A Billion Here, A Billion There...Is Medical Overuse Crippling the U.S.?

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The Bottom line first: Overuse of Medical Care

• Health costs are devastating national economy (& many household economies)
• 1/3 of health care costs ($700 billion/year) unnecessary (or worse); includes diagnostic and screening tests, drugs, surgery; unproven treatments; reasons are complex
• More prudent use: reduce costs, improve quality
• Savings would allow wider insurance coverage; free resources for other needs that also improve health. Doctors need to guide the process.
“A billion here, a billion there, and pretty soon you’re talking real money.”

- Attributed to Everett Dirksen, U.S. Senator from Illinois, but not confirmed. On Johnny Carson Show?
- A billion here and a billion there is how unnecessary medical care adds up.

Example: Nelene Fox, 38 yo from California

- Mother of 3, diagnosed with breast cancer age 38 (early 1990s)
- Bilateral mastectomies, chemotherapy
- Developed bony metastases
- Doctors: only chance for survival is high dose chemo and autologous bone marrow transplant
Nelene Fox: Subsequent Care

• HMO (Health Net) refused to cover procedure ($140,000) on basis that it was experimental
• Husband launched fundraising effort, raised $212,000
• Received transplant, died 8 mos later
• Fox’s brother attorney sued HMO for the delay, won $89 million in damages (later negotiated down)
• Many similar lawsuits, huge awards

Nelene Fox: Media & Political Responses

• Irresistible David and Goliath conflict: reporting focused on access; effectiveness presumed
• Story and verdict widely publicized
• 60 minutes: story critical of insurers
• In face of coverage and lobbying, state legislatures passed laws requiring coverage
• Insurers facing suits and bad publicity began to routinely offer coverage
Other Developments

- Financial windfall for doctors, hospitals; new hospital wings built
- Insurance execs accused of murder… BUT:
  - Fraudulent research from S. Africa
  - Long delayed RCT’s: no more effective than standard chemotherapy; more toxic
- 42,000 women treated
  Cost: $3.4 billion

Welch HG. BMJ 2002; 324: 1088

A Perfect Storm for Overuse?

1. Jumping the Gun: wide use before proof
2. Wishful Thinking; “it makes sense”
3. Media inflating value of new technology
4. Advocacy; political action
5. Financial incentives
Example: Surgery Problems

• Arthroscopic Knee debridement and lavage for osteoarthritis
• No more effective than sham surgery
• Cost: $3 billion/yr.


Example: Drug Safety Problem

□ Vioxx recalled after ~140,000 avoidable heart attacks
□ Most who took it would have done as well with ibuprofen.
□ Cost: $2.5 billion each year on market

Reasons for Overuse

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4. Advocacy; political action
5. Financial incentives
6. Marketing madness

Overuse of screening colonoscopy in the Medicare population

• Study of Medicare enrollees who had negative screening colonoscopy, 2001-2003
• Outcome: when was their next scope and what was indication?
• Reminder: All expert panels recommend 10 years as time for repeat exam; USPSTF recommends against routine screening over 75yo

Results: Colonoscopy

Of 24,071 pts with negative screening scopes:
• 46% had a repeat within 7 years.
• 23.5% had a repeat without clear indication.
• significant “bumps” in non-indicated tests at 3 and 5 years after the initial scope.
• One third of those over 80 at time of initial negative test had repeat screen within 7 yrs.

% of Medicare fee-for-service enrollees who underwent early repeated colonoscopy with no clear indication, by health referral region

The Flip Side of Excessive Colon Cancer Screening

• National Health Interview Survey (NHIS), administered by CDC:
• in 2005, only 50% of U.S. adults age 50 or older were up to date on colon cancer screening.

Misdirecting Resources for Colon Cancer Screening

• People willing to get screened probably get over-screened.
• Significant $ spent on over-screening; typical charge >$1,000
• Not to mention harms associated with unnecessary tests
• Resources better directed toward those who don’t get any form of screening.
Reasons for Overuse

1. Jumping the Gun: wide use before proof
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3. Media inflating value of new technology
4. Advocacy; political action
5. Financial incentives
6. Marketing madness
7. Indication Creep: If a little is good, more is better

Overuse of Medical Services: What do Doctors Say?
National Survey, 627 Primary Care Docs

• 42%: Their own patients receive too much care; 6% said too little; 52% “just right.”

