Presentation Objectives

Throughout this presentation I will describe the following:

- BRFSS Overview/History
- BRFSS Methodology & Questionnaire
- BRFSS Cancer Surveillance
- BRFSS Resources
- Questions/Discussion
What is the BRFSS

- **Behavioral Risk Factor Surveillance System**
- Annual random-digit dial telephone survey
- Conducted in NE annually since 1986
- Collects data via landline and cell phone
- Targeted at adults 18 and older
- Conducted in all 50 states, DC, and U.S. territories
- Developed by the CDC
- Administered through State/Federal partnership
- Survey covers a variety of health behaviors, conditions, and attitudes
GET ALL THE INFORMATION YOU CAN, WE'LL THINK OF A USE FOR IT LATER.
BRFSS Methods

- Random-digit telephone survey of adults 18+
- Data are collected each month of the calendar year
- Survey administered using Computer-Aided Telephone Interviewing System (CATI)
- Monthly sample of cell phone and landline telephone numbers drawn
- Sample data are weighted by CDC for each state/territory to adjust for differences between sample proportions and the actual population
- In Nebraska we:
  - Stratify by local health department region
  - Conduct a minority oversample
  - Have one of the highest response rates in the country
Cancer-Specific BRFSS Modules

- Chronic Health Conditions – cancer prevalence
  - (2011\textsuperscript{C}, 2012\textsuperscript{C}, 2013\textsuperscript{C}, 2014\textsuperscript{C}, 2015\textsuperscript{C}, 2016\textsuperscript{C}, 2017\textsuperscript{C}, 2018\textsuperscript{C})

- Breast and Cervical Cancer Screening
  - (2012\textsuperscript{C}, 2014\textsuperscript{C}, 2016\textsuperscript{C}, 2018\textsuperscript{C})

- Prostate Cancer Screening
  - (2012\textsuperscript{C}, 2014\textsuperscript{C}, 2016\textsuperscript{C}, 2018\textsuperscript{C})

- Colorectal Cancer Screening
  - (2012\textsuperscript{C}, 2013\textsuperscript{O}, 2014\textsuperscript{C}, 2015\textsuperscript{O}, 2016\textsuperscript{C}, 2017\textsuperscript{S}, 2018\textsuperscript{C})

- Cancer Survivorship
  - (2014\textsuperscript{O}, 2016\textsuperscript{O}, 2017\textsuperscript{O})

Legend
C=Core
O=CDC Optional
S=State-Added
Has a doctor, nurse, or other health professional EVER told you that you had any of the following? For each, tell me “Yes,” “No,” or you’re “Not sure.”

(Ever told) you had skin cancer?
1  Yes
2  No
7  Don’t know / Not sure
9  Refused

(Ever told) you had any other type of cancer?
1  Yes
2  No
7  Don’t know / Not sure
9  Refused

5.6% of Nebraska adults in 2017

11.0% of Nebraska adults in 2017

Side Note
Nearly double the percentage reporting they have been told they have heart disease or have had a heart attack or stroke (6.1%, 2017)
Cancer Screening

- BRFSS Covers Breast, Cervical, Prostate, and Colon Cancer Screening topics; Lung Cancer added in 2019
- Designed to provide estimates of the percentage of adults who are up-to-date on the U.S. Preventive Service Task Force Recommendations
  - For Breast Cancer: Percentage of females 50-74 years old who report having had a mammogram during the past 2 years
  - For Cervical Cancer: Percentage of females 21-65 years old without a hysterectomy who report having had a Pap test during the past 3 years
  - For Colon Cancer: Percentage of adults 50–75 years old who report having had a fecal occult blood test (FOBT) during the past year, or a sigmoidoscopy during the past 5 years and an FOBT during the past 3 years, or a colonoscopy during the past 10 years
**Up-To-Date on Colon Cancer Screening among Adults 50-75 Years Old**, Nebraska and U.S., 2008-2017

- Lowest percentage meeting USPFTF recommendation (of the three screenings)
- Has shown the greatest improvement (of the three screenings)

### Historical Trend (pre-2011)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Nebraska</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>58.5</td>
<td>61.2</td>
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<tr>
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<td>63.3</td>
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<tr>
<td>2010</td>
<td>59.7</td>
<td>65.1</td>
</tr>
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</table>

### Current Trend**

<table>
<thead>
<tr>
<th>Year</th>
<th>Nebraska</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>61.1</td>
<td>66.6</td>
</tr>
<tr>
<td>2013</td>
<td>62.8</td>
<td>66.6</td>
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<tr>
<td>2014</td>
<td>64.1</td>
<td>67.7</td>
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<tr>
<td>2015</td>
<td>65.2</td>
<td>67.7</td>
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<tr>
<td>2016</td>
<td>66.0</td>
<td>67.7</td>
</tr>
<tr>
<td>2017</td>
<td>68.3</td>
<td></td>
</tr>
</tbody>
</table>

