October 28-30 Quantitative Imaging Workshop Webcast

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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

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

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

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

<table>
<thead>
<tr>
<th>Cancer Death</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver Cancer Death</td>
<td>2.8X</td>
<td>4.2X</td>
</tr>
<tr>
<td>Larynx Cancer Death</td>
<td>2.5X</td>
<td></td>
</tr>
<tr>
<td>Cervical Cancer Death</td>
<td></td>
<td>3.3X</td>
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<tr>
<td>Gallbladder Cancer</td>
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- **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.
Walking Forward Phases

• Phase I and II: Cancer Disparity Research Program
  2002-2011
• Phase III: Mobile health smoking cessation program
  2011-2017
• Phase IV: Lung Cancer Screening Project (LDCT)
  2018-2022
• Phase V: Palliative Care Grant
  2018-2022
Smoking and Lung Cancer in South Dakota

- High smoking rates: State average 20%, 7 counties over 30% (Todd County highest at 41%)
- High lung cancer mortality rates:
  - American Indian: 95 per 100,000
  - Whites: 55 per 100,000
  - Northern Plains AIs: highest lung cancer mortality rate in the US

New diagnosis of Non-Small-Cell Lung cancer 2009-2015 Rapid City
Increasing Lung Cancer Screening for High Risk Smokers in a Frontier Population

Research Question:
will provider and/or individual level interventions increase low dose computerized axial tomography (LDCT) lung cancer screening among high risk smokers living in western South Dakota?

Project Goal:
To increase lung cancer screening rates by educating primary care providers and their clinic staff as well as community members in western South Dakota.
Increasing Lung Cancer Screening for High Risk Smokers in a Frontier Population

- **Aim 1: Screening awareness**
  - Build on previous research to improve provider and individual awareness of LDCT lung cancer screening
    - Initial and follow-up surveys at baseline and 6 months

- **Aim 2: Evaluate the efficacy of two interventions with PCPs and community members to increase awareness of LDCTs**
  - Main outcome measure: number of LDCTs completed

- **Aim 3: Policy Symposium and Lung Health Forum**
  - Partnership with Georgetown University: Bette Jacobs, PhD
  - Engage community members, state and tribal leaders, primary care MDs
  - Develop sustainable, evidence-based, culturally- and regionally-appropriate practice and policy recommendations
Increasing Lung Cancer Screening for High Risk Smokers in a Frontier Population

Bristol-Myers Squibb Foundation - Funded February 2017

• 2 x 2 study design to evaluate provider (n=135) and individual level (n=1000) interventions

• Both interventions include education and introduction to the online resource

• Metric will be increase in screening LDCTs

• 14,000 patients at risk in Western, SD

**First WF Project to include all of western SD
Challenge: Limited access to screening LDCT

<table>
<thead>
<tr>
<th>Intervention:</th>
<th>Study Groups:</th>
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<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Provider</td>
<td>No*</td>
</tr>
<tr>
<td>Individuals</td>
<td>No*</td>
</tr>
</tbody>
</table>

*delayed intervention based on study findings
Education sessions

Provider Workshops/CME sessions
  Began September 2018
  13 clinic sites completed
  Provider accrual 95
  Target goal: 135

Community Workshops/Education sessions
  Began August 2018
  460 participants

  To date: 100 LDCT referrals have been obtained with 81 completed
Year 2 LDCT Results

- **BASELINE**: 640
- **YEAR 1**: 872
- **YEAR 2**: 1209

Legend:
- Orange: Baseline
- Blue: Year 1
- Purple: Year 2
LDCTS BY SITE AND QUARTER

LDCT Totals Year 1 and Year 2

Negative Impact of COVID
OVERCOMING CHALLENGES

• Indian Health Service is not currently covering the cost nor providing LDCTs
• Grant received from the Irving A. Hansen Memorial Foundation for 105K
  • Will allow us to screen 200 American Indians at no cost to the patient
• Indian Health Service (IHS): “life and limb” policy
• COVID pandemic
OVERCOMING CHALLENGES
Increasing Lung Cancer Screening for High Risk Smokers in a Frontier Population

• **Aim 1: Screening awareness**
  • Build on previous research to improve provider and individual awareness of LDCT lung cancer screening
    • Initial and follow-up surveys at baseline and 6 months

• **Aim 2: Evaluate the efficacy of two interventions with PCPs and community members to increase awareness of LDCTs**
  • Main outcome measure: number of LDCTs completed

• **Aim 3: Policy Symposium and Lung Health Forum (May 2021)**
  • Partnership with Georgetown University: Bette Jacobs, PhD
  • Engage community members, state and tribal leaders, primary care MDs
  • Develop sustainable, evidence-based, culturally- and regionally-appropriate practice and policy recommendations