Toward a Future of Good Health and Wellness: Inequities in American Indian and Alaska Native Health

Jeffrey A. Henderson, MD, MPH
President & CEO
Black Hills Center for American Indian Health
Rapid City, SD


Presentation Overview
□ What are some prominent inequities in American Indian/Alaska Native health?
□ Why do these inequities exist?
□ What’s been done, or can be done about them?

Acknowledgements
□ Strong Heart Study
□ Stop Atherosclerosis in Native Diabetics Study (SANDS)
□ National Heart, Lung and Blood Institute
□ Dr. Patricia Nez Henderson
No Financial Conflicts

Background
□ Long history of AIAN disparities
□ Multiple disease states and persistent across changing notions of disease causation
□ Prominent social and political causes

Prominent Observational Studies
□ Strong Heart Study (1988-present)
□ Navajo Health and Nutrition Survey (1991-92)
□ Inter-Tribal Heart Project (1992-94)
□ Education and Research Towards Health (EARTH) Study (2001-2007)
□ BRFSS

Leading Causes of Death, U.S.
Incidence rates for AIAN vs. NHW
males by IHS region, 1999-2004

<table>
<thead>
<tr>
<th>Type</th>
<th>AIAN</th>
<th>NHW</th>
<th>NP</th>
<th>AL</th>
<th>SP</th>
<th>PC</th>
<th>East</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sit</td>
<td>414.6</td>
<td>549.2</td>
<td>636.1</td>
<td>538.7</td>
<td>573.4</td>
<td>338.0</td>
<td>308.9</td>
<td>256.2</td>
</tr>
<tr>
<td>Prost</td>
<td>105.6</td>
<td>194.4</td>
<td>174.6</td>
<td>78.3</td>
<td>156.7</td>
<td>83.2</td>
<td>83.9</td>
<td>65.7</td>
</tr>
<tr>
<td>Lung</td>
<td>69.6</td>
<td>85.9</td>
<td>119.8</td>
<td>113.3</td>
<td>111.0</td>
<td>57.7</td>
<td>51.0</td>
<td>21.2</td>
</tr>
<tr>
<td>CRC</td>
<td>52.6</td>
<td>59.8</td>
<td>68.9</td>
<td>98.5</td>
<td>70.3</td>
<td>44.9</td>
<td>31.1</td>
<td>25.7</td>
</tr>
<tr>
<td>Renal</td>
<td>23.2</td>
<td>17.2</td>
<td>29.2</td>
<td>28.6</td>
<td>25.1</td>
<td>15.2</td>
<td>15.3</td>
<td>15.2</td>
</tr>
<tr>
<td>Blad</td>
<td>16.5</td>
<td>41.5</td>
<td>26.6</td>
<td>23.0</td>
<td>25.0</td>
<td>14.1</td>
<td>22.8</td>
<td>5.7</td>
</tr>
<tr>
<td>NHL</td>
<td>15.2</td>
<td>23.1</td>
<td>19.2</td>
<td>13.2</td>
<td>24.2</td>
<td>12.5</td>
<td>5.5</td>
<td>10.9</td>
</tr>
<tr>
<td>Stom</td>
<td>14.7</td>
<td>8.5</td>
<td>18.7</td>
<td>34.6</td>
<td>10.5</td>
<td>12.2</td>
<td>7.9</td>
<td>15.3</td>
</tr>
<tr>
<td>Oral</td>
<td>13.1</td>
<td>16.4</td>
<td>22.6</td>
<td>20.5</td>
<td>18.4</td>
<td>12.2</td>
<td>11.3</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Incidence rates for AIAN vs. NHW
females by IHS region, 1999-2004