*Percentage of adults 50–75 years old who report having had a fecal occult blood test (FOBT) during the past year, or a sigmoidoscopy during the past 5 years and an FOBT during the past 3 years, or a colonoscopy during the past 10 years (U.S. data only collected during even calendar years)

**BRFSS data from 2011 and later are not comparable to data from 2010 and earlier due to methods changes

Source: Behavioral Risk Factor Surveillance System (BRFSS)
Up-To-Date on Breast Cancer Screening among Women 50-74 Years Old*, Nebraska and U.S., 2004-2016

- Gradual decline over past decade
- Lower than adults nationally in recent years

<table>
<thead>
<tr>
<th>Year</th>
<th>Nebraska</th>
<th>U.S.</th>
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</thead>
<tbody>
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<td>81.7</td>
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<td>81.2</td>
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<tr>
<td>2008</td>
<td>77.8</td>
<td>80.4</td>
</tr>
<tr>
<td>2009</td>
<td>75.9</td>
<td>79.4</td>
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<tr>
<td>2010</td>
<td>74.9</td>
<td>78.4</td>
</tr>
<tr>
<td>2012</td>
<td>76.1</td>
<td>78.1</td>
</tr>
<tr>
<td>2014</td>
<td>73.4</td>
<td>77.6</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Percentage of females 50-74 years old who report having had a mammogram during the past 2 years

**BRFSS data from 2011 and later are not comparable to data from 2010 and earlier due to methods changes

Source: Behavioral Risk Factor Surveillance System (BRFSS)
Up-To-Date on Cervical Cancer Screening among Women 21-65 Years Old*, Nebraska and U.S., 2004-2016

Historical Trend (pre-2011)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Nebraska</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>90.5</td>
<td>89.9</td>
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<tr>
<td>2006</td>
<td>89.0</td>
<td>88.6</td>
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<tr>
<td>2007</td>
<td>89.4</td>
<td>88.3</td>
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<tr>
<td>2008</td>
<td>88.6</td>
<td>87.8</td>
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<tr>
<td>2009</td>
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<td>87.0</td>
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<td>2010</td>
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<td>84.3</td>
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<tr>
<td>2012</td>
<td>81.7</td>
<td>82.6</td>
</tr>
<tr>
<td>2014</td>
<td>77.7</td>
<td>79.8</td>
</tr>
</tbody>
</table>

Current Trend**

- Highest percentage meeting USPSTF recommendation (of the three screenings)
- Has shown the greatest decline (of the three screenings)

*Percentage of females 21-65 years old without a hysterectomy who report having had a Pap test during the past 3 years
**BRFSS data from 2011 and later are not comparable to data from 2010 and earlier due to methods changes
Source: Behavioral Risk Factor Surveillance System (BRFSS)
Up-To-Date on Cancer Screening Recommendations among Nebraska Adults (age-adjusted), by Urban/Rural, 2014-2017^*%

- Residents in large urban areas are the most likely to report being up-to-date on screenings
- Greatest urban/rural disparity is in colon cancer screening

*Percentage of adults 50–75 years old who report having had a fecal occult blood test (FOBT) during the past year, or a sigmoidoscopy during the past 5 years and an FOBT during the past 3 years, or a colonoscopy during the past 10 years
**Percentage of females 50-74 years old who report having had a mammogram during the past 2 years
***Percentage of females 21-65 years old without a hysterectomy who report having had a Pap test during the past 3 years
^Years 2014-2017 combined for colon cancer, years 2014 and 2016 combined for breast and cervical cancer

Source: Behavioral Risk Factor Surveillance System (BRFSS)
Up-To-Date on Cancer Screening Recommendations among Nebraska Adults (age-adjusted), by Household Income, 2014-2017^  

<table>
<thead>
<tr>
<th>Household Income</th>
<th>Colon Cancer*</th>
<th>Breast Cancer**</th>
<th>Cervical Cancer***</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$25,000</td>
<td>54.3</td>
<td>63.2</td>
<td>67.9</td>
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<tr>
<td>$25,000 - $49,999</td>
<td>61.9</td>
<td>71.5</td>
<td>79.5</td>
</tr>
<tr>
<td>$50,000 - $74,999</td>
<td>68.8</td>
<td>79.5</td>
<td>82.9</td>
</tr>
<tr>
<td>$75,000+</td>
<td>76.3</td>
<td>82.9</td>
<td>83.4</td>
</tr>
</tbody>
</table>

- Strong association between income and being up-to-date on cancer screenings  
- Those reporting a household income of $75k+, compared to reporting less than $25k, were 41% more likely to report being up-to-date on their colon cancer screening

