Cancer and Disparities in Health Status, Healthcare Delivery, and Survival

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ECU Center for Health Disparities Research Lecture Series

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Objectives

• Define health disparities
• Describe factors related to health disparities
• Provide evidence of disparities in:
  – Health status
  – Health care delivery
  – Cancer survival
• Describe efforts to reduce health disparities
Conceptualizing Health Disparities

• Three broad categories of disparities will be introduced:
  – Health Status Disparities
  – Health Care Disparities
  – Survival Disparities

• Causes of each are likely related, though different phenomena.

• Thus, the solutions may differ.
What is a Health Disparity?

Conceptual issues:

• Inequities – avoidable, unfair, unjust
• Differences in condition, rank
• Lack of equality as of opportunity, treatment, or status
• Inequalities – differences that do not necessarily arise from inequities, measurable gaps between groups.
Definition of Health Disparity

What is a "health disparity"?

- In 2000, United States Public Law 106-525, also known as the "Minority Health and Health Disparities Research and Education Act," which authorized the National Center for Minority Health and Health Disparities, provided a legal definition of health disparities:
  - “A population is a health disparity population if there is a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality or survival rates in the population as compared to the health status of the general population.”

- What are "cancer health disparities"?
  - The NCI defines "cancer health disparities" as "differences in the incidence, prevalence, mortality, and burden of cancer and related adverse health conditions that exist among specific population groups in the United States."

- [http://crchd.cancer.gov/disparities/defined.html](http://crchd.cancer.gov/disparities/defined.html)
Who are the populations?

**Population Groups**
- American Indian/Alaska Native (AI/AN)
- Asian American
- Black or African American
- Hispanic or Latino Native Hawaiian
- or Other Pacific Islander

**Other Special Populations**
- Socio economic status
- Geography (urban or rural)
- Gender
- Age
- Disability status
- Risk status related to sex and gender
Demographic Shift

• We cannot discuss health disparities today in the context of population groups without looking toward the future....
Population trends in the United States by age and race/origin, 1980 to 2030

Smith B D et al. JCO 2009;27:2758-2765

©2009 by American Society of Clinical Oncology
Projected cases of all invasive cancers in the United States by race and origin.

Smith B D et al. JCO 2009;27:2758-2765
### NC Resident Population:
Percentage change by year 1990 to 2009, by Race/Ethnicity

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>1.2%</td>
<td>2.2%</td>
<td>4.7%</td>
<td>7.7%</td>
</tr>
<tr>
<td>N-H African American</td>
<td>21.9%</td>
<td>22.1%</td>
<td>21.8%</td>
<td>21.6%</td>
</tr>
<tr>
<td>N-H Am. Ind</td>
<td>1.2%</td>
<td>1.2%</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>N-H White</td>
<td>75.0%</td>
<td>73.4%</td>
<td>70.7%</td>
<td>67.4%</td>
</tr>
</tbody>
</table>

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![Graph showing the percentage change by year for different races/ethnicities from 1990 to 2009.](image-url)

Percent

- 0% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- >40%

* - Non Hispanic
What are the Causes of Disparities in Health Status, Health Care, and Outcomes?

FIGURE 1  Factors That Influence Social Disparities.
Source: Adapted from Freeman, HP³ and Institute of Medicine.⁷

From Ward, E. et al.
Model for Analysis of Population Health and Health Disparities

![Model Diagram]

Warnecke RB et al. AJPH 2008
Interplay between Economic, Social, Cultural factors, and Biologic Factors

• SES
  – Income
  – Education – low literacy
  – Employment
  – Insurance

• Behavioral
  – Tobacco use
  – Poor nutrition
  – Physical inactivity– obesity
  – Drug use

• Cultural
  – Nutrition customs
  – Attitude about illness
  – Hx racial discrimination
  – Belief in alternative med
  – Mistrust
  – Religious beliefs
Interplay between Economic, Social, Cultural Factors, and Biologic Factors

• Social Environment
  – segregated neighborhoods
  – geographic location of neighborhoods
  – lack the basic resources for a healthy life
  – assess to healthy food
  – safe/clean housing
  – living-wage job
  – decent schools
  – supportive social networks, negative social support
  – access to health care
Living in Rural America

• Around 60 million (~1 in 5) Americans live rural areas.

