Colorectal Cancer Screening in Washington State

Susie Dade, Deputy Director, Washington Health Alliance
Outline

• About the Alliance
• How we’re doing in Washington State
  – Incidence & Mortality
  – Screening rates
• What improvement could mean/quantifying improvement
About the Alliance
The Alliance: Who We Are

• **Ten year history.** Grassroots effort gave us our start in 2005.

• **Multi-stakeholder.** 185 member organizations statewide representing purchasers, plans, providers, patients and other health partners.

• **Purchaser-led.** The majority of our governing members represent employers and labor union trusts.

• **A convener.** A place where those who give, get and pay for care come together to align their efforts to lead health system change.

• **Non-profit.** We are a designated 501(c)3.

• **Non-partisan.** We engage in lobbying efforts on a very limited basis and only on topics that are directly related to our mission and core work.
Examples of the Alliance’s Broad Membership
Our Mission and Vision

Mission
The mission of the Washington Health Alliance is to build and maintain a strong alliance among purchasers, providers, health plans, consumers and others to promote health and improve the quality and affordability of the health care system.

Vision
Physicians, other providers and hospitals in Washington will achieve top 10% performance in the nation in the delivery of equitable, high quality, evidence-based care and in the reduction of unwarranted variation, resulting in a significant reduction in the rate of medical cost trend.
Three Overarching Goals

The Alliance’s principal strategies:

CONVENCING AND ALIGNING

• We bring together a diverse group of organizations and individuals who share our cause to drive collective action to improve the value of health care in Washington state.

MEASUREMENT AND REPORTING

• We share information and insights that describe how health care gets delivered, used and paid for in Washington state.
Performance Reporting: Core Competency of the Alliance

- Robust voluntary database with 4 million lives in Washington state since 2007.
- Thirty data suppliers (health plans, self-funded purchasers) submit claims data to the Alliance.
- Data dating back to 2004.
- Includes Commercial and Medicaid insured populations.
Colorectal Cancer in Washington state

How are we doing?
Colorectal Cancer: Incidence

# Colorectal Cancer: Incidence

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Incidence Rate (per 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast (female)</td>
<td>135</td>
</tr>
<tr>
<td>Prostate</td>
<td>133.9</td>
</tr>
<tr>
<td>Lung and bronchus</td>
<td>61.6</td>
</tr>
<tr>
<td>Colorectum</td>
<td>38.7</td>
</tr>
<tr>
<td>Uterine corpus</td>
<td>25.8</td>
</tr>
<tr>
<td>Melanoma of the skin</td>
<td>25.6</td>
</tr>
</tbody>
</table>

Per 100,000, age adjusted to the 2000 US standard population

Data sources: North American Association of Central Cancer Registries (NAACCR), 2015

Source: Cancer Statistics Center, 2008-2012
Colorectal Cancer: Mortality

## Colon Cancer Screening: Mortality

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Death Rate (2008-2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung and bronchus</td>
<td>45.8</td>
</tr>
<tr>
<td>Prostate</td>
<td>22.2</td>
</tr>
<tr>
<td>Breast (female)</td>
<td>20.3</td>
</tr>
<tr>
<td>Colorectum</td>
<td>14.1</td>
</tr>
<tr>
<td>Pancreas</td>
<td>11.4</td>
</tr>
<tr>
<td>Ovary</td>
<td>8.7</td>
</tr>
</tbody>
</table>

*Per 100,000, age adjusted to the 2000 US standard population*

*Data sources: National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention, 2015*

Source: Cancer Statistics Center, 2008-2012
Good news! We’re improving.

Variation Remains an Issue Across Counties

Variation for Colorectal Cancer is an Issue Across Race

Source: Health of Washington State, Department of Health, 2010 - 2012
Colorectal Cancer SCREENING in Washington State

Let’s prevent this!
Colorectal Cancer Screening: Measure Details

• **NCQA HEDIS**
  – Applies to Commercial and Medicare

• **The number of adults 51 to 75 years of age who had appropriate screening for colorectal cancer with any of the following tests:**
  – annual fecal occult blood test;
  – flexible sigmoidoscopy every five years; or
  – colonoscopy every ten years.

• **Exclusion:** Members who had a total colectomy or who were diagnosed with colorectal cancer at any time in their history, through the end of the measurement year.
Colorectal Cancer Screening
Health plan variation, commercial

Source: NCQA Quality Compass, 2015
Colorectal Cancer Screening
Medical Group variation, commercial

Statewide commercial: 63%
Best performing medical group: 83%
Worst performing medical group 22%
Colorectal Cancer Screening
County variation, commercial

Statewide commercial: 63%
Best performing county: 66%
Worst performing county 36%
# Colorectal Cancer Screening
## Racial and Ethnic variation

### Table 2. Health screenings among Medicaid enrollees, July 2012 - June 2013.

Red = rate is significantly worse than Medicaid statewide rate; Green = significantly better; Gray = not significantly different. Color rankings based on Wilson Score Interval statistical test.

