Evidence-Based Medicine, Pathways and P4P

presented to

North Carolina Oncology Association & South Carolina Oncology Society

February 27, 2010
Cancer Costs Are Rising Beyond Inflation, Other Healthcare Costs

Sources
1. Bureau of Labor and Statistics
2. Kaiser Family Foundation, CMS National Health Expenditures data
3. American Cancer Society, US Oncology data
Unsustainable Cancer Costs: Impact on Payers and Patients

Out-of-Pocket Costs for Cancer Care (2003-2009)

- Payer – 338% increase
- Patient – 109% increase

In 2006, 1 in 8 cancer patients reported delaying or foregoing treatment due to costs. ¹

¹ USA Today, the Kaiser Family Foundation, the Harvard School of Public Health. National survey of households affected by cancer, August 1 – September 14, 2006 (#7591).

Source
Based on HealthCore projections, ASCO 2008 Annual Conference
Regional Variations in Costs
Opportunity for Better Management

Source: Milliman Analysis of Medstat 2007, 14 million commercially insured lives, 104,473 cancer patients, Milliman Health Cost Guidelines 2009, Chemo patients exclude patients on chemo hormone therapy only
Impact on Physician Practices

- Insurance premiums are increasing while benefits are decreasing
  - Patients are paying greater out-of-pocket costs (potential for bad debt)
  - Insurance companies are ratcheting down physician payments
- The cost to run a physician practice has increased more than 30%
  - Inflation
  - More complex paperwork required by health insurers
- Payments from Medicaid and Medicare have not kept pace
  - General inflation
  - Practice operating costs\(^1\)
- Medicare transition from AWP to ASP
  - Resulted in significant income loss for many oncologists
  - Increasingly, commercial payers are following Medicare’s lead

Current State of Evidence-Based Care

- Appropriate application of evidence-based medicine in the physician practice occurs about 54% of the time.

- Large physician groups use only 33% of the recommended care management processes for asthma, congestive heart failure, depression and diabetes.

- 1 in 3 physician groups reported having no incentives to improve quality.

Source: Keckley, Paul H. PhD. Evidence-Based Medicine in Managed Care: A Survey of Current and Emerging Strategies, Medscape General Medicine, 2004;6(2):56.
Adoption of Evidence-Based Care

- **Government**
  - Centers for Medicare and Medicaid Services (CMS) is the largest purchaser of healthcare in the US
    - Moving toward value-based purchasing and evidence-based medicine decision-making through a variety of policies, ranging from quality initiatives to chronic care management programs, to coverage decisions to pay for specific items and services
    - Healthcare reform legislation includes further moves in this direction, including creation of Medicare Shared Savings Program and Accountable Care Organizations (ACOs), but unclear when this will actually happen

*Source: Mendelson, Dan et al. Evidence-Based Medicine in the United States – De Rigueur or Dream Deferred? Health Affairs, 24, no.1 (2005):133-136*
Barriers to Adoption of Evidence-Based Care

- Physician/patient relationship
  - Patients expect doctors to tailor care to their individual condition; most clinicians do not routinely integrate evidence-based guidelines into their practice

- Lack of automation in the practice setting
  - Hard for doctors to be able to easily reference clinical guidelines in a busy practice setting

Source: Mendelson, Dan et al. Evidence-Based Medicine in the United States – De Rigueur or Dream Deferred? Health Affairs, 24, no.1 (2005):133-136
Levels and Grades of Evidence

Levels of Evidence
- Level I - randomized controlled trials: THE GOLD STANDARD
- Level II - Single-arm, uncontrolled trials
- Level III - Case Studies
- Level IV - Observation, Expert opinion

Grades of Evidence
- A - based on randomized, controlled trials (Level I evidence)
- B - based on several Level II, III, IV studies
- C - based on Level II, III, IV evidence, but is inconsistent
- D - no empirical evidence to support