• Compared with their urban counterparts, rural Americans are more likely to:
  – Be older, to describe their health as poor or fair, and to lack private health insurance.
  – Have higher smoking and obesity rates.
  – Not receive preventive services (i.e., cancer screening)
  – Face longer distances to reach hospital or other health care services, especially medical specialty care (i.e., cancer treatment).
  – More poverty?

AHRQ 2002
Health Indicators

• Social and economic well being
  – % Living in Poverty / household Income
  – % Completing High School
  – Insurance coverage

• Risk Behavior and Health Promotion
  – Smoking
  – Alcohol
  – Obesity
  – Physical Inactivity
# US Health Indicators: Poverty, Limited Education, and No Insurance

<table>
<thead>
<tr>
<th>Racial/Ethnic Group</th>
<th>% With Income Below Poverty Level*†</th>
<th>% Graduated High School ‡</th>
<th>% Under Age 65 With No Health Care Coverage$</th>
<th>With No Regular Source of Medical Care$</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (non-Hispanic)</td>
<td>8.0</td>
<td>85.5</td>
<td>11.9</td>
<td>13.9</td>
</tr>
<tr>
<td>African American</td>
<td>24.1</td>
<td>72.3</td>
<td>19.2</td>
<td>16.7</td>
</tr>
<tr>
<td>Hispanic-Latino</td>
<td>21.8</td>
<td>52.4</td>
<td>34.8</td>
<td>30.8</td>
</tr>
<tr>
<td>American Indian/Alaskan Native†</td>
<td>27.1</td>
<td>70.9</td>
<td>33.4</td>
<td>15.9</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>—</td>
<td>78.3</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Asian</td>
<td>10.1</td>
<td>80.4</td>
<td>17.1</td>
<td>18.5</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>10.3</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>


From Ward, E. et al.
CA Cancer J Clin 2004;54:78-93
US Health Insurance Coverage Among Individuals Under Age 65 Years, 2006 (in Millions)

- Employer: 162.7 (62%)
- Uninsured: 46.5 (18%)
- Medicaid: 32.6 (13%)
- Medicare: 6.5 (2%)
- Other: 12.5 (5%)

Cumulative Changes in Health Insurance Premiums, Overall Inflation, and Workers' Earnings, 2000 to 2007

From Ward, E. et al.
## Social and Economic Well-Being Indicators, North Carolina, 2008

<table>
<thead>
<tr>
<th>Race</th>
<th>% Poverty &lt;18</th>
<th>% of Single Parent Families</th>
<th>Median Family Income</th>
<th>% High School Dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ratio to Whites</td>
<td>Ratio to Whites</td>
<td>Ratio to Whites</td>
<td>Ratio to Whites</td>
</tr>
<tr>
<td>All</td>
<td>19.9</td>
<td>25.9</td>
<td>56,588</td>
<td>5</td>
</tr>
<tr>
<td>White</td>
<td>11.3</td>
<td>17.8</td>
<td>64,879</td>
<td>4.3</td>
</tr>
<tr>
<td>African American/Black</td>
<td>33.4</td>
<td>52.8</td>
<td>37,897</td>
<td>6</td>
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<tr>
<td>American Indian</td>
<td>28.3</td>
<td>36.6</td>
<td>40,849</td>
<td>7</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>12.8</td>
<td>12.7</td>
<td>69,277</td>
<td>2.2</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>34.3</td>
<td>32.9</td>
<td>33,814</td>
<td>6.9</td>
</tr>
</tbody>
</table>

### Adult Health Indicators, North Carolina, 2008

<table>
<thead>
<tr>
<th>Race</th>
<th>% age 16-64 with no health insurance</th>
<th>% not see a doctor in last 12 months due to cost</th>
<th>2008</th>
<th>Ratio to Whites</th>
<th>2008</th>
<th>Ratio to Whites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>Ratio to Whites</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>21.3</td>
<td></td>
<td>16.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>14.2</td>
<td>1</td>
<td>13.5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American/Black</td>
<td>23.1</td>
<td>1.6</td>
<td>20.6</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian</td>
<td>28.3</td>
<td>2</td>
<td>25.3</td>
<td>1.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>16.7</td>
<td>1.2</td>
<td>15.7</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>65</td>
<td>4.6</td>
<td>29.1</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Percentages of North Carolina Adults with Selected Risk Factors/Conditions, by Race/Ethnicity
(Based on Weighted BRFSS Survey Data)

