American Indian Cancer Disparities and Data Considerations

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Agenda

- American Indian Public Health Resource Center
- Brief Introduction to SD tribes
- Tribal communities/SD characteristics
- Social Determinants
- Cancer Health Disparities - American Indian Cancer Foundation
- Data considerations
- Honoring the process
- Conclusion
- Digital Story - personal perspective
American Indian Public Health Resource Center

Regional Tribes

Turtle Mountain Band of Chippewa Indians

Spirit Lake Tribe

Mandan, Hidatsa, Arikara Nation

Standing Rock Sioux Tribe
SD Tribes

Yankton Sioux Tribe
Standing Rock Sioux Tribe
Sisseton Wahpeton Oyate
Rosebud Sioux Tribe
Oglala Sioux Tribe
Lower Brule Sioux Tribe
Flandreau Santee Sioux Tribe
Crow Creek Sioux Tribe
Cheyenne River Sioux Tribe
2017 Tribal communities/SD characteristics

- Median age - 24.7 (SD - 36.8)
- Age 65+ - 6.4% (SD-15.2%)
- Age 17 and younger - 40.1% (SD-24.6%)
- 65 years and older population with 1 disability - 41.1% (SD-8.5%)
- Median income - $22,014 (28.6%) (SD-$52,078)
- Live below the poverty level - 51.0% (SD-13%)
- High school or higher - 69.8% (SD-91.2)
- Bachelors or higher - 9.1% of the adults (SD-27.5%)
Health disparities

- According to the North Dakota Department of Health, the Office of Indian Affairs Commission, and the North Dakota Department of Human Services health disparities work group... "Health disparities in North Dakota are defined as inequalities in health status, utilization or access due to structural, financial, personal or cultural barriers."

- Northern plains American Indians have some of the worst health disparities in the nation

- Are very diverse representing many tribes
Common health disparities among SD tribes

- Leading causes of death
  - Diseases of the heart
  - Cancer
  - Unintentional injuries
  - Diabetes
- Suicide
- Drug poisoning
- Sexually transmitted diseases
- Obesity

- Infant mortality
- Risk factors
  - Smoking
  - Alcohol use
  - Drug use
  - Lack of physical activity
  - Sexual behavior
Historical context among tribes

- Upon European contact in the late 15th century
  - Population estimate of Indigenous peoples living in North America are between 9 and 12 million people, perhaps as high as 18 million
- Late 19th century
  - Reduced to less than 200,000
- Due to:
  - Warfare
  - Genocide
  - Infectious disease
    - Blankets that were used by smallpox patients distributed to tribes
    - Tuberculosis
    - Trachoma
    - Measles
    - Diphtheria
- 2010 census
  - Increased to 5 million
What impacts our health?
Social Determinants of Health

- Traditional ways of life have been disrupted
  - Poor housing conditions
  - Lack of access to quality education
  - Poverty
    - High rates of unemployment
  - Poor infrastructure
  - Historical trauma
    - Boarding schools
    - Relocation
    - Homeland displacement
  - Environmental contamination
  - Food insecurity
  - Limited access or proximity to health care or medical services
  - Health insurance
  - Limited access to fitness facilities/health promotion programs
  - Complex historical and legal nuances
YOU DO THESE THINGS
TAKE CARE OF YOUR FAMILY
BE A GOOD WORKER
PLAN CAREFULLY

RELOCATION SERVICES
-CAN HELP WITH-
A JOB — HOUSING
ORIENTATION — MONEY PROBLEMS
TRANSPORTATION—SUBSISTENCE
HOUSEHOLD GOODS, REPAIR OLD BUY NEW
PERSONAL APPEARANCE
EDUCATION—TRAINING

RELOCATION SERVICES
CAN HELP YOU ONLY
SO LONG AS YOU
HELP YOURSELF
Cancer is the...

#1 Cause of Death for Women
- #2 Heart Disease
- #3 Unintentional Injury

#2 Cause of Death for Men
- #1 Heart Disease
- #3 Unintentional Injury

The most commonly diagnosed cancers are...
- #1 Breast
- #2 Lung
- #3 Colorectal

#1 Prostate
#2 Lung
#3 Colorectal

Lung cancer is the leading cause of cancer death for men and women.

