Models for Most Appropriate Care: Population Health and Total Cost of Care Reduction at Cedars-Sinai

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Population Health and Risk-Based Contracts at Cedars-Sinai

• 30-year history of providing longitudinal primary and specialty care for patients through foundation model
  o Multi-specialty medical group: Cedars-Sinai Medical Group
  o Independent practice association: Cedars-Sinai Health Associates
  o Several affiliated medical groups (geographically dispersed)
• Risk-bearing contracts are
  o Commercial HMO and ACO
  o Medicare Advantage and ACO

Clinical and cost improvement for Population Health: Focus on appropriateness of care
Appropriateness of Care must be Assessed Across the Continuum to Have Maximum Impact

• **Admissions**
  - Daily Admission Debrief (DAD) to identify opportunities
  - Care coordination and ambulatory care enhancements to safely prevent admissions

• **Length of stay**
  - Physician Advocate program
  - Targeted interventions

• **Diagnostic tests, Procedures, Treatments**
  - Clinical Decision Support
  - Evidence-based Network Management
Admissions: Retrospective Review for Case-Finding and Trends

- Each admission reviewed retrospectively by 2 to 3 physicians
- Database created to monitor trends over time and identify opportunities for improvement
- Was there a possible missed opportunity in the physician office or patient’s home?
- Interventions are at 3 levels
  - Case-finding for quality improvement referrals (e.g., post-operative complications)
  - Recommendations for patient care enhancements (e.g., refer to care coordination)
  - Identify opportunities for systems of care to prevent admissions (e.g., fall prevention programs)

Daily Admission Debrief (DAD): Looking for Potentially Avoidable Admissions
DAD Trend Over Time Demonstrated Improvement in “Avoidability”
Ambulatory Programs: Wrap-Around Services, Alternative Sites of Care, Care Coordination

CS-360 - Integrated Program for Highest Risk Patients

- Congestive Heart Failure (CHF)
- Weight Management
- Drug Therapy Management Programs
- Disease Management Programs
- Outpatient Parenteral Antibiotic Therapy (OPAT)
- Healing at Home
- NP House Calls
- Supportive Care Medicine
- Enhanced Care Program (ECP)
- Post Discharge MedReconciliation
- ED Assist
- Pain Management and Mental Health

Ambulatory Care Management & Total Care Management (for Medicare Advantage)

- Daily Admissions Debrief
- Primary and Specialty Care
Patient Engagement: Tailored Approaches to Enhance Access, Connection, Interaction

Patient engagement facilitates achievement of triple aim

## Impact: Achieved “Well Managed” Performance

<table>
<thead>
<tr>
<th>Organization</th>
<th>Acute Med Surg Admits/1000</th>
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</thead>
<tbody>
<tr>
<td>Milliman Loosely Managed</td>
<td>37.4 to 38.6</td>
</tr>
<tr>
<td>Anthem Regional Average</td>
<td>34</td>
</tr>
<tr>
<td>Optum Moderately Managed</td>
<td>32.4</td>
</tr>
<tr>
<td>Optum Well Managed</td>
<td>29.4</td>
</tr>
<tr>
<td>Milliman Well Managed</td>
<td>24.7 to 25.2</td>
</tr>
<tr>
<td><strong>Cedars-Sinai Medical Group Commercial HMO FY15</strong></td>
<td><strong>23.01</strong></td>
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</tbody>
</table>

Cedars-Sinai Medical Group Commercial HMO FY15 Performance
Reducing Length of Stay: Encouraging Appropriate Care with Physician Advocate Program

• “Physician Advocates” – January 2014
• Participate in daily Progression of Care Rounds
• Review Medical Records
• Identify opportunities to improve quality, efficiency
• Contact physician, “Can I help you….”
  o Find appropriate placement or outpatient services
  o Expedite diagnostic testing
  o Clarify goals of therapy
  o Provide appropriate pain management
Impact: Meaningful Reductions in LOSI

Physician Advocates

Prepared by Resource & Outcomes Management, 9/22/2015
Appropriate Care in Diagnostics, Procedures and Treatments: Rationale for CDS

<table>
<thead>
<tr>
<th>Predictors of Success</th>
<th>Adjusted OR</th>
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</thead>
<tbody>
<tr>
<td><strong>Automatic provision of decision support as part of workflow</strong></td>
<td>112</td>
</tr>
<tr>
<td>Provision of decision support at the time and location of decision making</td>
<td>15</td>
</tr>
<tr>
<td>Provision of recommendation rather than just an assessment</td>
<td>7</td>
</tr>
<tr>
<td>Computer-based generation of decision support</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Kawamoto K, Houlihan CA, Balas EA, Lobach DF. Improving clinical practice using clinical decision support systems: a systematic review of trials to identify features critical to success. BMJ. 2005 Apr 2;330(7494):76S. PMID: 15767266
~400 interventions from 70 medical societies

Education alone for Choosing Wisely did not work\(^1\)
Can a physician remember 400 different Choosing Wisely guidelines?