*Percentage of adults 50–75 years old who report having had a fecal occult blood test (FOBT) during the past year, or a sigmoidoscopy during the past 5 years and an FOBT during the past 3 years, or a colonoscopy during the past 10 years

**Percentage of females 50-74 years old who report having had a mammogram during the past 2 years

***Percentage of females 21-65 years old without a hysterectomy who report having had a Pap test during the past 3 years

^Years 2014-2017 combined for colon cancer, years 2014 and 2016 combined for breast and cervical cancer

Source: Behavioral Risk Factor Surveillance System (BRFSS)
Up-To-Date on Colon Cancer Screening among Nebraska Adults 50-75 Years Old (age-adjusted), by Race/Ethnicity, 2013-2017 Combined

- Non-Hispanic Whites were 32% more likely than non-Hispanic American Indians and 66% more likely than Hispanics to report being up-to-date on their colon cancer screening.
- Just 2 in 5 Hispanic adults 50-75 years old are up-to-date on their screening.

*Percentage of adults 50–75 years old who report having had a fecal occult blood test (FOBT) during the past year, or a sigmoidoscopy during the past 5 years and an FOBT during the past 3 years, or a colonoscopy during the past 10 years.

Source: Behavioral Risk Factor Surveillance System (BRFSS)
Cancer Survivorship

Subset of questions targeted at those who indicated they had ever been told by a doctor that they had cancer, including:

- How many types they had been diagnosed with
- Age at first diagnosis
- Most recent type of cancer
- Treatment status
- Type of doctor providing majority of care
- Documentation of treatment history
- Follow-up care planning with doctor
- Health care coverage for treatment/denial of coverage
- Clinical trial participation
- Current pain caused by cancer or treatment/pain management
Cancer Survivorship Results, 2017

- Among BRFSS respondents who had ever been told they had cancer (n=2,447):
  - 19.6% reported having been diagnosed with 2+ types of cancer
  - 70.3% were under the age of 65 at the time of their first diagnosis
  - Most commonly diagnosed cancers:
    - Non-melanoma skin (28.4%)
    - Breast (14.2%)
    - Melanoma (14.2%)
    - Prostate (9.0%)
    - Colon (4.2%)
    - Thyroid (3.6%)
    - Cervical (3.2%)

*Note: All others <2%*
Cancer Survivorship Results, 2017 Combined

Among BRFSS respondents who had ever been told they had cancer, and completed treatment (n=1,381):

- Family practice (41.6%) and general practitioner or internist (37.7%) provide the majority of their health care
- 36.5% ever received written history of all cancer treatments received
- 70.6% ever received instructions on where to go or who to see for routine cancer checkups after completing cancer treatment
- 94.9% had health insurance that paid for all/part of cancer treatment
- 8.2% ever denied health or life insurance because of cancer
- 5.1% participated in a clinical trial as part of cancer treatment
- 9.2% have current pain from cancer or cancer treatment
  - About a ¼ of those with pain say it is not under control
Other Cancer-Related Topics on BRFSS

- Tobacco Use
- Alcohol Use
- Overweight and Obesity
- Physical Activity
- Nutrition
Conclusions and Next Steps

Conclusions
- The BRFSS can provide rich data for understanding cancer in Nebraska
- Cancer screening trends are mixed, and large disparities exist
- Large prevalence of persons diagnosed with cancer and large BRFSS sample size provides adequate data to better understand cancer survivors
- Survey data subject to several limitations

Next Steps
- Continue to collect and analyze cancer data using BRFSS and collaborate with NC2 on these efforts
- Strive to include survey questions that support changes in health care and medical technology (future opportunity to collect more data in 2020 on survivorship, including cancer type, pain management, and course of treatment).
- Adapt to changing use of technology for BRFSS data collection
BRFSS Resources

Nebraska DHHS BRFSS Website

www.dhhs.ne.gov/brfss

Nebraska BRFSS Interactive Dashboard (using Logi Analytics… near future)

CDC BRFSS Website

https://www.cdc.gov/brfss/

https://www.cdc.gov/brfss/brfssprevalence/index.html

County Health Rankings & Roadmaps

http://www.countyhealthrankings.org/
Disclosure

Jeff Armitage has listed no relevant financial relationship that would be considered a conflict of interest.
Governor Pete Ricketts

Vision:
Grow Nebraska

Mission:
Create opportunity through more effective, more efficient, and customer focused state government

Priorities:
• Efficiency and Effectiveness
• Customer Service
• Growth
• Public Safety
• Reduced Regulatory Burden

We Value:
• The Taxpayer
• Our Team
• Simplicity
• Transparency
• Accountability
• Integrity
• Respect