Other leading causes of cancer death are...
- Prostate
- Colorectal
- Breast

Cancer death rates for AI/AN increased over a 20 year period, while decreasing for Whites over the same time frame.

Distinct patterns in AI/AN cancer rates are observed across six geographic regions defined by the Indian Health Service.
Cancer Burden by Region

- Alaska
- Northern Plains
- Pacific Coast
- Southern Plains
- Southwest
- East
Culturally appropriate and comprehensive approaches are needed to reduce cancer risk for American Indian and Alaska Native (AI/AN) people in these areas:

1. Identifying and addressing the social, physical and economic determinants of cancer risk in American Indian and Alaska Native communities.

2. Improving access to quality health services for cancer screening, diagnosis and treatment for American Indian and Alaska Native people.

3. Promoting healthy lifestyle choices while recognizing cultural values and practices:
   - Avoiding harmful tobacco use
   - Eating nutritious foods
   - Being physically active
   - Getting regular cancer screenings
   - Limiting alcohol intake
AI/AN in Alaska have higher cancer diagnoses and death rates for many cancers compared to Whites.

**Most Common Cancers: Alaska**

<table>
<thead>
<tr>
<th>Cancer Diagnosis</th>
<th>Men</th>
<th>Women</th>
<th>Cancer Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Lung</td>
<td></td>
<td></td>
<td>#1 Lung</td>
</tr>
<tr>
<td>#2 Prostate</td>
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<td></td>
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<tr>
<td>#3 Colorectal</td>
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<td></td>
<td>#3 Colorectal</td>
</tr>
<tr>
<td>#4 Stomach</td>
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<td>#4 Stomach</td>
</tr>
</tbody>
</table>

* Indicates higher rates for AI/AN than Whites

**Cancer Disparities for AI/AN vs. Whites: Alaska**

### Men
- Stomach Cancer Diagnosis: 4.5X
- Stomach Cancer Death: 4.4X

### Women
- Stomach Cancer Diagnosis: 6.4X
- Stomach Cancer Death: 7.1X

**Prevention**

Stomach cancer rates are highest in Alaska. Smoked and pickled foods, and salted meats and fish are risk factors. A diet high in fresh fruits and vegetables can lower risk.
AI/AN in the East have lower cancer diagnosis rates for the top three cancers compared to both Whites and other regions.

**Most Common Cancers: East**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>#1 Breast</td>
<td><img src="Image" alt="" /></td>
<td>#1 Lung</td>
</tr>
<tr>
<td>#2 Lung</td>
<td><img src="Image" alt="" /></td>
<td>#2 Breast</td>
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</tr>
<tr>
<td>#3 Colorectal</td>
<td><img src="Image" alt="" /></td>
<td>#3 Prostate</td>
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* Indicates higher rates for AI/AN than Whites

**Cancer Disparities for AI/AN vs. Whites: East**

- **Women**
  - **Colorectal Cancer Death**: 1.3X
  - **Kidney Cancer Diagnosis**: 1.5X
  - **Liver Cancer Diagnosis**: 2.3X

**Prevention**

Unlike other regions, AI/AN men and women in the East experience similar or lower rates for most cancers compared to Whites. More research is needed to understand why, but differences in factors such as lifestyle or screening access could provide clues about preventing cancer in other regions.
AI/AN in the Northern Plains experience some of the **highest** cancer diagnoses and death rates in the United States.

### Most Common Cancers: Northern Plains

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**Cancer Disparities for AI/AN vs. Whites: Northern Plains**

- **Men**
  - Liver Cancer Death: 2.8x
  - Larynx Cancer Death: 2.5x

- **Women**
  - Cervical Cancer Death: 4.2x
  - Gallbladder Cancer Death: 3.5x

**Prevention**

Lung cancer is the leading cause of cancer death in the Northern Plains. Improved access to tobacco cessation services like quit lines, medications, and counseling can help AI/AN people quit commercial tobacco and reduce their risk for lung cancer.
AI/AN in the Pacific Coast have fewer cancer disparities than in other regions, but show similar or worse rates for some of the top cancers when compared to whites.

