Teaching Residents to Provide High-Value, Cost-Conscious Medicine

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Disclosures

We have no conflicts of interest to disclose for the workshop
Objectives

1. Describe the need and desire for cost-conscious care curricula in pediatrics
2. Brainstorm potential curricular solutions for teaching residents about cost-conscious, value-driven care
3. Practice using a framework for teaching cost-conscious high-value care in simulated case discussions
Outline

Overview of Current Health Care Spending
Background on Cost-Conscious Medicine Curriculums
Current Needs Assessment
Introduction of Toolkit for teaching High-Value Medicine
Cases
Discussion and Reflection
Why is Cost-Conscious Medicine Important
Healthcare Spending Worldwide

Total Health Expenditure Per Capita (US $, PPP)

Healthcare spending in the US

Number of MRI Units per Million Persons

Health Outcomes
The US does not rank highly in most health indicators…

Life Expectancy vs. Health Expenditure
Life Expectancy vs. Health Expenditure
Infant Mortality per 1000 Live Births

What to do

Thinking about cost does not come naturally to physicians

• We put our patients first, not cost
• We don’t want to miss a diagnosis
• We don’t like to limit our thought process
• We don’t recognize side-effects of test/treatments

How do we train ourselves and the next generation to think differently?
Teaching Residents the Importance of Performing Cost-Conscious Medicine
Is this being done?

The ACGME in its Common Program Requirements ([IV.A.5.g][3]) identifies Systems-Based Practice as one of the 6 core competencies.

Residents must “incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate.”

Is this being done?

2014 study surveying Internal Medicine Program Directors found that only approximately 15% have a formalized curriculum on cost-conscious medicine, with 49% working to create a formal curriculum.

Is this being done?

ACP’s Internal Medicine High Value Curriculum

Choosing Wisely Campaign
Is this being done in pediatrics?

In pediatrics, a study of a single institution found that Pediatric Attendings (71%) and Residents (75%) self reported as being “minimally knowledgeable” or “completely unaware” of costs, charges and reimbursements in inpatient setting.

Rock, et al, Pediatrics 2013
Current State of Cost-Conscious Medicine Curriculum in Pediatrics
What to do
## Demographics

<table>
<thead>
<tr>
<th></th>
<th>Program Directors</th>
<th>Chief Residents</th>
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<tbody>
<tr>
<td><strong>Med Peds</strong></td>
<td>40 (48%)</td>
<td>37 (51%)</td>
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<tr>
<td><strong>Peds Only</strong></td>
<td>43 (52%)</td>
<td>35 (49%)</td>
</tr>
<tr>
<td><strong>Urban</strong></td>
<td>63 (76%)</td>
<td>57 (79%)</td>
</tr>
<tr>
<td><strong>Suburban</strong></td>
<td>13 (16%)</td>
<td>12 (17%)</td>
</tr>
<tr>
<td><strong>Rural</strong></td>
<td>7 (8%)</td>
<td>3 (4%)</td>
</tr>
<tr>
<td><strong>Community</strong></td>
<td>12 (14%)</td>
<td>5 (7%)</td>
</tr>
<tr>
<td><strong>University</strong></td>
<td>71 (86%)</td>
<td>67 (93%)</td>
</tr>
<tr>
<td><strong>Program &lt;20 Residents</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-39</td>
<td>21 (25%)</td>
<td>19 (26%)</td>
</tr>
<tr>
<td>40-59</td>
<td>17 (20%)</td>
<td>12 (17%)</td>
</tr>
<tr>
<td>20-79</td>
<td>9 (11%)</td>
<td>8 (11%)</td>
</tr>
<tr>
<td>80-99</td>
<td>16 (19%)</td>
<td>14 (19%)</td>
</tr>
<tr>
<td>&gt;99</td>
<td>10 (12%)</td>
<td>13 (18%)</td>
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Perception of Cost-Consciousness in Training Programs

- I have knowledge of the cost of common tests and treatments that I order
- My program orders fewer tests per patient compared to the average at other pediatric residency programs
- The cost of care per patient at our primary hospital is less than the average cost at other pediatric programs
- Residents at my program receive adequate training in the cost of care that they provide
- My program needs a formal curriculum on high-value, cost-conscious medicine
Current High-Value Cost Conscious Curricula

Perceived Changes in Behavior

The curriculum at my program has led to changes in my personal ordering behavior

The curriculum at my program has led to changes in the ordering behavior of residents as a whole
Location of High-Value Cost Conscious Teaching

- Acute Care Wards:
  - Never
  - Rarely (Once per year)
  - Sometimes (Once per month)
  - Frequently (Once per week)

- Outpatient Clinics:
  - Never
  - Rarely (Once per year)
  - Sometimes (Once per month)
  - Frequently (Once per week)

- ED:
  - Never
  - Rarely (Once per year)
  - Sometimes (Once per month)
  - Frequently (Once per week)

- ICU:
  - Never
  - Rarely (Once per year)
  - Sometimes (Once per month)
  - Frequently (Once per week)
Desired Format of High-Value Cost-Conscious Curriculum

- Case Presentations: 49/62
- Didactic Lectures: 30
- Pop-up Screen in EMR: 30/37
- Auditing of Cases: 27/31
- Computer-based Didactics: 24/50
- Case-based Computer Simulation: 18/43
- Elective Rotations: 9
- Required Rotations: 0
## Barriers to Practicing High-Value Cost-Conscious Medicine

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<th>Program Directors</th>
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<tr>
<td>1</td>
<td>Faculty have final say in ordering tests and medications and may override the residents suggested treatment plan</td>
<td>There is limited transparency on cost and charges within our hospital or with insurance companies</td>
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<td>Faculty have final say in ordering tests and medications and may override the residents suggested treatment plan</td>
</tr>
<tr>
<td>3</td>
<td>Residents have limited knowledge of alternatives to current practice</td>
<td>Residents have limited knowledge of alternatives to current practice</td>
</tr>
<tr>
<td>4</td>
<td>Patients at our program are too sick to do a stepwise approach</td>
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High-Value Medicine Toolkit
The Toolkit – The Case Conference

• Morning report is typically focused on diagnosis and the “facinomas” and “zebras”
• Change the focus of discussion

How can we make the patient better?
The Toolkit – The Case Conference

Pick the right case:
- Common chief complaints
- Known diagnosis
- Chief complaints with guidelines

HPI and Exam:
- Don’t waste time with the audience eliciting the history and exam
The Toolkit – The Case Conference

Differential

• Discuss each diagnosis

• Highlight which diagnoses are likely and important to make
The Toolkit – The Case Conference

Work-up & Treatment

“What can we do to make this patient better?”

• For each test or study:
  – What are we looking for?
  – How will it change management?
  – What are the potential risk and complications?
  – What are the downstream effects of a false positive?
The Toolkit – The Case Conference

Consider the “cost” of each test

• Charge master for charge to insurance company
  – Health Care Blue Book

• What is the “cost” to the family?
Time to Practice
Take home points

1. Teaching about value in medicine is critical in residency training and residents prefer case based discussion format

2. A morning report case based discussion is an effective and feasible format to discuss cost-conscious, high value care

3. Using a frame work to approach case discussions will help solidify concepts of value in different workup and treatment options
Next Steps

At Stanford: weekly Chief morning report case discussions with focus on value of diagnostics and treatment and quarterly noon conference lectures on value and healthcare spending

Newly formed APA SIG on cost conscious medicine at PAS 2015

Workshop on teaching residents cost-conscious medicine at PAS 2015