Not from government or an insurance company

Inpatient
Across populations of patients

Ambulatory
Prepare for risk-based payment

\(^1\)Early trends among seven recommendation from the Choosing Wisely Campaign. JAMA Internal Medicine. 10/12/15
Cedars-Sinai Alerts Its Docs to *Choosing Wisely*

*June 5, 2014*

With a focus on stimulating physician and patient conversations, there is perhaps no more appropriate environment in which the *Choosing Wisely®* campaign could take hold than the examining room. Cedars-Sinai Health System has taken an important step in ensuring these conversations happen by becoming the first system in the nation to incorporate dozens of specialty society campaign recommendations into its electronic medical records (EMR) system.
Distribution of Choosing Wisely Guidelines at Cedars-Sinai

- CT & MRI imaging: 46%
- Nuclear imaging: 21%
- High cost meds: 13%
- High cost labs: 6%
- High cost procedures: 14%

CDS lowers waste & cost
Choosing Wisely: Don’t use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium. 

(American Geriatrics Society)¹, ², ³

Hyperlink: Choosing Wisely – American Geriatrics Society
Information for Patients: Use of Sedatives in Elderly Patients

Reasons for override:
- sleep disorder
- end of life care
- withdrawal / DT
- non-drug options failed
- peri-procedural anesthesia

Example #1: Benzodiazepine Usage in Older Adults
31.5% reduction in benzodiazepine use

Projected reductions over 1 year:

- 20 fall related injuries
- 9 ED visits
- 8 >6 months assistance
- 3 hospitalizations
- 2 deaths from falls

Potential impact

References:
Example #2: Transfusion

Choosing Wisely: Don’t transfuse more units of blood than absolutely necessary. 
(Society for Hospital Medicine)¹, ², ³

Reasons for override:
- Active blood loss
- Hemoglobinopathy
- Subarachnoid hemorrhage
- Chemotherapy

Hyperlink: Choosing Wisely – Society of Hospital Medicine
Information for Patients: Blood Transfusion for Anemia in the Hospital

Targeted alerts integrated into workflow with closed loop analytics

Note: CDS alert displays using Epic’s native best practice alerts; Epic does not allow use of actual screenshots.
17% reduction in blood utilization while CMI increased by 14%

* 2015 is projected from 6 months of data

** 2015 Case Mix Index (CMI) value is from January-June data
Typical Acceptance Rates

- Carotid imaging for syncope: 27%
- Lyme disease testing: 24%
- NSAIDS in hypertension: 23%
- DVT workup: 16%
- Benzodiazepines / SH in elderly: 15%
- GCSF: 13%
- Antipsychotics in dementia: 10%
- Vitamin D deficiency testing: 10%
- Echo after valve replacement: 9%
- Brain imaging for syncope: 9%
- Low risk imaging for PE: 8%
Lessons Learned

• **Process is important**
  o Governance
  o Education
  o Clinical decision support
  o Monthly individual physician Choosing Wisely adherence feedback

• **Acceptance is high**
  o “Do” alerts vs “Don’t” alerts
  o Cancellation rates for Choosing Wisely: 12% vs 2-4% for other alerts
  o Actual impact likely higher (estimated 3:1) due to “education effect”

• **Alert fatigue not a big factor**
  o Each MD typically sees only 1-5/month
  o “Retire” alerts over time and turn new ones on

• **Ongoing improvements in alert results from physician feedback**
Reinforcing Appropriate Care: Identifying Subspecialty Network

- Select subspecialists for PCP referral risk-based contracts
- Identify subspecialists who provide high quality, cost-effective care with high levels of patient satisfaction
- Use data to drive an evidence-based approach
How Does Performance Compare with Peers?

EXAMPLE: DR. JONES

0.98%
Choosing Wisely Performance Rate

0.74%
average

ignored alert % range
(0% to 8.77%)
Cardiology Results

final pop health readiness score
Conclusions: Efforts to Improve the Value of Care for Patients With Risk-based Contracts at Cedars-Sinai

• Multi-pronged approach
  o Ambulatory and inpatient
  o Focus on physicians and extended care teams

• Leverage the EHR with other data
  o CDS experience
  o Incorporating EHR data to identify specialty network

• Impact has been significant
  o Safely reduced utilization and costs
  o Improved quality
  o Bonuses from health plans for reducing utilization

• On the horizon
  o Expand involvement in ACOs and risk-based contracts
  o Expand programs beyond patients under risk-based contracts