US Oncology Pathways are Level I Pathways
# Lung Cancer Patients Receiving Chemotherapy

National Study shows 31% On Pathway

<table>
<thead>
<tr>
<th>Analysis for Lung Cancer Patients Receiving Chemotherapy</th>
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<tbody>
<tr>
<td>Number of Samples</td>
</tr>
<tr>
<td>Number of patients having all on Pathway chemo claims</td>
</tr>
<tr>
<td>Average Cost* for On Pathway patients</td>
</tr>
<tr>
<td>Average Cost* for Off Pathway patients</td>
</tr>
<tr>
<td>Average member months for On Pathway</td>
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<tr>
<td>Average Chemo Cost for On Pathway patients</td>
</tr>
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<td>Average number of Chemotherapy months for On Pathway</td>
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* cost = ip+op+rx cost incurred from index date to index date + 15 months

Source: Milliman Analysis of Medstat 2007, 14 million commercially insured lives, 104,473 cancer patients, Milliman Health Cost Guidelines 2009, Chemo patients exclude patients on chemo hormone therapy only
## Pancreatic Cancer On/Off Pathway Analysis

National Study Shows 31% On Pathway

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Average Number of Chemo Sensitive Admissions for On Pathway    | 0.8                        |

Average Number of Chemo Sensitive Admissions for Off Pathway   | 1.1                        |

* cost = ip+op+rx cost incurred from index date to index date + 15 months

Source: Milliman Analysis of Medstat 2007, 14 million commercially insured lives, 104,473 cancer patients, Milliman Health Cost Guidelines 2009, Chemo patients exclude patients on chemo hormone therapy only.
Level I Pathways
Level I Pathways Development
Key Guiding Principles

- Review the evidence: science comes first!
  - Based on the strongest available evidence for efficacy and minimize toxicity
- 80/20 Rule:
  - Recommend therapies that work for the majority of patients
- Find the balance point:
  - Maximizes patient benefit and accountability for healthcare expenditures
- Always make clinical trials the first choice for “On-Pathway”
- Generally offer Pathways choices for 1st, 2nd and 3rd line in advanced setting
  - Treating beyond 3rd line without Phase III data demonstrating efficacy is “Off Pathway”
- Easily accessible point-of-care Pathways clinical decision tools via iKnowMed or Web Portal
- Pathways are reviewed on quarterly basis
  - Participating oncologists are encouraged to provide feedback
Level I Pathways
Development Process

- **Key Features**
  - High physician adoption due to physician-led development
  - Feeds Advance Care Planning process by addressing futility of extended lines of therapy
  - Clinical benchmarking improves quality of care
  - Incorporates cost of care along with effectiveness
# Level I Pathways
## A More Precise Approach

<table>
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<tr>
<th>Level I Pathways</th>
<th>Other Guidelines/Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regimens are generally recommended in step-wise sequence by Lines of Therapy</td>
<td>General panel of options only. No sequence or preference among options stated.</td>
</tr>
<tr>
<td>Lines of Therapy are limited</td>
<td>NO limits in Lines of Therapy</td>
</tr>
<tr>
<td>Designed by oncologists, for oncologists, through a consensus process</td>
<td>Designed by academic/tertiary centers with minimal consideration of community oncology practices.</td>
</tr>
<tr>
<td>Costs to patients and payers are considered.</td>
<td>Costs to patients and payers are NOT considered.</td>
</tr>
<tr>
<td>Structured with implementation tools and feedback mechanism to ensure consistent quality of care.</td>
<td>General document WITHOUT support framework to ensure quality care.</td>
</tr>
</tbody>
</table>
Level I Pathways – related savings*

- 35% reduction in total medical oncology costs
- 37% reduction in chemotherapy costs
- Total Savings: On vs. Off-Pathway = $9,695