<table>
<thead>
<tr>
<th>Condition</th>
<th>African American</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current smoking¹</td>
<td>22.4</td>
<td>22.2</td>
</tr>
<tr>
<td>Did not get recommended level of physical activity²</td>
<td>63.6</td>
<td>53.6</td>
</tr>
<tr>
<td>No leisure-time physical activity¹</td>
<td>29.4</td>
<td>21.3</td>
</tr>
<tr>
<td>Consumption of less than 5 servings of fruits and vegetables per day²</td>
<td>82.2</td>
<td>76.2</td>
</tr>
<tr>
<td>Binge Drinking¹</td>
<td>9.5</td>
<td>12.8</td>
</tr>
<tr>
<td>Overweight/Obese¹</td>
<td>74.9</td>
<td>62.3</td>
</tr>
</tbody>
</table>

1. 2006–2008

Implications for Cancer Control?

• Falling incomes
• Higher levels of poverty
• Higher levels of insufficient insurance
• Declining levels of education
• Aging population
• Population diversity
Health Indicators

- Incidence rates
- Mortality rates

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>African American</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chronic Conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart disease</td>
<td>236</td>
<td>192.6</td>
</tr>
<tr>
<td>Cancer</td>
<td>224</td>
<td>185.2</td>
</tr>
<tr>
<td>Stroke</td>
<td>73.5</td>
<td>49.2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>51</td>
<td>19.5</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>30.4</td>
<td>51.1</td>
</tr>
<tr>
<td>Kidney disease</td>
<td>36.5</td>
<td>14.8</td>
</tr>
<tr>
<td>Chronic liver disease</td>
<td>8.4</td>
<td>9.3</td>
</tr>
<tr>
<td><strong>Infectious Diseases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumonia/influenza</td>
<td>19.2</td>
<td>20.2</td>
</tr>
<tr>
<td>Septicemia (blood poisoning)</td>
<td>22.3</td>
<td>12.3</td>
</tr>
<tr>
<td>HIV disease</td>
<td>16.5</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Injury and Violence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle injuries</td>
<td>18</td>
<td>18.1</td>
</tr>
<tr>
<td>Other unintentional injuries</td>
<td>21.8</td>
<td>30.9</td>
</tr>
<tr>
<td>Homicide</td>
<td>16.4</td>
<td>3.6</td>
</tr>
<tr>
<td>Suicide</td>
<td>5</td>
<td>14.4</td>
</tr>
</tbody>
</table>

* Rates are age-adjusted to the 2000 U.S. standard population and are expressed as deaths per 100,000 population using underlying cause of death.

Age-Adjusted Death Rates per 100,000 Persons by Race and Hispanic Origin for Cancer: U.S., 2005

- All Races: 183.8
- White: 182.6
- African American: 222.7
- American Indian/Alaska Native: 123.2
- Asian/Pacific Islander: 110.5
- Hispanic: 122.8
Age-Adjusted Death Rates per 100,000 Persons by Race and Hispanic Origin for Breast Cancer: U.S., 2005

24.1
23.4
32.8
15.2
12.2
15.0

0
5
10
15
20
25
30
35

All Races
White
African American
American Indian/Alaska Native
Asian/Pacific Islander
Hispanic
Age-Adjusted Death Rates per 100,000 Persons by Race and Hispanic Origin for Prostate Cancer: U.S., 2005

Age-Adjusted Death Rate per 100,000 Persons

All Races 24.5
White 22.6
African American 53.3
American Indian/Alaska Native 17.6
Asian/Pacific Islander 10.4
Hispanic 18.5
Age-Adjusted Death Rates per 100,000 Persons by Race and Hispanic Origin for Colon, Rectum & Anus Cancer: U.S., 2005
### Age-Adjusted Death Rates per 100,000 Persons by Race and Hispanic Origin for Trachea, Bronchus & Lung Cancer: U.S., 2005

<table>
<thead>
<tr>
<th>Race/Origin</th>
<th>Age-Adjusted Death Rate per 100,000 Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Races</td>
<td>52.6</td>
</tr>
<tr>
<td>White</td>
<td>53.1</td>
</tr>
<tr>
<td>African American</td>
<td>58.4</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>34.1</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>25.7</td>
</tr>
<tr>
<td>Hispanic</td>
<td>22.4</td>
</tr>
</tbody>
</table>
Figure 1. Cancer mortality rates for African American and Whites for all cancers combined, lung cancer, other smoking-related cancers, colorectal, breast, and prostate cancers, National Center for Health Statistics, 1975 to 2004