• 28%: practice more aggressively than they would like

• 61%: Medical specialists practice too aggressively

Why do primary care docs say they practice more aggressively?

1. Malpractice concerns (76%)
2. Clinical performance measures (52%)
3. Inadequate time with patients (40%)
4. Financial incentives: other docs, but not me.

Opportunity Costs: What Society Loses

Societal Risks of Medical Overuse: Diverting from other determinants of health

- 2009: Health spending = 54% of federal revenue. CBO: “single biggest threat to budget stability”
- Health care competes directly with education & infrastructure in many state budgets
- Medicaid: 22% of state funding
- Education: 21% of state funding; Transportation 8%
- Medicaid (state): $84 billion in 2000 ➞ $141 billion in 2007; less for education, infrastructure
Heath and Economic Benefits of Education

• Greater educational attainment correlates with better health status and longevity, higher income, greater tax contributions, lower welfare costs

• Why better health? Better lifestyle & health care choices; safer jobs, better health insurance coverage, resources to move away from neighborhoods with crime, pollution

• Cost-effectiveness analysis: overall saves money for society, adds 2 years to life span, more cost-effective than most medical care


Federal Spending Under CBO’s Alternative Fiscal Scenario

Orszag PR. Healthcare Financial Mgmt Jan. 2009; 70-75

Peter Orszag, CBO
Barriers to Reducing Overuse of Medical Care

Public: skeptical about Guidelines that might reduce overuse

- Focus groups, interviews, survey; most employed
- Guidelines: inflexible, remove choice, interfere with providers using experience and training; deny access to innovations; protect doctors from suits
- More care and newer care is better
- More costly care is better (“get what you pay for”)
- Prefer info from friends & family, not performance data

Lay Perceptions of Scientific Information: Treating Back Pain

- BackInfo: Results of Cochrane Reviews for lay users
- Researcher: If you had heard that the neighbor had a successful treatment and you went to BackInfo and it said this treatment had no effect, what would you do?
- Karin: I would drop that website and listen to the neighbor


Misinformation: Making Research Results as Favorable as Possible

- Unfair comparisons
- Selective reporting of subgroups, side effects, outcome measures
- Publish favorable results multiple times
- Use guest authors, ghostwriters
- Withhold (or suppress) unfavorable results

Misinformation: Burying Bad News in Industry studies

- 74 FDA-registered studies: 51% positive per FDA
  - Published Literature: 94% of trials positive

- Of 36 studies judged negative or questionable by FDA:
  - 22 never published
  - 11 published with positive spin
  - 3 published as negative trials

Another way to bury unwanted results: Eliminating Funding Agencies

- Work done by Back Pain PORT, funded by Agency for Health Care Policy and Research (AHCPR), predecessor to AHRQ
- Studying outcomes of treatments for back pain
- One aspect: studying outcomes of spinal fusion surgery, for degenerative conditions
- Results nearly eliminated the AHCPR
Spinal Fusion Surgery & AHCPR

• Spinal fusion: “welding” vertebrae together
• Popular technique: “pedicle screw”: adds about $13,000 per operation; $4 billion/year
• Our findings:
  - Most rapidly increasing type of back surgery
  - Lit. synthesis: few validated indications
  - Admin. Data: higher costs, complications than discectomy, laminectomy
  - Recommended RCT’s
Also from AHCPR: Guidelines for acute low back pain

- Congressional Mandate
- 23 panel members; 4 surgeons
- Extensive literature search, quality rating
- Non-surgical Rx for most acute problems (avoided chronic pain)
Opponents to Research, Guidelines

- North American Spine Society (NASS): letter-writing campaign
- Center for Patient Advocacy (founded by ortho surgeon on NASS board): eliminate AHCPR, curtail FDA
- Sofamor Danek: injunction to block guidelines
- Acromed: subpoena of research

