High Value
Cost-Conscious Care: Eliminate Waste and Improve Outcomes

Cynthia D. Smith, MD, FACP

April 26, 2013
Conflict of Interest Disclosure

- I am an employee of the American College of Physicians.
- I own stock and stock options in Merck and Company.
- I have no other financial relationships with commercial entities producing healthcare-related products and/or services.
Learning Objectives

- Define health care value as the process of balancing clinical benefit with harms and costs
- Understand physician driven sources of excessive health care costs
- Gain exposure to the high value care curriculum and feedback on its use
- Identify ways to incorporate the curriculum into residency training
Case

- 34 yo man admitted for sudden onset severe abdominal pain
- History of hypertension, did not take any medications, had not seen a physician in 5 years
- Worked as a bouncer in a club in south Philadelphia, unmarried, social ETOH, denied drug use, practiced safe sex
- Family history positive for hypertension
- BP of 190/110 in the ED
- Admitted for pain control, BP control and work-up of abdominal pain
Estimated Costs of Diagnostic Tests and Hospital Stay

- Hospital stay (5 days) = $9,000
- Laboratory costs = $283
- Obstruction series = $115
- Thoracic CT scan (dissection protocol) = $564
- RUQ ultrasound = $172
- Abd/pelvic CT scan = $887
- EGD = $1214
- Total cost = $12,235 *

*does not include physician billing or pharmacy costs, all costs from healthcare blue book
http://healthcarebluebook.com
Why did I show you the costs?

- Belief that it is part of every physician's professional responsibility to use health care resources judiciously.
- Physicians receive little or no training on appropriate resource utilization, and rarely get feedback on their resource utilization and its impact on cost of care.
- Health care expenditures are increasing at an unsustainable rate—projected to reach 20% of our GDP by 2020.
- Up to 30% ($765 billion) per year have been identified as potentially avoidable; many of these costs attributed to unnecessary services.
Rising Health Care Costs: Increasingly Borne by Patients and Families

US Centers for Disease Control and Prevention
Is the money we are spending on health care making us healthier?

FIGURE 1-5 U.S. male life expectancy at birth relative to 21 other high-income countries, 1980-2006.
Excess Cost Domain Estimates: 30% of Health Costs

Cost in Billions of $$$

- Unnecessary Services ($210 B)
- Inefficiently Delivered Services ($130 B)
- Excess Administrative Costs ($190 B)
- Excessive Pricing ($105 B)
- Missed Prevention Opportunities ($55 B)
- Fraud ($75 B)
Growth in Volume of Physician Services Per Medicare beneficiary 2000-2009
From Reinhardt blog, NY Times, 12/24/2010
Shifting focus: More ≠ Better

- Get physicians to understand and focus on health care value
- Before using a test or treatment, they should consider the potential benefits and potential harms and costs.
- More care is better care → High value, customized care is better care

A to B = higher cost for better outcome
A to C = more value
Can you think of specific examples?

<table>
<thead>
<tr>
<th></th>
<th>Improved Outcome</th>
<th>No Improved Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Cost</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Can you think of specific examples?

<table>
<thead>
<tr>
<th>High Cost</th>
<th>Improved Outcome</th>
<th>No Improved Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• AICD for low EF</td>
<td>• MRI for non-specific low back pain</td>
</tr>
<tr>
<td></td>
<td>• ART for HIV</td>
<td>• Imaging for uncomplicated headache</td>
</tr>
<tr>
<td></td>
<td>• Surgery for spinal stenosis</td>
<td>• Thrombolysis for hemodynamically stable patients with PE</td>
</tr>
<tr>
<td></td>
<td>• Trastuzumab for high risk HER-2 positive breast cancer</td>
<td>• Arthroscopic surgery for knee OA</td>
</tr>
<tr>
<td></td>
<td>• TKR in severe knee OA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• PET staging suspected NSCLC</td>
<td></td>
</tr>
<tr>
<td>Low Cost</td>
<td>• Influenza vaccination</td>
<td>• PSA screening</td>
</tr>
<tr>
<td></td>
<td>• Screening for HTN</td>
<td>• Annual pap smears</td>
</tr>
<tr>
<td></td>
<td>• ASA in CAD</td>
<td>• Stockings for in hospital VTE prevention</td>
</tr>
<tr>
<td></td>
<td>• Smoking cessation</td>
<td>• Preop labs for non cardiac surgery</td>
</tr>
</tbody>
</table>
Do physicians agree that health care is overused?