North Carolina Adult Cancer Deaths per 100,000 by Race 2004-2008

North Carolina Adult Cancer Deaths per 100,000 by Race 2004-2008

Figure 7.1 iii. Cancer - All Sites:

Age-adjusted mortality rate per 100,000 population

ECU CHSRD CJ Mansfield 03/18/09

Cancer Mortality

Comparison of Fitted Rates in 1999

<table>
<thead>
<tr>
<th></th>
<th>NWM</th>
<th>WM</th>
<th>NWF</th>
<th>WF</th>
</tr>
</thead>
<tbody>
<tr>
<td>NWM</td>
<td>29% LT</td>
<td>53% LT</td>
<td>58% LT</td>
<td>NWM</td>
</tr>
<tr>
<td>40% GT</td>
<td>34% LT</td>
<td>34% LT</td>
<td>40% LT</td>
<td>WM</td>
</tr>
<tr>
<td>114% GT</td>
<td>52% GT</td>
<td>9% LT</td>
<td>9% LT</td>
<td>NWF</td>
</tr>
<tr>
<td>135% GT</td>
<td>68% GT</td>
<td>10% GT</td>
<td>10% GT</td>
<td>WF</td>
</tr>
</tbody>
</table>

Comparison of Fitted Rates in 2007

<table>
<thead>
<tr>
<th></th>
<th>NWM</th>
<th>WM</th>
<th>NWF</th>
<th>WF</th>
</tr>
</thead>
<tbody>
<tr>
<td>NWM</td>
<td>25% LT</td>
<td>42% LT</td>
<td>50% LT</td>
<td>NWM</td>
</tr>
<tr>
<td>33% GT</td>
<td>24% LT</td>
<td>24% LT</td>
<td>33% LT</td>
<td>WM</td>
</tr>
<tr>
<td>74% GT</td>
<td>31% GT</td>
<td>31% GT</td>
<td>13% LT</td>
<td>NWF</td>
</tr>
<tr>
<td>99% GT</td>
<td>50% GT</td>
<td>50% GT</td>
<td>15% GT</td>
<td>WF</td>
</tr>
</tbody>
</table>
Part II: Health Disparities in Healthcare

FIGURE 2—Understanding the origins of health and health care disparities from a health services research perspective: key potential determinants of health disparities within the health care system, including individual, provider, and health care system factors. Kilbourne et al. AJPH 2006;96:2113–2121
Model of Health Care Disparities

The model views health care disparities as resulting from characteristics of the health care system, the society’s legal and regulatory climate, discrimination, bias, stereotyping and uncertainty. Not all dissimilarities in care are necessarily a disparity.

Disparities in Healthcare Treatment

• Patient preferences
• Provider factors
• Health care organization and system
Patient Preferences or Barriers

• Once in care, minorities express impediments:
  – Religious or cultural beliefs regarding decisions not to have care or treatment
  – Lack of social support or care provider
  – Lack of regular source of medical care in community
Provider Factors

• Stereotype patients who hold beliefs that contrast with standard medical practice.
• Unconscious bias and stereotypes.
• Limited questioning, less dialogue, and fewer explanations for non-white patients.
• Perceptions of physicians as uninterested and less engaging for non-white patients.
• Perceptions that physicians do not understand background and values of minority patient.
Provider Factors

• More verbally dominant with African American (43%) than with White patients (24%)

• Less patient centered with African American patients (1.02 [95% CI = 0.89, 1.14] than with White (1.31 [95% CI = 1.02, 1.60] ).

• Physicians’ affective tone as less positive during medical visits with African American Patients (11.90%) than with White patients (12.68%).

• No difference when adjusting for physician demographics or duration of visit.
Provider Factor: Physician Recommendation

• Of the 558 women (82%) who had ever had a mammogram, the main reason that they had it done was that their doctor had recommended it (67%).

• Physician’s recommendation was the most important determinant of treatment selection in prostate cancer.
Provider Factors: Communication

- Overall, the evidence suggests that the way that a clinician relates to and communicates with patients can have a profound impact on them and their family, including on their psychosocial adjustment, decision making, treatment compliance, and satisfaction with care. It confirms much of the clinical wisdom that has permeated the field of cancer care in recent decades regarding greater honesty in the communication of medical information, balanced with empathy and the provision of hope. – G. Rodin
Health Care Treatment

• Access to high quality cancer care varies by socio-economic status and race.

• Stage at diagnosis is the most consistent predictor of 5-year survival.