**Most Common Cancers: Pacific Coast**

<table>
<thead>
<tr>
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</thead>
<tbody>
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<td>#1 Breast</td>
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<td>🌱</td>
<td>🍓</td>
</tr>
<tr>
<td>#2 Lung</td>
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<tr>
<td>#3 Colorectal</td>
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**Cancer Disparities for AI/AN vs. Whites: Pacific Coast**

- Liver Cancer Diagnosis: Men 2.6X, Women 2.8X vs. Men 2.1X, Women 1.9X
- Liver Cancer Death: Men 2.1X, Women 1.9X vs. Men 1.7X, Women 1.9X
- Stomach Cancer Diagnosis: Men 1.7X, Women 1.9X vs. Men 1.7X, Women 1.9X

**Prevention**

Breast cancer is the most common cancer and the second leading cause of cancer deaths among AI/AN women in the Pacific Coast. Improved access to screening and quality, timely care can help reduce breast cancer mortality.
AI/AN in the Southern Plains have higher cancer diagnoses and death rates for the top three cancers compared to whites.

Most Common Cancers: Southern Plains

- **Women**
  - #1 Breast
  - #2 Lung
  - #3 Colorectal

- **Men**
  - #1 Prostate
  - #2 Lung
  - #3 Colorectal

Cancer Disparities for AI/AN vs. Whites: Southern Plains

- **Men & Women**
  - Stomach Cancer Diagnosis: 1.9X vs. 2.3X
  - Liver Cancer Diagnosis: 2.1X vs. 2.4X
  - Liver Cancer Death: 2.2X vs. 2.5X

**Prevention**

Colorectal cancer diagnoses and deaths are common in the Southern Plains. Improved access to screening, especially for those in rural areas, can help detect this cancer early when treatment is most effective and can save lives.
AI/AN in the Southwest have lower cancer diagnoses and death rates for many of the most common cancers compared to whites.

**Most Common Cancers: Southwest**

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<tr>
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**Prevention**

Like in other regions, AI/AN people in the Southwest have higher rates of liver cancer compared to Whites. Increasing vaccination rates for the hepatitis B vaccine can prevent new liver cancer cases and new hepatitis C treatments may decrease liver cancer deaths.
Data Considerations

- Misclassification
- Tribal affiliation is often not collected
- Quality of data
- State rates are often reported by county when tribal lands often cover multiple counties and do not share the same boundaries
- Geographical differences also exist
- Limitations will also differ based on which data source is used
Challenge/Recommendation

- Challenge
  - Approval process
    - Indian Health Service Great Plains IRB
    - University of Minnesota IRB
    - Turtle Mountain Band of Chippewa (TMBCI) resolution
    - TMBCI Research Review Board
    - IHS Clinic CEO letter
      - Letter of support versus letter of accommodation

- Recommendation
  - Researchers should ensure that they receive proper approval from all proper entities
  - Researchers should request letter of accommodation
Challenge/Recommendation

- **Challenge**
  - Background check
  - Training
    - Health Insurance Portability and Accountability Act (HIPAA)
    - Privacy Act
    - Information System Security Trainings
  - Resource and Patient Management System

- **Recommendation**
  - Researchers should allocate adequate time
Honor the Process

- Engagement of a multitude of stakeholders
  - identify cultural norms and common beliefs around tribal health equity and wellness
  - Identify issues of interest to community partners
- Education & evidence to build capacity for action and innovation
  - shared information
  - opportunities
  - space for collaborations
  - increase resilience and ownership around a common set of tribal health equity goals
  - strategies for collective impact
- Foster ownership and action
  - develop, enact and enforce policies that promote tribal health equity and healthy norms within American Indian communities
Conclusion

- By improving the health of American Indians
  - improved overall health status
  - decreased burden on the health care system,
  - less uncompensated medical services in the private sector
  - Improved rural health equity
My Digital Story