Healthcare Disparities

Of all the forms of inequality, injustice in health care is the most shocking and inhumane.

Martin L. King, Jr., 1966

Definition of Health/Healthcare disparities

• Differences between population groups in health outcomes.
  – Incidence, mortality, morbidity, survival, & quality of life
  – Accessibility and quality of health care
• Can be characterized in a multitude of ways
  – Race/ethnicity, income, geographic location, sexual orientation/identity, physical disability, etc.
A brief history of health disparities and the study of disparities in healthcare

Background
- Exploitation of Blacks, poor, and disadvantaged
- Examples include . . .

Landmark studies & reports
- 1985, The Heckler Report
  - Disparities are “an affront both to our ideals and to the ongoing genius of American medicine.”

Landmark studies & reports
- 2001, IOM Report
  - Lack of equity is one of the greatest deficiencies of the US healthcare system.
Landmark studies & reports

• 2003, IOM Report
  – Racial and ethnic minorities were less likely to receive routine medical procedures and far more likely to receive low-quality health services.

The etiologies and burden of health care disparities

Disparities are inextricably linked to the social determinants of health

- Economic determinants
  – Lack of finances for decent housing → limited access to health foods, safe playgrounds, and schools
- Education
  – Adults without a high school diploma are 3X more likely to die before 65 than whose with a college degree

Disparities are inextricably linked to the social determinants of health

Image from www.healthypeople.gov

Christine Bahls, Health Affairs, October 6, 2011
Disparities are inextricably linked to the social determinants of health

- Lower quality care
  - Racial and ethnic minorities often receive health care in hospitals and other facilities that offer lower-quality care.

- Provider bias
  - Providers don’t give adequate care to certain groups because of stigmas and bias.

Christine Bahls, Health Affairs, October 6, 2011

Yes, it’s true! Physicians’ implicit biases contribute to health care disparities

- Example: Thrombolysis for ACS
  - Study of 287 residents at 4 academic medical centers
    - Vignette of patient presenting with ACS, questionnaire assessing explicit biases, and 3 Implicit Association Tests
  - Main outcomes
    - IAT scores: implicit race preference & perceptions of cooperativeness
    - Assessment of explicit racial bias
    - Physician attribution of symptoms to ACS and clinical decision


Yes, it’s true! Physicians’ implicit biases contribute to health care disparities

- Physicians reported no explicit preference for White vs. Black patients
  - Implicit measures revealed
    - Preference: White > Black patients
    - Perception: Blacks less cooperative with procedures and less cooperative generally
  - As pro-White bias so did the likelihood of treating white patients and not treating Blacks.

Take the implicit-association test: https://implicit.harvard.edu/implicit/takeatest.html

Examples of disparities permeate the practice of medicine

- Non-Hispanic blacks are > 50% more likely to die of heart disease or stroke prematurely than non-Hispanic Whites.

- Infant mortality for non-Hispanic blacks is > 2X that of non-Hispanic whites.

- Men are ~4X more likely to commit suicide than women.

CDC Health Disparities and Inequalities Report, 2013
The example of colorectal cancer: race matters

\[ \text{Incidence, Male} \]

\[ \text{Incidence, Female} \]


The example of colorectal cancer: education matters

\[ \text{Deaths per 100,000 Persons} \]


The example of colorectal cancer: income matters

\[ \text{Screen up-to-date, \%} \]

Gupta S et al. JNCI 2014;106(4):dju032

The example of colorectal cancer: place matters

- Study to identify colorectal cancer “hotspots” based on US county-level mortality data.
- Spatial mapping identified 3 hotspots.
  - Lower Mississippi Delta
    - 94 counties: AR, IL, KY, LA, MI, MO, and TN
  - West Central Appalachia
    - 107 counties: IN, KY, OH, and WV
  - Eastern Virginia/North Carolina
    - 37 counties: NC and VA

“Currently, your zip code is more predictive of your life expectancy than your genetic code.”