• Non-white race presents with later stage.

• Choice of treatment modalities differ within stage at diagnosis by race: chemotherapy, surgery, radiation, watch-ful waiting.

• Disparities in care are associated with higher mortality among minorities.
Treatment Modality Studies

• Data-based studies using SEER with linkage to Medicaid roles may lack detailed information on:
  – physician recommendations
  – Co-morbid conditions of patients
  – Values of patient leading to decision-making
  – Include only CoC accredited hospitals

• Consistent results across a range of clinical settings including:
  – public and private hospitals
  – teaching and non-teaching hospitals
Health Care Treatment

A study of the SEER data found that:

• African-American and Hispanic men had longer time intervals between diagnosis and receipt of medical monitoring visit.

• Nearly 6% of African-American men and 5% of Hispanic men compared to 1% of white men did not have any medical monitoring visits or procedures during the 60-month follow up period.

### Adjusted Percentage Distributions for Patients to Receive Treatment by Tumor Aggressiveness

<table>
<thead>
<tr>
<th></th>
<th>Conservative</th>
<th>Radiation</th>
<th>Prostatectomy</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gleason &lt; 8 and PSA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 20 ng/mL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHW</td>
<td>15.5</td>
<td>27.8</td>
<td>56.7</td>
<td>0.21</td>
</tr>
<tr>
<td>AA</td>
<td>20</td>
<td>20.6</td>
<td>59.5</td>
<td></td>
</tr>
<tr>
<td><strong>Gleason ≥ 8 or PSA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 20 ng/mL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHW</td>
<td>16.3</td>
<td>31.7</td>
<td>52</td>
<td>0.003</td>
</tr>
<tr>
<td>AA</td>
<td><strong>38.9</strong></td>
<td>25.9</td>
<td>35.2</td>
<td></td>
</tr>
</tbody>
</table>
Health Care Disparity

In a study of race differences in the use of three cancer screening procedures among Medicare patients (age 65 for older), African-American patients are less likely than white patients to receive each procedure.


* Statistically significant difference between African Americans and whites all categories.
Women undergoing treatment experience delay


<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>60-Day Delay RR (95% CI)</th>
<th>90-Day Delay RR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.31 (1.23-1.39)</td>
<td>1.41 (1.26-1.59)</td>
</tr>
<tr>
<td>Black</td>
<td>1.36 (1.3-1.41)</td>
<td><strong>1.56</strong> (1.44-1.69)</td>
</tr>
<tr>
<td>Asian</td>
<td>1.13 (1.04-1.23)</td>
<td>1.14 (0.96-1.35)</td>
</tr>
</tbody>
</table>

Adjusted for insurance, age, region, stage, HR status, year dx, comorbidity index, high school grad, hospital type.
Disparities Exist Among Insured Women

Figure 1. White women (55.2%) were more likely than African-American women (38.4%) to be diagnosed with stage 0 or stage I disease (asterisks), and approximately twice as many African-American women (6.1%) compared with white women (3.6%) were diagnosed with stage IV disease (P < .05). Short et al. Cancer 2010;116:193–202.
Unexplained Disparity in Health Plan

• Black women with insurance were diagnosed with later stage at younger age and had higher mortality.
• Greater comorbid conditions – hypertension and renal disease, BMI
• More negative hormone receptor status
• Documentation gaps in medical charts
• Patient education needed
## Health Care Center Patients Experience Fewer SES/Race Disparities

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Non-health center (range in difference between whites and individual racial/ethnic groups)</th>
<th>Health center (range in difference between whites and individual racial/ethnic groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women with Pap smear in past 3 years, %</td>
<td>Yes (3%–16%)</td>
<td>No</td>
</tr>
<tr>
<td>Adults with diabetes with eye examination in past year, %</td>
<td>Yes (3%–10%)</td>
<td>Yes (0%–8%) (result unreliable because of small sample size)</td>
</tr>
<tr>
<td>Persons 65 years and older with flu vaccine in past year, %</td>
<td>Yes (8%–18%)</td>
<td>No</td>
</tr>
<tr>
<td>Adults who report difficulty understanding information from MD, %</td>
<td>Yes (3%–17%)</td>
<td>No</td>
</tr>
<tr>
<td>Adults who received outpatient mental health treatment in past year, %</td>
<td>Yes (0%–8%)</td>
<td>Yes (1–11%)</td>
</tr>
<tr>
<td>Access indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons younger than 65 years with health insurance, %</td>
<td>Yes (2%–23%)</td>
<td>No</td>
</tr>
<tr>
<td>Children with any period of uninsurance during the year, %</td>
<td>Yes (2%–24%)</td>
<td>Yes (0–12%) (result unreliable because of small sample size)</td>
</tr>
</tbody>
</table>
Survival frequencies (weighted %) and hazard ratios (all-cause mortality) for race (AA vs. White)-overall and stratified by IHC triple subtypes of breast cancer

