The Good Red Road

Intersections of Culture, Science, Policy and American Indian Health Disparities

2017 SD ACP Chapter Scientific Meeting

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Jeffrey A. Henderson, MD, MPH
President & CEO
Black Hills Center for American Indian Health
Presentation Overview

• Native Culture Today
• The Beauty and Mystery of Native Lands
• A Legacy of Health Inequities
• The Curious Case of Cancer
• The Changing Landscape of Type 2 DM
• Other Challenges
• Conclusions
• Strategic Recommendations
Acknowledgements

• American Indian & Alaska Native tribes, communities and peoples
• National Cancer Institute
• Centers for Disease Control and Prevention
• Dr. Patricia Nez Henderson

No Financial Conflicts
Native Culture Today

- Inseparable from its past
Native Culture Today

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• A true renaissance in process
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- A true renaissance in process in many areas
- Necessarily a synthesis of traditional tribal and contemporary western cultures
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- Poverty, joblessness, environmental impacts (including climate change) and jurisdictional issues
Tobacco Industry’s Impact on Our Tradition, Culture and Values
Tribes Joining the Tobacco Industry

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Native Culture Today

- Inseparable from its past
- A true renaissance in process in many areas
- Necessarily a synthesis of traditional tribal and contemporary western cultures
- Poverty, joblessness, environmental impacts (including climate change) and jurisdictional issues
- Community-based organizations must be recognized as having a vital role to play in the elimination of health disparities
Native Lands

- The term “reservation” is derived from the phrase “reserved lands”
American Indian and Alaska Native Lands Showing U.S. Geological Survey Projects Active During Fiscal Year 2000

Lands With USGS Projects
Lands Without USGS Projects

Indian Land Boundaries from U.S. Department of Interior, Bureau of Indian Affairs
AIAN Health Inequities

• A long history of notable differences in health
• Despite profound change in disease causation
• AIAN cancer data very problematic
• Cancer not a significant problem among our people
• New techniques have greatly strengthened AIAN cancer data
An Update on Cancer in American Indians and Alaska Natives, 1999–2004

Supplement to Cancer

Prostate Cancer Incidence Among American Indian and Alaska Native Men, US, 1999–2004

Jeffrey A. Henderson, MD, MPH
David K. Espey, MD
Melissa A. Jim, MPH
Robert R. German, DrPH, MPH
Kate M. Shaw, MS
Richard M. Hoffman, MD, MPH

1 Black Hills Center for American Indian Health, Rapid City, South Dakota.
2 Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, Atlanta, Georgia.
3 University of New Mexico Cancer Center, Albuquerque, New Mexico.

BACKGROUND. American Indian and Alaska Native (AI/AN) men experience lower incidence of prostate cancer than other race/ethnic populations in the US, but racial misclassification of AI/AN men threatens the validity of these estimates. To the authors’ knowledge, little is known concerning prostate-specific antigen (PSA) testing in AI/AN men.

METHODS. The authors linked cancer registry data with Indian Health Service enrollment records to improve race classification. Analyses comparing cancer incidence rates and stage at diagnosis for AI/AN and non-Hispanic white (NHW) men for 6 geographic regions focused on counties known to have less race misclassification. The authors also used Behavioral Risk Factors Surveillance System data to characterize PSA testing in AI/AN men.

RESULTS. Prostate cancer incidence rates were generally lower in AI/AN than in NHW men for all regions combined (rate ratio of 0.68). However, regional variation
State and Contract Health Service Delivery Area (CHSDA) counties by IHS region
Cancer incidence rates, both sexes combined, CHSDA and all counties

