Leveraging APCD Data to Drive Higher Value Care in Virginia

Analyzing Data to Identify Unnecessary or Harmful Medical Tests and Procedures

• **Value Based Insurance Design & Choosing Wisely®** are key components of Virginia’s State Innovation Model (SIM) design

• Key partners in this work include: Virginia Center for Health Innovation, Virginia Health Information, Milliman, and the University of Michigan’s Center for Value-Based Insurance Design

• Main strategy is to utilize data from Virginia’s **All Payer Claims Database** and the **Milliman MedInsight Health Waste Calculator** to identify priorities as to which medical tests and procedures are not generating value for patients and should be reduced.
Important Definitions

Choosing Wisely® – designed by the American Board of Internal Medicine and the National Physicians Alliance to help physicians, patients and other health care stakeholders think and talk about overuse of health care resources. Each medical specialty was asked to identify 5 medical tests and/or procedures that they know to be unnecessary and/or harmful. More than 70 specialty society partners are now participating in Choosing Wisely®.

MedInsight Health Waste Calculator – an analytical software tool that provides actionable insight on the degree of necessity of healthcare services and determines optimal efficiency benchmarks.

All Payer Claims Database – includes paid claims from commercial health insurance companies and the Department of Medical Assistance Services. This voluntary program facilitates data-driven, evidence-based improvements in the access, quality, and cost of healthcare. For the purposes of this work, VHI and VCHI were also able to secure Medicare fee for service data to add to the Medicaid and commercial data.
Virginia Value Initiative

Data Source- Virginia’s All Payer Claims Database
Administered by Virginia Health Information

- Medicare Fee-for-Service
- Medicaid Fee-for-Service
- 9 of largest health insurers in Virginia

Medical and Pharmacy Claims for 5.5 million Virginians
Defining “Low Value”

- Services that research has proven to add no value in particular clinical circumstances and in fact can lead to subsequent unnecessary patient harm and higher total cost of care.

- MedInsight Health Waste Calculator methodology begins with evidence based guidance as prioritized and defined by leading community organizations (by in large Choosing Wisely®).

- Due to the limitations of clinical data within claim records the MedInsight Health Waste Calculator approach is very conservative in terms of its definitions of waste.
“Low Value” Defined:
Preoperative Baseline Cardiac Testing

- Measure Description – Echocardiography or stress testing performed in adults 18 years and older, 30 days prior to a low or intermediate risk non-cardiac surgery

- Services being measured – Echocardiography or stress testing services including facility and professional services

<table>
<thead>
<tr>
<th>Services measured are categorized as:</th>
<th>HIGH VALUE “Necessary”</th>
<th>LIKELY LOW VALUE</th>
<th>LOW VALUE “Wasteful”</th>
<th>ULTIMATE RISK Summary of “Low Value” Preoperative Cardiac Testing Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any inpatient admission 30 days prior to the cardiac testing</td>
<td>None</td>
<td>Absence of any inpatient admission 30 days prior to the cardiac testing</td>
<td>Insufficient evidence on effect of preoperative testing on total perioperative complications or procedure cancellation</td>
<td></td>
</tr>
<tr>
<td>Any ED, observation or urgent care visit on or 1 day after the cardiac testing</td>
<td>Absence of Any ED, observation or urgent care visit on or 1 day after the cardiac testing</td>
<td>Preoperative testing may result in abnormal results that may lead to new diagnosis or additional investigations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis of high risk markers for CHD 2 years prior to the cardiac testing</td>
<td>Absence of high risk markers for CHD</td>
<td>Unnecessary vitamin D treatment may lead to Vitamin D toxicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of signs &amp; symptoms of CHD 2 months prior to the cardiac testing</td>
<td>Absence of signs &amp; symptoms of CHD</td>
<td>Additional investigation may cause unnecessary psychological and economic burdens, postponement of surgery, and even morbidity and mortality</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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What We’ve Done So Far-

Fall 2015- First release of state and regional reports

March 2016- Health system taskforce created through the Virginia Hospital and Healthcare Association

January 2016- 2nd release of state and regional reports

April 2016- Report created specifically for Commonwealth of Virginia Employee claims
# Virginia Value Initiative

## Summary of Results

<table>
<thead>
<tr>
<th>Reporting Period</th>
<th>2013, 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Measures</td>
<td>45</td>
</tr>
<tr>
<td>CMS Data Included?</td>
<td>Yes</td>
</tr>
<tr>
<td>Dollars Spent on Unnecessary Services</td>
<td>$650 million per year</td>
</tr>
<tr>
<td>Unnecessary Services Identified</td>
<td>1.65 million per year</td>
</tr>
</tbody>
</table>

Better value for a healthier Commonwealth
Overall Results – Summary

20% of members exposed to 1+ low service

36% of services measured were low value

2.4% or $11.94 PMPM in claims were unnecessary

Potential Cost Savings of $650 Million Per Year
2014 Statewide Results by Insurance Type