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>ER−PR−HER2−</th>
<th>ER−PR−HER2+</th>
<th>ER/PR+HER2+</th>
<th>ER/PR+HER2−</th>
</tr>
</thead>
<tbody>
<tr>
<td>N, Overall survival (%)</td>
<td>479 (71.6)</td>
<td>135 (68.6)</td>
<td>33 (43.1)</td>
<td>36 (70.3)</td>
<td>272 (77.4)</td>
</tr>
<tr>
<td>AA %</td>
<td>60.5</td>
<td>59.5</td>
<td>13.1</td>
<td>68.5</td>
<td>69.1</td>
</tr>
<tr>
<td>White %</td>
<td>76.4</td>
<td>77.3</td>
<td>62.7</td>
<td>70.9</td>
<td>79.7</td>
</tr>
</tbody>
</table>

Lund et al. 2009
Evidence of Racial and Ethnic Disparities in Healthcare

• Disparities consistently found across a wide range of disease areas and clinical services.
• Disparities are found even when clinical factors, such as stage of disease presentation, co-morbidities, age, and severity of disease are taken into account.
Five-Year Relative Survival Rates Among Patients Diagnosed with Selected Cancers by Race and Stage at Diagnosis, US, 1999 to 2005.
Five-Year Cancer Survival Rates, All-sites Combined, by Race, Gender and Poverty, 1988-1994

*Survival rates are cause-specific, and represent the probability of escaping death due to the underlying cancer in the absence of other causes of death.

Source: Singh GK, Miller BA, Hankey BF, Edwards BK.17
Solutions: Health Disparities

Academic Medicine Report in response to IOM report regarding healthcare disparities:

* Disparities are unacceptable.
* Occur in the context of broader historic and contemporary social and economic inequality, and are
* Evidence of persistent racial and ethnic discrimination in many sectors of American life.
* Many sources—including health systems, health care providers, patients, and utilization managers—may contribute to racial and ethnic disparities in health care.
* Bias, stereotyping, prejudice, and clinical uncertainty on the part of health care providers may contribute to racial and ethnic disparities in health care.
* A small number of studies suggest that certain patients may be more likely to refuse treatments, yet these refusal rates are generally small and do not fully explain health care disparities.
Reduce Disparities in Healthcare

• Train more minority Health providers
• Improve training in cultural competence
• Introduce concepts in med/nursing school
• Create med school/community partnerships
• Provide evidence-based solutions as CME
• Structural change in HC that allows more time with patient, less time pressure
Reduce Disparities in Healthcare

• Reduce barriers to participation in clinical trials?
  – Lack of insurance
  – Lack of access to trials due to transportation, language, lack of understanding
  – Lack of provider cultural competency
  – 83% of cancer patients treated in private practices that do not participate in clinical trials.
  – Closure of public hospitals in urban centers
  – Lack of physician Medicare reimbursement

Colon-Otero et al. Cancer 2008;113:447
Other Solutions

- Better health literacy
- Patient navigation
- Medical home
External Barriers to Good Health: More than just Cancer

Source: Primer to Action: Social Determinants of Health, Toronto 2008
Definition Revision

• Social disparities or health disparities?

• Population groups: includes everyone but white affluent, urban, able-bodied, heterosexual, middle-aged men?

• Gold standard?

• Are health disparities really underlying differences in social status?
How to begin to eliminate health disparities?

“Poverty is a carcinogen.”

– Dr. Sam Broder, 1991
(former Director, National Cancer Institute)
References

- Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare, Institute of Medicine, NAS, 2002

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• Johnson RL et al. Patient Race/Ethnicity and Quality of Patient-Physician Communication During Medical Visits. Am J Public Health 2004;94:2084-2090


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- Shi et alRacial/Ethnic and Socioeconomic Disparities in Access to Care and Quality of Care for US Health Center Patients Compared With Non–Health Center Patients, J Ambulatory Care Manage 2009; 32:342–350,