Business Case for SCOAP

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Pharmaceutical Outcomes Research and Policy Program
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• The health care expense problem – The Orzag Hypothesis
  – What is driving health care cost escalation?
• The quality/cost problem – The Orzag Solution
  – The disconnect between expenditures, technology and outcomes
  – The path forward
• SCOAP as a regional “pilot test” of a local solution to health care cost/quality improvements
  – Case studies
US Demographics

Source: U.S. Census, 2000
US Demographics

**U.S. 1960-1970**

- **Under 14**: 4%
- **15-24**: 48%
- **25-34**: 9%
- **35-44**: -4%
- **45-54**: 13%
- **55-64**: 19%
- **65+**: 21%

Source: U.S. Census, 2000
US Demographics

Source: U.S. Census, 2000
US Demographics

Source: U.S. Census, 2000
US Demographics

U.S. 1990-2000

Source: U.S. Census, 2000
US Demographics

Source: U.S. Census, 2000
US Demographics

U.S. 2000-2020

Source: U.S. Census, 2000
Increases in the Oldest Old
U.S. Population Aged 85+ (in millions)


Prepared by the UNC Institute on Aging
Demographics = unsustainable spending growth rates???

CBO Projections for Social Security, Medicare, and Medicaid

Source: Congressional Budget Office, “The Long-Term Budget Outlook,” December 2003
Assumptions: Excess cost growth of 2.5% for both Medicare and Medicaid; Social Security benefits paid as scheduled under current law
Projected growth rates as a percentage of GDP

Federal Spending and Revenue Projections

Federal Spending Under CBO’s Alternative Fiscal Scenario – Health Care Will Bankrupt America

Percentage of Gross Domestic Product

- Medicare and Medicaid
- Social Security
- Other Spending (Excluding debt service)

Actual vs. Projected
### Estimated Contributions of Selected Factors to Long-Term Growth in Real Health Care Spending per Capita, 1940 to 2000

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Aging of the Population</td>
<td>2</td>
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<tr>
<td>Changes in Third-Party Payment</td>
<td>10</td>
<td>13</td>
<td>10</td>
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<tr>
<td>Personal Income Growth</td>
<td>11-18</td>
<td>5</td>
<td>&lt;23</td>
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<tr>
<td>Prices in the Health Care Sector</td>
<td>11-22</td>
<td>19</td>
<td>Not Estimated</td>
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<tr>
<td>Administrative Costs</td>
<td>3-10</td>
<td>13</td>
<td>Not Estimated</td>
</tr>
<tr>
<td>Defensive Medicine and Supplier-Induced Demand</td>
<td>0</td>
<td>Not Estimated</td>
<td>0</td>
</tr>
<tr>
<td>Technology-Related Changes in Medical Practice</td>
<td>38-62</td>
<td>49</td>
<td>&gt;65</td>
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</table>
Misdiagnosing the Problem

• Most discussions in media: aging and demographics

• Orzag Hypothesis:
  – Rising cost per beneficiary, not the number or type of beneficiaries
Sources of Growth in Projected Federal Spending on Medicare and Medicaid

Percentage of GDP

Effect of Excess Cost Growth

Interaction of Aging and Excess Cost Growth

Effect of Aging of Population

2007 2012 2017 2022 2027 2032 2037 2042 2047 2052 2057 2062 2067 2072 2077 2082
Medicare Spending per Beneficiary in the United States, by Hospital Referral Region, 2005

Source: Data from CMS
Variation in Medicare Spending

Total Medicare Reimbursement
Parts A and B Reimbursement in 2003

Source: Dartmouth Atlas of Health Care
Discharges for Ambulatory Care Sensitive Conditions
per thousand Medicare beneficiaries in 2003

Source: Dartmouth Atlas of Health Care
Performance on Medicare Quality Indicators, 2000–2001

Quartile Rank
- First
- Second
- Third
- Fourth

Higher Spending Does Not Necessarily Lead to Higher Quality

Source: Baicker and Chandra (Health Affairs 2004)
The Relationship Between Quality and Medicare Spending, by State, 2004

Composite Measure of Quality of Care

Source: Data from AHRQ and CMS.
## Variations Among Academic Medical Centers

*Use of Biologically Targeted Interventions and Care-Delivery Methods Among Three of U.S. News and World Report’s “Honor Roll” AMCs*

<table>
<thead>
<tr>
<th>Biologically Targeted Interventions: Acute Inpatient Care</th>
<th>UCLA Medical Center</th>
<th>Massachusetts General Hospital</th>
<th>Mayo Clinic (St. Mary’s Hospital)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS composite quality score</td>
<td>81.5</td>
<td>85.9</td>
<td>90.4</td>
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</table>