<table>
<thead>
<tr>
<th>Type of Cancer</th>
<th>AIAN</th>
<th>NHW</th>
<th>AIAN:NHW</th>
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<td>CHSDA-All sites</td>
<td>368.4</td>
<td>475.9</td>
<td>0.77</td>
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<tr>
<td>Kidney</td>
<td>18.2</td>
<td>12.6</td>
<td>1.45</td>
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<tr>
<td>Stomach</td>
<td>10.8</td>
<td>5.8</td>
<td>1.88</td>
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<tr>
<td>Cervix</td>
<td>9.4</td>
<td>7.4</td>
<td>1.28</td>
</tr>
<tr>
<td>Liver</td>
<td>9.0</td>
<td>4.3</td>
<td>2.11</td>
</tr>
<tr>
<td>Gallbladder</td>
<td>3.3</td>
<td>0.9</td>
<td>3.59</td>
</tr>
<tr>
<td>All Co.-All sites</td>
<td>275.5</td>
<td>479.0</td>
<td>0.58</td>
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</table>
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>
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<tbody>
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<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>
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<td>Prost</td>
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<td>154.4</td>
<td>174.6</td>
<td>78.3</td>
<td>156.7</td>
<td>83.2</td>
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<tr>
<td>Lung</td>
<td>69.6</td>
<td>85.9</td>
<td>119.8</td>
<td>115.3</td>
<td>111.0</td>
<td>57.7</td>
<td>51.0</td>
<td>21.2</td>
</tr>
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<td>59.8</td>
<td>88.9</td>
<td>98.5</td>
<td>70.3</td>
<td>44.0</td>
<td>31.1</td>
<td>25.7</td>
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<td>17.2</td>
<td>29.2</td>
<td>28.6</td>
<td>25.1</td>
<td>15.2</td>
<td>15.3</td>
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</tr>
<tr>
<td>Blad</td>
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<td>41.5</td>
<td>26.8</td>
<td>23.0</td>
<td>25.0</td>
<td>14.1</td>
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</tr>
<tr>
<td>NHL</td>
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<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>
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<td>8.5</td>
<td>18.7</td>
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<td>7.9</td>
<td>15.3</td>
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<tr>
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<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>
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Incidence rates for AIAN vs. NHW females by IHS region, 1999-2004

<table>
<thead>
<tr>
<th>Type</th>
<th>AIAN</th>
<th>NHW</th>
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<th>AL</th>
<th>SP</th>
<th>PC</th>
<th>East</th>
<th>SW</th>
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<td>Breas</td>
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<td>115.9</td>
<td>134.9</td>
<td>115.7</td>
<td>74.7</td>
<td>71.4</td>
<td>50.8</td>
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<tr>
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<td>75.4</td>
<td>69.9</td>
<td>48.0</td>
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<tr>
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<td>43.6</td>
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<td>Renal</td>
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<tr>
<td>Pancr</td>
<td>9.8</td>
<td>9.4</td>
<td>12.5</td>
<td>11.9</td>
<td>10.1</td>
<td>11.1</td>
<td>7.0</td>
<td>7.7</td>
</tr>
</tbody>
</table>
Why does this dramatic regional cancer variation exist?
Changing Landscape of T2DM

- Great burden of T2DM in Native communities
- On the heels of tuberculosis and other infection diseases (epidemiological transition)
- Social determinants play a huge role
- Rates of overweight and obesity in AIAN youth have leveled off between 2006 and 2015
- SDPI – better results than the DPP
Changing Landscape of T2DM

Source: United States Renal Data System, 2008
Other Challenges

• Methamphetamine use has exploded on many reservations
• Drug- and alcohol-fueled violence remain
• Alcohol stereotype
• High rates of autoimmune disease
• Opioid abuse not obviously a problem on SD reservations
• Early school absenteeism
CONCLUSIONS

• American Indian & Alaska Native culture is vibrant and alive
• There exists much beauty and strength
• Asset-based orientations and approaches should be promoted
• A tribe’s land and history are the vital threads that tie it to the present, and must be understood
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 disseminated, culturally grounded, and implemented
• Ongoing surveillance of behaviors and conditions is essential to gauge progress (BRFSS, NACR)
• Greater participation on the part of Aboriginal Tribes, communities and people is essential to efforts to improve health and eliminate inequities
CONCLUSIONS

• American Indians and Alaska Natives experience dramatic regional variation in cancer incidence when compared to NHWs

• This variation should be taken into account in both policy and surveillance efforts

• Many influences on individual- and population-health

• Social inequities have a profound impact on health status
6 Strategic Recommendations

1. Support health lifestyles more positively (individual risk factors)
2. Increase access to screening and follow-up services (institutions, including medical care)
3. Increased focus on dissemination and implementation (D&I)
6 Strategic Recommendations

4. Better coordinate tribal, state and federal fiscal resources (social and economic policies)
5. Embrace use of culturally-based, highly participatory methods
6. Explicitly involve and fund community-based organizations
Contact Me

Jeffrey A. Henderson, MD, MPH
Black Hills Center for American Indian Health
701 St. Joseph St., Ste. 204
Rapid City, SD 57702
(605) 348-6100; Email: jhenderson@bhcaih.org

WWW.BHCAIH.ORG