<table>
<thead>
<tr>
<th></th>
<th>On-Pathway Treatment (N=1,095)</th>
<th>Off-Pathway Treatment (N=314)</th>
<th>Cost Savings (On vs. Off)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Med Oncology Cost</td>
<td>$18,042</td>
<td>$27,737</td>
<td>$9,695</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>$11,839</td>
<td>$18,762</td>
<td>$6,923</td>
</tr>
<tr>
<td>Oncology–related Outpatient visits</td>
<td>$1,124</td>
<td>$1,060</td>
<td>$64</td>
</tr>
<tr>
<td>Supportive Care Medications</td>
<td>$4,374</td>
<td>$7,198</td>
<td>$2,824</td>
</tr>
</tbody>
</table>

* Neubauer, et al., Cost Effectiveness of Evidence-Based Treatment Guidelines for the Treatment of Non Small Cell Lung Cancer in the Community Setting. JOP 2010:6:1
Breast Cancer Level I Pathway Savings
Adjuvant Line of Therapy

Notes:
• AC Course = 4 cycles; wk Paclitaxel course= 12 cycles; 3 wk Docetaxel = 4 cycles
• Docetaxel is the generic of Taxotere®

Savings potential moving from AC f/b 3wk to AC f/b wk Pac*:
20 patients = $182,540
50 patients = $456,350
* Comparable Disease Free Survival
Further Efficiencies within Level I Pathways

- For practices currently adhering to Level I Pathways, Innovent has identified additional opportunities to make treatment less costly without compromising effectiveness

- Example: Metastatic Non Small Cell Lung Cancer

Regimen Cost Comparison: 1st Line Metastatic NSC-Lung Cancer

- **Cisplatin + Pemetrexed x 6 cycles**
  - Regimens shown have:
    - Same FDA approval
    - NCCN recommendation
    - Comparable survival benefit
  - Savings potential for switch to Cisplatin + Pemetrexed:
    - 10% → $0.8 MM
    - 20% → $1.6 MM
    - 30% → $2.4 MM

- **Carboplatin + Paclitaxel + Bevacizumab x 6 cycles, followed by Bevacizumab x 5 cycles**

Source: US Oncology Internal Study: June 2008 – July 2009, 211 Total Regimens
Payer Cost and Provider Margins
Generics vs Single Source

Current Market
Single ASP Rate: ASP + X%

Drug 1
Physician Margin
Payer Cost

Drug 2
Rationalized Fees
Physician Margin
On Low Cost Drug Increased

Savings to Payers
Shared Savings with Physicians
Pay for Performance
Cancer Care Management Strategy 1

- Focuses on tiered reimbursement
- Locally developed pathways
- Physicians are paid higher rate for pathways compliance

IMPACT

- Program is focused on reimbursement reduction rather than patient value and alignment of incentives
- First year payer savings are significant
- Sustaining reduction requires further drops in reimbursement
- Does not address patient management or regional variation in care
Cancer Care Management Strategy 2

- Manage demand for high cost drugs through formulary, pre-certification and medical management
- Switch to oral drugs if possible

IMPACT

- Patient risk increases since care is not evidence-based
- Shifts costs to patient through pharmacy benefit
- Does not address variation in care
- Does not address patient management
Cancer Care Management Strategy 3

- Promotes evidence-based care through physician developed, national pathways
- Use fee rationalization to align financial incentives between payer and physician
- Nurse outreach from the physician’s office to manage complications
- Promote advance care planning to address end-of-life care

**IMPACT**

- Places priority on patient care
- Promotes a single standard of care
- Creates value for payers, physicians and patients
- Lowers cost
Summary

- Healthcare cost trend is not sustainable
  - Cancer costs outpace healthcare trends

- Wide variability exists in care today

- Any viable solution must address the needs of multiple of stakeholders:
  - Patients: want quality, cost effective care
  - Employers: want premium/cost control
  - Payers: want predictable costs and growth in profits / reduced costs
  - Physicians: want to provide quality care and maintain practice viability

- Must evaluate what P4P solution best addresses all stakeholder needs