<table>
<thead>
<tr>
<th>Care Delivery—and Spending—Among Medicare Patients in Last Six Months of Life</th>
<th>UCLA Medical Center</th>
<th>Massachusetts General Hospital</th>
<th>Mayo Clinic (St. Mary’s Hospital)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Medicare spending</td>
<td>50,522</td>
<td>40,181</td>
<td>26,330</td>
</tr>
<tr>
<td>Hospital days</td>
<td>19.2</td>
<td>17.7</td>
<td>12.9</td>
</tr>
<tr>
<td>Physician visits</td>
<td>52.1</td>
<td>42.2</td>
<td>23.9</td>
</tr>
<tr>
<td>Ratio, medical specialist / primary care</td>
<td>2.9</td>
<td>1.0</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Source: Elliot Fisher, Dartmouth Medical School.
Concentration of Total Annual Medicare Expenditures Among Beneficiaries, 2001

Source: Data from CMS.
The Horizon of New Health Technologies

- **Diagnostics:** Virtual colonoscopy
- **Devices:** Computerized knee
- **Procedures:** Breast MRI
- **Drugs:** Biologics

**Inside the M2A™ Capsule**
1. Optical dome
2. Lens holder
3. Lens
4. Illuminating LEDs (Light Emitting Diode)
5. CMOS (Complementary Metal Oxide Semiconductor) imager
6. Battery
7. ASIC (Application Specific Integrated Circuit) transmitter
8. Antenna
Understanding and managing the problem

Technologies that increase quality of care and desired outcomes

ACTION: Adoption and incent utilization

Therapeutic advantage when appropriately applied

ACTION: Limit use to appropriate population

Therapeutic advantage is unproven

ACTION: Restrict or control utilization

Proactively addressing the impact of new medical technologies could save a 25,000-employee organization $10 million over the next two to three years.

Source: Ingenix Health Technology Pipeline

Managed Healthcare Executive, August 2004
New Technology #2
Average Health Insurance Premiums and Worker Contributions for Family Coverage, 1999-2008

Paths Toward Capturing the Opportunity

• **Information**
  – Comparative effectiveness research
  – Randomized control trials
  – Health Information Technology
  – Cost offsets and ROI

• **Incentives**
  – Better care, not more care
  – Coverage vs. differentiated payments

• **Delivery Systems**

• **Health Behavior**
  – Making it easy and simple to lead healthy lives
  – Managing chronic disease
  – Emphasizing prevention
  – Changing behavior and social norms among medical professionals
Connecting the Dots – Business Case for Quality
(from clinical improvement to financial gain)

- Increased Quality
- Increased Bed Turnover
- Increased Admits
- Static Bed Count

- Reduced ALOS
- Cost Improvements
- Revenue Enhancements
- Improved Profits
Then a miracle occurs

P06511
HAQ 10 + t
n = 1.1

"I think you should be more explicit here in Step Two."
Re-operative Complications
Elective Colon Resection

Quarter of Participation

0%
15%

1 2 3 4 5 6 7 8 9 10 11
Impact on Length of Stay

Colon Resection

Gastric Bypass

Average LOS (days)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average LOS</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
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</table>

Median LOS (days)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median LOS</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
Testing for Leak in OR
Prevents Reoperation After OR
SCOAP Changing Behavior Around Quality

**Blood Clot Prevention**

- Q1 06: 60%
- Q2 06: 70%
- Q3 06: 65%
- Q4 06: 70%
- Q1 07: 75%
- Q2 07: 80%
- Q3 07: 85%
- Q4 07: 90%

**Proper LN Evals in Cancer**

- Q1 06: 50%
- Q2 06: 60%
- Q3 06: 70%
- Q4 06: 80%
- Q1 07: 85%
- Q2 07: 90%
- Q3 07: 95%
- Q4 07: 100%

**Diabetes management**

- 2006: 40%
- Q1 07: 50%
- Q2 07: 60%
- Q3 07: 70%
- Q4 07: 80%

**Avoiding Transfusion**

- 2006: 20%
- Q1 07: 40%
- Q2 07: 60%
- Q3 07: 80%
- Q4 07: 100%
**Surgical Checklist Initiative**

“A System for Safer Surgery”

**Step 1: Briefing - Prior to Skin Incision**

- Team members introduce themselves by name and role
- Surgeon, Anesthesia Team, and Nurse confirm patient (at least 2 identifiers), site, procedure, position

