Paid Claims Data Analysis

Analysis of care costs and quality to

• Inform policy
• Inform purchasers and payers
• Inform consumers
• Inform communities
• Inform providers
Paid Claims Data Analysis

• Pilot (2004-2007): Built and assessed the capability of the MQF warehouse to support population based, statewide quality measures and studies

• Phase 1 (2007-2009): All-Payer Analysis of Variation in costs of healthcare in Maine (Variation ~ Quality)

• Phase 3 (2009-2010): Deliverables to include:
  – Update phase 2 to include quality measures
  – Demonstrate differences in cost and quality at the physician/practice level
    • Will require assignment of physicians to practices
  – Identify specific services that account for cost/quality differences
  – Identify and analyze systems of care
MQF Regional Variation in Effective Care

Percent of Diabetic Members Aged 18-64
Having LDL-C Test Performed
Measurement Period: 7/1/2004-6/30/2005

Report on Initial Analysis of Maine’s Paid-Claims Database,
Health Dialog for DHA/MQF, February 2007
Performance Varies Across Providers

Coronary Artery Disease Gap in Care Score
Provider Performance and Confidence Intervals (July 2004 - June 2005)

Cardiology Results

- There is no correlation between delivery of effective care and efficiency performance (supply sensitive cost).
- Comparison of provider performance is revealing.

### Cardiology - Total Effective Care Score vs. Cardiac Testing Cost

![Graph showing correlation between Total Effective Care Score and Cardiac Testing Cost](image)

**Provider A**
- 130 patients
- Mean age 57.3
- 62% Male
- Panel Risk Score 1.05

**Provider B**
- 200 patients
- Mean age 58.0
- 65% Male
- Panel Risk Score 1.09

PA admissions are high and variable

**Healthcare Variation in Maine**, April 2009

Health Dialog for Dirigo Health Agency/Maine Quality Forum
## ADMISSIONS BY TYPE

<table>
<thead>
<tr>
<th>Type of Admission</th>
<th>$ Total IP</th>
<th>% of total IP</th>
<th>$ Total PA IP</th>
<th>% of total PA IP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac-Circulatory</td>
<td>$193.3M</td>
<td>21.1%</td>
<td>$56.5M</td>
<td>19.9%</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>$114.5M</td>
<td>12.5%</td>
<td>$18.1M</td>
<td>6.4%</td>
</tr>
<tr>
<td>GI</td>
<td>$86.9M</td>
<td>9.5%</td>
<td>$37.2M</td>
<td>13.1%</td>
</tr>
<tr>
<td>Respiratory</td>
<td>$72.4M</td>
<td>7.9%</td>
<td>$52.0M</td>
<td>18.3%</td>
</tr>
<tr>
<td>All Other</td>
<td>$448.9M</td>
<td>49.0%</td>
<td>$119.8M</td>
<td>42.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$916.0M</strong></td>
<td><strong>100%</strong></td>
<td><strong>$283.6M</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

(Total PA IP is 31% of total IP)

*(Healthcare Variation in Maine, April 2009
Health Dialog for Dirigo Health Agency/Maine Quality Forum)*
Impact of Chronic Disease on Cost and Utilization by Age

<table>
<thead>
<tr>
<th>Chronic Impact</th>
<th>0-17</th>
<th>18-45</th>
<th>46-64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Pop</td>
<td>7%</td>
<td>8%</td>
<td>18%</td>
<td>31%</td>
</tr>
<tr>
<td>% of IP Costs</td>
<td>15%</td>
<td>22%</td>
<td>58%</td>
<td>72%</td>
</tr>
</tbody>
</table>

- Age plays a large role both in terms of chronic disease prevalence and in terms of impact on inpatient dollars

*(Healthcare Variation in Maine, April 2009)*

Health Dialog for Dirigo Health Agency/Maine Quality Forum)
## High-Cost, Highly Variable Outpatient Services

(High Cost, High Variable)