Survey of primary care physicians

- 42% believe patients in their own practice are receiving too much care (vs. 6% who say “too little”)
- Perceived factors leading to overuse
  - Malpractice concerns: 76%
  - Clinical performance measures: 52%
  - Inadequate time to spend with patients: 40%

Arch Intern Med. 2011; 171:1582-1585
Are we educating residents about resource utilization?
(Dine CJ. *JGME*. 2010; 2:175)

- 37% of residents were provided some feedback about their resource utilization; 20% reported receiving feedback regularly
- 16% developed a concrete plan with their attending physician for improving resource utilization; 28% reported receiving any corrective feedback
- 63% reported having no idea about cost of tests
How can we reduce inappropriate care?

- Educate target audiences about areas of overuse and misuse of care:
  - Practicing physicians
  - Trainees (students, residents, and fellows)
  - Patients
Targeting Practicing Physicians

- Guidelines, guidance statements, position papers
- High value care recommendations in MKSAP 16
- High value care recommendations in our annual live meeting
- Waxman Clinical Skills Center expanding and improving the clinical skills of internists to empower them to provide more cost effective and comprehensive care
- Developing new MOC activities that focus on eliminating misuse and overuse (imaging in back pain, polypharmacy, referrals)
- Smartmedicine (point of care tool for practicing physicians, free for ACP members) high value care recommendations, comparative guidelines
Other National Initiatives

- National Physicians Alliance: “Top 5” Campaign
- *Archives of Internal Medicine*: “Less is More” series
- ABIM Foundation: Choosing Wisely® Campaign
<table>
<thead>
<tr>
<th>ABIMF Choosing Wisely®</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• American Academy of Allergy, Asthma &amp; Immunology</td>
<td>• American Academy of Otolaryngology-Head and Neck Surgery</td>
</tr>
<tr>
<td>• American Academy of Family Physicians</td>
<td>• American Academy of Pediatrics</td>
</tr>
<tr>
<td>• American College of Cardiology</td>
<td>• American College of Obstetricians and Gynecologists</td>
</tr>
<tr>
<td><strong>American College of Physicians</strong></td>
<td>• American College of Rheumatology</td>
</tr>
<tr>
<td>• American College of Radiology</td>
<td>• American Geriatrics Society</td>
</tr>
<tr>
<td>• American Gastroenterological Association</td>
<td>• American Society for Clinical Pathology</td>
</tr>
<tr>
<td>• American Society of Clinical Oncology</td>
<td>• American Society of Echocardiography</td>
</tr>
<tr>
<td>• American Society of Nephrology</td>
<td>• American Urological Association</td>
</tr>
<tr>
<td>• American Society of Nuclear Cardiology</td>
<td>• Society of Cardiovascular Computed Tomography</td>
</tr>
<tr>
<td>• Consumer Reports</td>
<td>• Society of Hospital Medicine</td>
</tr>
<tr>
<td>• American Academy of Hospice and Palliative Medicine</td>
<td>• Society of Nuclear Medicine and Molecular Imaging</td>
</tr>
<tr>
<td>• American Academy of Neurology</td>
<td>• Society of Thoracic Surgeons</td>
</tr>
<tr>
<td>• American Academy of Ophthalmology</td>
<td>• Society for Vascular Medicine</td>
</tr>
</tbody>
</table>
1. Don’t do imaging for uncomplicated headache.
   Imaging headache patients absent specific risk factors for structural disease is not likely to change management or improve outcome. Those patients with a significant likelihood of structural disease requiring immediate attention are detected by clinical screens that have been validated in many settings. Many studies and clinical practice guidelines concur. Also, incidental findings lead to additional medical procedures and expense that do not improve patient well-being.