**Anesthesia Team Reviews:**
- Airway or other patient-specific concerns (special meds, health conditions affecting recovery, etc)
- Does patient have an allergy? □ No □ Yes

**Nursing Team Reviews:**
- Equipment issues (i.e., gas tanks full, all instruments ready) or other patient concerns

**Surgeon Reviews:**
- Brief description of procedure and anticipated difficulties
- Expected duration of procedure
- Single operative field, □ multiple operative fields
- Need for instruments/supplies beyond those normally used for the procedure
- Risk of blood loss > 500 ml □ No □ Yes, and adequate IV access established

**Step 2: Process Control - Prior to Skin Incision**

**Surgeon Confirms:**
- Essential imaging displayed □ N/A
- Active warming in place □ N/A (case < 1 hour)
- Glucose checked for diabetics □ Insulin started for glucose > 125 □ N/A
- Beta blocker planned postop □ N/A (not on preop beta blocker)
- DVT/PE prevention plan in place □ N/A
- Antibiotic prophylaxis given in last 60 minutes □ N/A
- Antibiotic redosing plan in place □ N/A (case < 3 hours)
- Specialty specific checklist needed □ N/A
- The operating team has agreed upon plan to prevent sharps injury □ N/A (no sharps)

**Last Q SCOAP:**
- 5.4 % missed
- 7.7 % missed
- 33.3 % missed
- 10.8 % missed
- 6.8 % missed

**Last Q SCOAP:**
- 14.7 % missed

**Step 3: Debriefing - At Completion of Case**

**Surgeon and Nurse Confirm with the Team:**
- Before closure are instrument, sponge, and needle counts correct
- Name of procedure and, if applicable, how is the specimen labelled (correct patient name)?
- Special instructions for pathologist (e.g., 12+ negative lymph nodes for colon GA)? □ N/A
- Equipment issues to be addressed? □ No □ Yes, and response plan (who/what/when)
- What could have been done better? □ Nothing □ Something, and response plan (who/what/when)
- Beta blocker planned postop □ N/A (not on preop beta blocker)
- What are key concerns for recovery and management of the patient?

Adapted from the WHO “Safe Surgery Saves Lives” campaign

SCOAP is a program of the Foundation for Health Care Quality

www.scoapchecklist.org

rev 9/23/08
The “Behavior Change” Model

Clinician-led Initiative

Focus on clinician behavior change

Quality measures

Process of care

Outcomes

Efficiency measures

- LOS, time in OR
- Expensive medication use
- Exchange/substitute/standardize equipment, implants, devices
- Within 72hr blood/radiologic testing

Business case for quality

More directly measurable-business case for efficiency/standardization
Case Studies

- Phase 1 – QI module: 50 hospitals in SCOAP
- Phase 2 – business module: UWMC, Providence Everett, Good Samaritan, Samaritan Healthcare
- Focus:
  - Uncaptured revenue related to pre-op testing
    - Unbilled charges $200-500,000/yr
  - Supply avoidance through substitution
    - Savings $1.5-3 million/yr
Lessons from Pilot Phases

- **Success but recognized challenges**
  - Several “data programs” compete for hospital resources
  - Uncertainty at the hospital level about ability to change
  - Upfront costs of abstraction/dues
    - 1, 5, 10K dues, 10-30K abstraction fees

- **SCOAP Solution**
  - Data abstraction is a service-no up front cost
  - Change intervention is a service-no up front cost
  - Option to have “risk” or “no-risk” contracts

- **Fees determined through**
  - Avoided costs
  - Enhanced revenue related to 72hr testing
How SCOAP Makes Financial Assessments

• Measure utilization of OR supplies before and after intervention
  – Units used x cost/unit at baseline and after SCOAP

• Measure utilization of post-surgical supplies before and after intervention
  – Units used x cost/unit at baseline and after SCOAP

• Measure blood and radiologic testing within 72 hours before and after intervention
  – Tests used x revenue/test at baseline and after SCOAP
SWOT

• **Strengths**
  – Sweet spot of quality improvement and cost reduction
  – Novel approach
    • Clinician led behavior change
    • No risk to hospital

• **Weaknesses**

• **Opportunities**
  – What else would you like us to focus on

• **Threats**
  – Competitors
  – Internal programs
  – Supply chain management consulting groups
  – Administrative data

• **Willingness to pay/What’s it worth?**
  – Back end/no risk % of savings vs up-front fee
Find out more:

www.scoap.org