Sir Michael Marmot

The example of colorectal cancer: culture, access & social justice matters

- Disparities in treatment secondary to
  - Cultural differences in acceptance of therapy
  - Comorbid diseases (including obesity) making aggressive therapy inappropriate
  - Lack of convenient access to therapy
  - Racism and SES discrimination

Adapted from Otis Brawley, Cancer Disparities Conference 2016

Summary of etiologies of health disparities

- Access to Care
- Social Determinants of Health
- Individual Health Behaviors
- Quality of Healthcare

Financial burden of health care disparities

- In 2009, disparities among African Americans, Hispanics and non-Hispanic whites cost the health care system $23.9 billion.¹
- Combined costs of health disparities and premature death in US were $1.24 trillion between 2003-2006.²

¹. Waidmann T, The Urban Institute, September 2009
². Joint Center for Political and Economic Studies, 2010
Approaches to reduce health care disparities

There are numerous strategies used to reduce health disparities

• Healthcare transformation
• Enhancing diversity of the healthcare workforce
• Population health strategies
  – Cultural competency training
  – Patient navigators
• Advance scientific knowledge and innovation
  – Improving minority accrual to clinical trials

A multilevel approach can reduce disparities

Adapted from Gupta S et al. JNCI 2014: 106(4):dju032
A multilevel approach can reduce disparities

Adapted from Gupta S et al. JNCI 2014: 106(4):dju032

Practice setting
Provider/team
Family & social supports
Individual

State health policy environment
Local community environment
Practice setting
Provider/team
Family & social supports
Individual

Adapted from Gupta S et al. JNCI 2014: 106(4):dju032
A multilevel approach can reduce disparities

- National health policy environment
- State health policy environment
- Local community environment
- Practice setting
- Provider/team
- Family & social supports
- Individual

Adapted from Gupta S et al. JNCI 2014; 106(4):dju032

A multilevel approach can reduce disparities: the example of colorectal cancer

- New York Citywide Colon Cancer Control Coalition

% ≥ 50yo who underwent colonoscopy within last 10 yrs by race/ethnicity


A multilevel approach can reduce disparities: the example of colorectal cancer

- The Delaware Project

Age-adjusted colorectal cancer incidence rates by race


A multilevel approach can reduce disparities: the example of colorectal cancer

- The Delaware Project

Age-adjusted colorectal cancer mortality rates by race

A multilevel approach can reduce disparities: the example of colorectal cancer

- OSU Provider and Community Engagement (PACE) Program: Inflatable colon tours

A multilevel approach can reduce disparities: the example of colorectal cancer

- OSU Provider and Community Engagement (PACE) Program: Inflatable colon tours

### Improvement in Cancer Knowledge Among Individuals 50 yrs and older

- How much do you feel you know about colon cancer? (% at least...)
- How knowledgeable do you feel about colon cancer progression?...
- Do you know the different types of colon cancer screening tests? (OK...)

### Willingness to Discuss Colon Cancer with Others among Individuals 50 Years and Older

- Individuals at risk (at least somewhat likely)
- Peers (at least somewhat likely)
- Relatives (at least somewhat likely)
- Doctor (at least somewhat likely)

### Greater Intention to Undergo Screening among Individuals 50 Year and Older

- How likely are you to get screened? (at least somewhat likely)

### Adenoma detection among average-risk patients, N=44

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>ADR%</th>
<th>AADR%</th>
<th>Proximal adenoma%</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>61.4%</td>
<td>11.4%</td>
<td>34.1%</td>
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<tr>
<td>Gender</td>
<td></td>
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<tr>
<td>Female</td>
<td>53.3%</td>
<td>13.3%</td>
<td>26.7%</td>
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<tr>
<td>Male</td>
<td>65.5%</td>
<td>10.3%</td>
<td>37.9%</td>
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<tr>
<td>Race/ethnicity</td>
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</tr>
<tr>
<td>Black</td>
<td>60.1%</td>
<td>36.0%</td>
<td>12.0%</td>
</tr>
<tr>
<td>White</td>
<td>61.5%</td>
<td>30.8%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

ADR= adenoma detection rate
AADR= advanced adenoma detection rate
The goal is to achieve health equity

Conclusions

• Health care disparities are well documented across the spectrum of medicine.

• Differences in access, quality, behaviors, and social determinants of health are key contributors.

Conclusions

• Healthcare disparities are costly.

• Multilevel approaches are necessary to significantly impact these inequities.