2. Don’t image for suspected pulmonary embolism (PE) without moderate or high pre-test probability.
   While deep vein thrombosis (DVT) and PE are relatively common clinically, they are rare in the absence of elevated blood d-Dimer levels and certain specific risk factors. Imaging, particularly computed tomography (CT) pulmonary angiography, is a rapid, accurate and widely available test, but has limited value in patients who are very unlikely, based on serum and clinical criteria, to have significant value. Imaging is helpful to confirm or exclude PE only for such patients, not for patients with low-pre-test probability of PE.

3. Avoid admission or preoperative chest x-rays for ambulatory patients with unremarkable history and physical exam.
   Performing routine admission or preoperative chest x-rays is not recommended for ambulatory patients without specific reasons suggested by the history and/or physical examination findings. Only 2 percent of such images lead to a change in management. Obtaining a chest radiograph is reasonable if acute cardiopulmonary disease is suspected or if there is a history of chronic stable cardiopulmonary disease in a patient older than age 70 who has not had chest radiography within six months.
Targeting Trainees

- Habits start early in training → need to focus on students, residents, and fellows
- Residents and students seen as “change agents”
- Collaboration to develop HVCCC curriculum for residents: The Alliance for Academic Internal Medicine and the ACP
AAIM-ACP Curriculum Overview

- Available free at www.highvaluecarecurriculum.org
- Introduces and builds on a simple, step-wise framework
- Eleven one hour modules with a mix didactic and interactive teaching
- Small group activities involving actual cases (inpt and outpt) and bills to engage learners
- A Facilitator’s Guide accompanies each module to help faculty prepare
Steps Toward High-Value, Cost-Conscious Care

- **Step one:** Understand the benefits, harms, and relative costs of the interventions that you are considering

- **Step two:** Decrease or eliminate the use of interventions that provide no benefits and/or may be harmful

- **Step three:** Choose interventions and care settings that maximize benefits, minimize harms, and reduce costs (using comparative-effectiveness and cost-effectiveness data)

- **Step four:** Customize a care plan with the patient that incorporates their values and addresses their concerns

- **Step five:** Identify system level opportunities to improve outcomes, minimize harms, and reduce healthcare waste

Eleven Modules

- Introduction to Healthcare Value
- Waste, Costs, Over-ordering Tests
- Health Insurance
- Costs and Payment Models
- Biostatistics Concepts To Know
- Screening and Prevention
- Balancing Benefits with Harms and Costs
- High Value Medication Prescribing
- Barriers to HVCCC
- Local Quality Improvement Project
- High Value Consultation and Referral
Small Group Activity Module 1: Introduction to Healthcare Value

- Residents review bills from two patients with uncomplicated DVT - one who has been treated as an outpatient and one who has been treated as an inpatient.

- They see for themselves that the cost is almost five times as much for the inpatient for similar outcomes.
Small Group Activity Module 8: High Value Prescribing

- Medication reconciliation at discharge exercise
- Residents compare discharge regimen with her outpatient regimen.
- The difference in medication costs between “cost blind” prescribing and “cost aware” prescribing was $900/month.
- Generic medications are at least \( \frac{1}{4} \) of the cost of their brand name equivalents.
Curriculum Dissemination

- The curriculum has been downloaded 7,600 times since its launch in July 2012
- Over 50% of program directors surveyed have implemented some component of the curriculum to date
- 54 programs report the initiation of local high value quality improvement projects from the curriculum
To what extent did the information provided in this curriculum impact your residents in each of the following areas?