- **Commercial**
  - Necessary: 52%
  - Low Value: 48%

- **Medicare**
  - Low Value: 22%
  - Necessary: 78%

- **Medicaid**
  - Necessary: 55%
  - Low Value: 45%

Better value for a healthier Commonwealth
Virginia Value Initiative

% Low Value Services by Region - 2014

Central Region: 33%
Eastern Region: 33%
Northern Region: 45%
Northwest Region: 33%
Southwest Region: 31%

% Low Value
State Average
## Top 5 Measures by Cost - 2014

<table>
<thead>
<tr>
<th>Measure</th>
<th>Total Services Measured</th>
<th>Low Value Index (%)</th>
<th>Low Value Services (#)</th>
<th>Unnecessary Spending ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline labs for patients undergoing low-risk surgery</td>
<td>571,600</td>
<td>79%</td>
<td>453,447</td>
<td>$184,781,018</td>
</tr>
<tr>
<td>Stress cardiac or advanced non-invasive imaging in the initial evaluation of patients w/o symptoms</td>
<td>219,878</td>
<td>13%</td>
<td>27,817</td>
<td>$185,997,938</td>
</tr>
<tr>
<td>EKGs or other cardiac screening for low-risk patients w/o symptoms</td>
<td>2,268,194</td>
<td>6%</td>
<td>147,423</td>
<td>$60,499,385</td>
</tr>
<tr>
<td>Routine Pap tests in women 21–65 years of age</td>
<td>199,865</td>
<td>81%</td>
<td>161,539</td>
<td>$37,558,706</td>
</tr>
<tr>
<td>PSA-based screening for prostate cancer in all men regardless of age</td>
<td>313,011</td>
<td>42%</td>
<td>132,793</td>
<td>$31,501,675</td>
</tr>
</tbody>
</table>
Results for State of Virginia Employee Claims

43% of services measured were determined to be low value

46% of low value services were related to screening tests

$9.95 PMPM in claims were unnecessary

Potential Cost Savings of $25 Million Per Year
Caveats

• The Health Waste Calculator does no additional data validation, it relies on the APCD processes in total to review data quality issues before the Health Waste Calculator (HWC) is run.

• “Waste” is defined in each HWC Clinical Specification per measure. The VHI APCD has access to all the clinical specifications and will be reasonable in the distribution of the clinical assumptions to the interested parties.

• The majority of HWC measures require a one year historical look-back period. The subsequent reporting summaries are for incurred year 2014 with historical data going back to 1/1/2011. Please see the HWC Clinical specifications for each measure to review the Milliman historical look-back assumptions.
Early lessons learned

- Word Choice Matters- “Waste” will strike a nerve with certain audiences
- May want to focus on reducing harmful measures first – and not focus solely on potential cost savings
- May want to prioritize reducing those measures with a high waste index, even if the likely cost savings is lower. Easier to message and change behavior.
- Need to be prepared to address provider medical liability concerns
- Consumer education needs to be conducted concurrent with provider education
## Potential Levers

### Sample Opportunity

<table>
<thead>
<tr>
<th>Measure</th>
<th>Total Services</th>
<th>Low Value Services</th>
<th>Low Value Services /1K</th>
<th>Low Value $</th>
<th>Unit Cost</th>
<th>% of Overall Low Value $</th>
<th>% of Total Overall $</th>
<th>Quality Index</th>
<th>Low Value Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screening Tests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin D Screening</strong></td>
<td>173,381</td>
<td>173,381</td>
<td>32.31</td>
<td>$23,821,569</td>
<td>$137</td>
<td>3.6%</td>
<td>1.3%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Potential Levers**

<table>
<thead>
<tr>
<th>Lever</th>
<th>Potential Strategy</th>
<th>Opportunity to Impact Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytics and Reporting</td>
<td>Develop focused reporting by provider group</td>
<td>Med</td>
</tr>
<tr>
<td>Education and Promotion</td>
<td>Create member awareness campaigns</td>
<td>Low – Med</td>
</tr>
<tr>
<td>Claim Adjudication</td>
<td>Implement claim edits to deny inappropriate care</td>
<td>High</td>
</tr>
<tr>
<td>Provider Network</td>
<td>Incorporate into provider network development strategy</td>
<td>Med - High</td>
</tr>
<tr>
<td>Medical Management</td>
<td>Add utilization management requirements</td>
<td>High</td>
</tr>
<tr>
<td>Benefit Design</td>
<td>Incorporate value based design</td>
<td>High</td>
</tr>
</tbody>
</table>
What’s Next-

- State and regional reporting for 2015
- Potential benefit design changes for state employees
- Health system specific reporting
- Hospital taskforce to select measures of focus
- Employer specific reporting