<table>
<thead>
<tr>
<th>Type</th>
<th>AIAN</th>
<th>NHW</th>
<th>NP</th>
<th>AL</th>
<th>SP</th>
<th>PC</th>
<th>East</th>
<th>SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sit</td>
<td>337.8</td>
<td>424.0</td>
<td>471.1</td>
<td>500.7</td>
<td>440.9</td>
<td>295.1</td>
<td>272.0</td>
<td>218.3</td>
</tr>
<tr>
<td>Breas</td>
<td>85.3</td>
<td>134.4</td>
<td>115.9</td>
<td>113.9</td>
<td>115.7</td>
<td>74.7</td>
<td>71.4</td>
<td>50.8</td>
</tr>
<tr>
<td>Lung</td>
<td>48.5</td>
<td>58.6</td>
<td>93.8</td>
<td>75.4</td>
<td>69.9</td>
<td>48.0</td>
<td>43.5</td>
<td>10.4</td>
</tr>
<tr>
<td>CRC</td>
<td>41.6</td>
<td>43.6</td>
<td>59.6</td>
<td>106.2</td>
<td>53.8</td>
<td>35.6</td>
<td>39.7</td>
<td>17.2</td>
</tr>
<tr>
<td>Uteru</td>
<td>18.1</td>
<td>23.0</td>
<td>19.5</td>
<td>13.6</td>
<td>22.4</td>
<td>16.7</td>
<td>15.2</td>
<td>16.7</td>
</tr>
<tr>
<td>Renal</td>
<td>14.2</td>
<td>8.7</td>
<td>19.3</td>
<td>12.0</td>
<td>18.1</td>
<td>10.2</td>
<td>14.0</td>
<td>12.4</td>
</tr>
<tr>
<td>NHL</td>
<td>13.1</td>
<td>16.4</td>
<td>18.0</td>
<td>9.9</td>
<td>18.5</td>
<td>12.5</td>
<td>8.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Ovary</td>
<td>11.5</td>
<td>14.4</td>
<td>11.0</td>
<td>7.3</td>
<td>14.7</td>
<td>10.0</td>
<td>5.9</td>
<td>12.5</td>
</tr>
<tr>
<td>Pancr</td>
<td>9.8</td>
<td>9.4</td>
<td>12.5</td>
<td>11.0</td>
<td>10.1</td>
<td>11.1</td>
<td>7.0</td>
<td>7.7</td>
</tr>
</tbody>
</table>

AIAN Total Mortality

Why do these inequities exist?

A multilevel model of disease causation

Percent of persons who self-report as AIAN within counties
Percent of persons within counties living in poverty

Top 10 poorest counties in America, 2000 US Census

- Buffalo Co., SD $5213
- Shannon Co., SD $6286
- Starr Co., TX $7069
- Ziebach Co., SD $7463
- Todd Co., SD $7714
- Sioux Co., ND $7731
- Corson Co., SD $8615
- Wade Hampton, AK $8717
- Maverick Co., TX $8758
- Apache Co., AZ $8986

United States mean - $21,587

Association between household income and risk of death

AIAH Health Behaviors

Healthcare Expenditures

What’s been/being done?

- Varied BHCAIH Efforts
Black Hills Center for American Indian Health

- Community-based 501 (c)(3) organization
- Founded in 1998
- To conduct activities that will lead to the enhanced wellness of American Indian peoples, communities, and tribes
- Research, Service, Education, and Philanthropy

Black Hills Center for American Indian Health

**Research Portfolio**

- Currently home to 6 peer-reviewed health research grants and contracts totaling $9 million (historical: 32 and over $20 million)

1. Collaborative to Improve Native Cancer Outcomes (CINCO) CPHHD P50 – NIH/NCI
2. Native People for Cancer Control Community Networks Program – NIH/NCI
3. Native American Research Centers for Health: Lakota Center for Health Research – NIH/NIGMS/IHS

Black Hills Center for American Indian Health

**Research Portfolio - Results**

- BHCAIH has consented more than 8,000 American Indians into its various studies in the past 8 years
- Injected more than $5 million directly into impoverished Native communities
- Directly or indirectly hired more than 40 tribal members to work on our varied projects
- 36 scientific publications and 4 book chapters

Black Hills Center for American Indian Health

**Research Portfolio**

4. Southwest Navajo Tobacco Education and Prevention Project (SNTEPP) – CDC/RWJ/ARNF/AZ
5. Lakota Oyate Wicozani Pi Kte RCT – NIH/NHLBI
6. The experience of chest pain among the Lakota pilot project – NIH/NCMHD

What’s been/being done?

- Varied BHCAIH Efforts
- SHS CVD Risk Prediction Model
- Stop Atherosclerosis in Native Diabetics Study (SANDS)
- Special Diabetes Program for Indians Competitive Grant Program
What’s been/being done?

- Community-based interventions to lower CVD risk among AIANs (NHLBI)
- Economic Development
- Casino gaming
- Increasing # of interventions
- Fitful advances in tribal sovereignty

CONCLUSIONS

- American Indians and Alaska Natives experience a number of health inequities
- These inequities often have long-established histories
- Social inequities have a profound impact on health status
- It is likely that improvements in social condition, more than anything else, will begin to alleviate inequities in health

CONCLUSIONS

- Tribal/community, clinical, and national leadership and governmental financial support are essential
- Further research is needed to determine effective preventive interventions
- Successful interventions need to be replicated and/or scaled up
- Ongoing surveillance of behaviors and conditions is essential to gauge progress

CONTACT INFORMATION

Jeff Henderson
President and CEO
Black Hills Center for American Indian Health
701 St. Joseph St., Suite 204
Rapid City, SD 57701
(605) 348-6100
(605) 348-6990 fax
E-mail: jhenderson@bhcai.org