- Lead to increased interest in the value of common tests and treatments
  - Uncertain: 33.3%
  - Not at all: 3%
  - Not too much: 33.3%
  - Somewhat: 30.3%

- Lead to increased knowledge of where to find estimated costs of common tests and treatments
  - Uncertain: 36.4%
  - Not at all: 9.1%
  - Not too much: 37.9%
  - Somewhat: 16.7%

- Lead to improved skills in communicating with patients about not doing unnecessary tests and treatments
  - Uncertain: 40.9%
  - Not at all: 7.6%
  - Not too much: 37.9%
  - Somewhat: 13.6%

- Lead to improved skills in incorporating patient values and concerns into clinical decisions
  - Uncertain: 40.9%
  - Not at all: 12.1%
  - Not too much: 30.3%
  - Somewhat: 15.2%

- Lead to a decrease in the ordering of unnecessary tests and treatments
  - Uncertain: 39.4%
  - Not at all: 12.1%
  - Not too much: 31.8%
  - Somewhat: 16.7%
Resident Comments on Specific Modules

- “Good picture of insurance in this country”
- “It was brief and to the point; easy to understand”
- “Bringing more attention to the insurance issues of patients”
- “I particularly enjoyed the case scenarios”
- “The presentation helped us to know how to cut down on prescription costs and still prescribe equally effective drugs”
- “It is a very important topic that needs to be understood because this can really help our patients. The presentation is good, concise and informative”
- “Real life examples help put the cost of brand name drugs in proper perspective”
Challenge for Program Directors and Faculty

- Find space in a busy curriculum with reduced duty hours to incorporate these sessions
- Identify and develop faculty to teach these topics and role model high-value cost-conscious care at the bedside
- Need to track this additional competency in their trainees over time (ITE sub-score on HVCCC and will be incorporated into ABIM exam)
Educating Patients About High Value Care

- Creating high quality patient information materials to accompany physician education materials around high value care
- Collaboration with Consumer Reports- they help create and distribute these patient information materials in digital, print, and video format to accompany new high value care recommendations and guidelines
- Patient fair at our annual meeting in April in SF- introducing patients to high value care
- Collaboration with AHRQ’s Effective Healthcare Program- co-branding and helping to distribute unbiased, evidence based disease specific summaries to physicians and patients
Expansion of the High Value Care Initiative

- Medical students: incorporate high value care curriculum content into SIMPLE and other interactive cases- these reach 97% of students in the nation

- Practicing physicians: adapt high value cases to an online interactive format for practicing physicians, create more high value practice improvement modules for part 4 MOC

- Beyond internal medicine: adapt curriculum to other specialties, current work underway with ACOG and CREOG; surgery, family medicine, pediatrics and psychiatry also interested; collaboration with ACGME Resident/Fellow Council to expand beyond IM
Current Philosophy at ACP

- Focus now on the “low-hanging fruit”: interventions with low or no benefit, independent of cost
- Goal: reduce inappropriate care that does not help (or even harms) patients
- Ultimate outcomes: better patient care, reduced cost
Future Challenges

- End of life care
- Appropriate use of subspecialty consultation and referral
- Decreasing hospitalization and ER utilization
- Over-pricing
- Price transparency
- Defensive medicine
- Improved reimbursement for care coordination
- Alignment of financial incentives
- Physician financial conflict of interest
Back to the Case: Diagnosis Unknown

- Patient suffered a bradycardic arrest in the endoscopy suite with propofol administration and could not be resuscitated
- Family refused a post-mortem
- My discomfort with diagnostic uncertainty coupled with my belief that more care was better care may have cost this patient his life
- Every test ordered should have benefit weighed carefully with harms and costs
In Summary: What can we do?

- Eliminate unnecessary tests and treatments and teach our students and residents to do the same
- Tolerate some diagnostic uncertainty- close follow up and care coordination can help assuage anxiety
- Manage patient expectations by talking to them about their values and concerns