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>OP Costs</th>
<th>Savings with 10% Reduction</th>
<th>Savings with 25% Reduction</th>
<th>Savings with 50% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Tests</td>
<td>$89.6M</td>
<td>$9.0M</td>
<td>$22.4M</td>
<td>$44.8M</td>
</tr>
<tr>
<td>Advanced Imaging</td>
<td>$66.6M</td>
<td>$6.7M</td>
<td>$16.7M</td>
<td>$33.3M</td>
</tr>
<tr>
<td>Standard Imaging</td>
<td>$52.1M</td>
<td>$5.2M</td>
<td>$13.0M</td>
<td>$26.0M</td>
</tr>
<tr>
<td>Echography</td>
<td>$32.4M</td>
<td>$3.2M</td>
<td>$8.1M</td>
<td>$16.2M</td>
</tr>
<tr>
<td>Specialist Visits</td>
<td>$64.1M</td>
<td>$6.4M</td>
<td>$16.0M</td>
<td>$32.1M</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$304.8M</strong></td>
<td><strong>$30.5M</strong></td>
<td><strong>$76.2M</strong></td>
<td><strong>$152.4</strong></td>
</tr>
</tbody>
</table>

*(Healthcare Variation in Maine, April 2009)*

Health Dialog for Dirigo Health Agency/Maine Quality Forum
# Overall Inpatient and Outpatient Savings

<table>
<thead>
<tr>
<th>Inpatient Savings</th>
<th>Savings from 25% Reduction</th>
<th>Savings from 50% Reduction</th>
<th>Savings from 75% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$71.1M</td>
<td>$141.8M</td>
<td>$212.7M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outpatient Savings</th>
<th>Savings from 10% Reduction</th>
<th>Savings from 25% Reduction</th>
<th>Savings from 50% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
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<td>$30.5M</td>
<td>$76.2M</td>
<td>$152.4M</td>
</tr>
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| Total Savings      | $101.6M                     | $218M                      | $365.1M                    |

| Savings as a % of total inpatient & outpatient dollars | 4% | 9% | 16% |

*Healthcare Variation in Maine*, April 2009
Health Dialog for Dirigo Health Agency/Maine Quality Forum
Utilization is the primary driver of cost and much is unwarranted

Inpatient Costs: There is significant variation in total admissions and PA admissions across the State
- PA admissions account for a significant portion of all admission costs
- The volume of PA admissions across State Healthcare Service Areas (HSAs) varies by type and is not explained by illness
- Maine residents across HSAs who have chronic conditions account for a high percentage of health care spending and a majority of inpatient spending
  - Much of this inpatient utilization falls into the category of “potentially avoidable”

Outpatient Costs: there is significant variation in outpatient spending throughout Maine, much of it can be reduced
- The top five categories of outpatient spending amenable to interventions make up approximately 23% of outpatient spending
- The remainder of outpatient spending is evenly distributed among numerous categories

*Healthcare Variation in Maine*, April 2009
Health Dialog for Dirigo Health Agency/Maine Quality Forum)
Paid Claims Analysis Phase 2 - Project Plan/Deliverables

• Part I – update and expand upon Cost Driver Study to include quality
  — Update data warehouse through 2007
  — Utilizing 2007 data, analyze cost and quality by HSA/geography in Maine
    • demonstrate variations at the total population level as well as for specific cohorts (i.e., chronic disease)

• Part II – Analyze variation in cost and quality by provider group
  — Identify physician practice groups in Maine
  — Demonstrate variations in cost and quality among practices in Maine, in general and for specific chronic diseases
    • Primary care
    • Cardiology
    • Orthopedics
    • other (GI? Pulmonary?) – work with MQF to evaluate as many specialties as can be done with administrative data

• For both Parts I and II, we will identify the specific drivers/services (imaging, lab, specialty visits, hospital admissions) which account for the differences in quality and cost by geography and practice

• Part III – Analysis of systems of care
  — Identify systems of care through analysis of referral and admission patterns– create spectrum of ACOs
  — Analyze cost and quality of ACOs along whole spectrum
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Payment Reform Approach: Meet the providers where they are