<table>
<thead>
<tr>
<th>Racial/Ethnic Group</th>
<th>Cancer Screenings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Breast</td>
</tr>
<tr>
<td><strong>Statewide commercial</strong></td>
<td>73%</td>
</tr>
<tr>
<td><strong>Statewide Medicaid (all races)</strong></td>
<td>50%</td>
</tr>
<tr>
<td><strong>White</strong></td>
<td>50%</td>
</tr>
<tr>
<td><strong>Hispanic or Latino</strong></td>
<td>53%</td>
</tr>
<tr>
<td><strong>Black or African American</strong></td>
<td>49%</td>
</tr>
<tr>
<td><strong>American Indian and Alaska Native</strong></td>
<td>41%</td>
</tr>
<tr>
<td><strong>Asian</strong></td>
<td>58%</td>
</tr>
<tr>
<td><strong>Native Hawaiian and Pacific Islander</strong></td>
<td>*</td>
</tr>
</tbody>
</table>
Colorectal Cancer Screening
Some improvement over time

- Commercial
  - 2011-2012: 58%
  - 2013-2014: 63%

- Medicaid
  - 2011-2012: 38%
  - 2013-2014: 44%
Summary/Key findings

• Although the incidence of and death rate from colorectal cancer is declining in Washington, the impact remains significant.

• Screening remains an essential tool in minimizing the impact of colorectal cancer.

• Even so, our state significantly lags behind the national 90th percentile for ensuring routine screening is taking place.

• Some medical groups surpass the national benchmark with screening rates as high as 83%.

• But there is significant variation among health plans, medical groups and counties, with screening rates among medical groups as low as 22%.
Looking ahead: Quantifying improvement

Knowing what improvement means!
What might colorectal cancer screening improvement look like in our state?

What if screening rates improved by five percentage points? Seven points? Achieved national 90th percentile performance?

**OUTCOMES:**
- More lives saved or extended

**UTILIZATION:**
- Additional testing
- Necessary disease treatment reduced or avoided

**TRADE-OFFS:**
- Increased false positive cases and unnecessary procedures
- Increased number of over-diagnosed cases
The Alliance is interested in estimating these effects…

The Alliance will continue measuring past adherence with screening guidelines.

We’d also like to begin estimating the future impacts of improvement by producing demonstrations of projected population impact that builds on well-vetted disease history models such as this research:

**Annals of Internal Medicine**

**Evaluating Test Strategies for Colorectal Cancer Screening: A Decision Analysis for the U.S. Preventive Services Task Force**

Ann G. Zuber, PhD; Iris Lansdorp-Vogelaar, MS; Amy B. Knudsen, PhD; Janneke Wilschut, MS; Marjolein van Ballegooijen, MD, PhD; and Karen M. Kuntz, ScD

The USPSTF requested a **decision analysis** to inform their update of recommendations for colorectal cancer screening.

**Objective**: To identify a set of recommendable CRC screening strategies.

Decision analysis uses two colorectal cancer **microsimulation models** from the Cancer Intervention and Surveillance Modeling Network with a **societal perspective** and a **lifetime time horizon**.

**Outcome measures** are the **number of life-years gained** compared with no screening and **number of colonoscopies and non-colonoscopy tests** required.

**Funding**: NCI and AHRQ.
Decision Analysis models

The first time that the USPSTF has included simulation modeling to help inform their decision on recommendations (2008)

Although randomized, controlled trials are the preferred method for establishing effectiveness of interventions, they are expensive, require long follow-up, and can address only a limited number of comparison groups.

Decision Analysis uses a comparative modeling approach to compare life-years gained relative to resource use of different strategies for colorectal cancer screening.

The base case assumes 100% adherence for screening tests, follow-up of positive findings, and surveillance of persons found to have adenomas.

(Note: alternate simulations assessed the effect of lower adherence rates)

1Ann Intern Med 2008;149:659-669
Example of outcome measures from decision analysis/simulation

Suppose 1,000 40-year olds are 100% adherent to the following CRC screening strategy:

Colonoscopy beginning at age 50 and ending at age 75 (with a 10-year interval when results are negative)

Disease history simulations suggests this group of people will collectively experience:

1. 230 to 271 additional years of life from CRC avoided or delayed

2. Between 3,756 and 4,136 additional colonoscopies (including recall colonoscopies)
Another example of outcome measures from simulation

Suppose 1,000 40-year olds are 100% adherent to the following CRC screening strategy:

Annual fecal immunochemical testing (FIT) beginning at age 50 and ending at age 75

Disease history simulations suggests this group of people will collectively experience:

1. 227 to 256 additional years of life from CRC avoided or delayed
2. Between 11,773 and 11,830 additional FIT tests
3. Between 2,295 and 2,949 additional colonoscopies
Issues and Opportunities

1. Weighing the impact of screening to prioritize limited time, resources within a health care delivery system that is increasingly being held accountable for total cost AND quality

2. Framing impacts accurately
   - On average, a single colonoscopy is associated with 20-26 days of extended life -- but these benefits accrue to a relatively small number of people.
   - It is not true that an individual colonoscopy, on a single patient adds 20-26 days of life

3. Communicating the differential health value of screenings
   - Evidence and simulations suggest many-fold differences in the number of potential lives saved between colorectal, breast, and cervical cancer screening adherence.
Thank you!

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