluates the impact of a patient navigation intervention in reducing potential barriers to surgical cancer care and improving rates among African Americans with early stage NSCLC
Figure 3.B. Hypothesized Relationships Among the Study Variables

Moderators (Age, Gender, Marital Status, Comorbidity, Urban-Rural Status, Education, Income, Insurance Status)

Individual, Sociocultural, Economic, and Organizational Barriers to Surgical Resection

Patient Navigation Intervention

Mediators
- Health-Related Quality of Life
- Anxiety
- Perceived Self-Efficacy in Patient-Physician Interactions
- Trust in Physicians
- Satisfaction with the Decision Made
- Social Support

Study Outcomes
Primary
- Receipt of Surgical Resection
Secondary
- Receipt of Surgical Consultation
- Time to Surgical Resection
- Time to Death
Objective 2: Develop Specific, Targeted Research Interventions to Reduce Cancer Disparities

- SC Cancer Disparities Research Center (SC CaDRe)  
  5P20CA15707104 (PIs: Ford and Salley)
  - Identifies factors that may influence participation in a breast cancer genetic research study
Figure 1. Conceptual Framework Underlying the Structure of the SC CaDRE

- Research Capacity Building
- Generating Knowledge
- Research in Cancer Disparities
- Research Dissemination and Translation
- Community

Figure 2. Community Engagement in the SC CaDRE

- Identify the SC CaDRE's focus on hormone-related cancer (prostate and breast cancer)
- Participate in the selection of PRP 1 and PRP 2
- Provide guidance in study recruitment and retention strategies
- Interact with the SC CaDRE Student Fellows' via training activities
- Participate in translating and disseminating SC CaDRE research results to communities in SC
- Develop new federal grant proposals for peer review
Figure 4.C.2. Triple-Level Research Mentoring Strategy for the SC CaDRe

**Mentoring Level 1**
- **Years 1-2**
  - PRP 1: Multiple PIs from MUSC and SCSU
  - SC CaDRe Faculty Fellows

**Mentoring Level 2**
- MUSC Graduate Students selected as co-investigators on PRPs
- SC CaDRe Student Fellows

**Mentoring Level 3**
- SCSU undergraduate students selected to participate in the MUSC SURP and to work on PRPs
- SC CaDRe Student Fellows
Objective 2: Develop Specific, Targeted Research Interventions to Reduce Cancer Disparities

- **Optimizing Survivorship and Surveillance after Treatment for Colon Cancer**

  5R21CA152865  (PI: Ford, Co-Is: Zapka and Sterba)(ended 8/31/14)

- Investigate the role of multilevel factors on participation of colon cancer survivors in guideline-based post-treatment surveillance and care.
Figure D.3.2. Surveillance Care for CRC Survivors: The Interfaces between Primary Care Physicians, Oncology Specialists, and Patients

Organization/Practice Setting Level

Practice Level: Reminders, guidelines, support services; inter-specialty communication

Provider Level: Specialist MDs (medical oncologists, surgeons, gastroenterologists)

Patient Level: Personal factors

Surveillance Care for CRC Survivors
Figure 1. GOAL Study Conceptual Framework

**Study Intervention Arms**
- Arm 1: Physical activity (PA)
- Arm 2: Dietary counseling (DC)
- Arm 3: Attention control

**Study Mediators**
- Exercise
- Fat intake
- Fruit and vegetable intake
- Hormone receptor status

**Study Outcomes** (BCa Prognostic Biomarkers)
- Telomere length
- Oxidative stress
- Immune activation
- Advanced glycation end products
- Estrogen/Estradiol

**Study Outcomes** (Cognitive and Physical Function)
- Cognitive function (CF)
- Functional impairment (FI)

**Older Overweight and Obese Postmenopausal BCa Survivors**

**Sociodemographic Moderators**
- Race/Ethnicity
- Co-morbidity
- Education
- Income
- Urban-rural residence

**Psychosocial Moderators**
- Self-efficacy
- Depression
- Health related quality of life
- Perceived social support

*Novel biomarker potentially associated with lifestyle choices
Figure 2. GOAL Study Design

Eligible Older Patients with BCa Identified from the MUSC HCC BCa Clinics

Randomized by Participant

ARM 1: PA (n=75)

ARM 2: DC (n=75)

ARM 3: Attention Control (n=75)

Socio-Demographic Moderators

Psychosocial Moderators

Mediators

Outcomes
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- CF
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QUESTIONS?

Research.  Educate.  Eliminate Cancer Disparities

Courtesy of the Sidney Kimmel Cancer Center