Consequences of Attacks

- 1996 House bill with $0 for AHCPR
- Agency restored by Senate after intense lobbying in support by prof. societies
- Intimidation led AHCPR to end guideline work
- 25% budget cut: no new starts for years
AHCP & Spine Fusion: long-term F/U

- NASS: lawsuit alleging CME activities were promotions for pedicle screws
- Today: companies under investigation for alleged kickbacks to surgeons; Sofamor Danek: $40 million fine in 2006.
  Now: surgeons forming their own companies
- AHRQ systematic review, 2006: Screws augment fusion rate, but higher complications, and no advantage in symptoms demonstrated
- “Fusion for degen. disc disease has no conclusive advantage over nonsurgical Rx, short-term or long-term”
- This year: NC blue cross limiting coverage of fusions

Increases in use of services for LBP

1a. Lumbosacral injection rates, Medicare

<table>
<thead>
<tr>
<th>Year</th>
<th>Epidural Steroids (injections per 100,000)</th>
<th>Facet Injections (injections per 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>79.7</td>
<td>283.9</td>
</tr>
<tr>
<td>1995</td>
<td>553.4</td>
<td>1420</td>
</tr>
<tr>
<td>1996</td>
<td>2055.2</td>
<td>61.1</td>
</tr>
</tbody>
</table>

266% increase

1b. Opioid analgesic prescriptions for spine problems

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions of Prescriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>8.42</td>
</tr>
<tr>
<td>1998</td>
<td>13.9</td>
</tr>
<tr>
<td>1999</td>
<td>19.96</td>
</tr>
</tbody>
</table>

108% increase

1c. Lumbar spine MR imaging, Medicare

<table>
<thead>
<tr>
<th>Year</th>
<th>Lumbar MRIs, Thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>349</td>
</tr>
<tr>
<td>1995</td>
<td>5349</td>
</tr>
<tr>
<td>1996</td>
<td>1420</td>
</tr>
</tbody>
</table>

307% increase

1d. Lumbar fusion rates, degenerative spine conditions

<table>
<thead>
<tr>
<th>Year</th>
<th>Fusions per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>13.9</td>
</tr>
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<td>1995</td>
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220% increase

Attacks on Funding or Research Agencies: Business as Usual?

- Injury prevention branch at CDC, from NRA and “Doctors for Integrity in Research and Public Policy”
- National Center for Health Care Technology Assessment in 1970’s
- Office of Technology Assessment
- Disincentive to studying controversial topics; slows new knowledge
Ways Forward: Strategies for Reducing Medical Overuse

• No single intervention
• Needs to involve all stakeholders
• Will require involvement of
  Policymakers, Government
  Patients
  Clinicians

Strategies For Government

• Direct comparisons of drugs, devices (Support PCORI!)
• Better post-marketing surveillance
• Require RCTs for devices
• Conditional FDA approvals; insurance
Strategies For Patients

• Better informed participation in health decisions: Shared Decision Making; more use of decision aids?
• “Nutritional Labels” for drugs?
• Avoid advocating new treatments with inadequate evaluation (enroll in clinical trials instead)
• Be skeptical; ask lots of questions
**Strategies For Doctors: Evidence-Based Medicine**

Not enough to know treatment *ought* to work, whether it makes physiologic sense, whether it’s common practice, whether we learned it in medical school, whether we’ve always done it that way, whether an expert vouches for it, or whether it works in mice...

Instead: what’s best evidence that new treatment extends lives or improves quality of life, and what are the risks?

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**More Strategies for Doctors: Renewed Professionalism**

Professionalism  
Business Ethos

AAMC Report, April 2008: Doctors, Staff, and Students in Medical Schools should avoid:
- free food, gifts, travel from drug & device co’s.
- Ghost-writing services from industry
- Strongly discouraged Speakers’ Bureaus
- ACP (2011): Stewardship of resources as new competency for Graduate Medical Education
Summary

- Up to 30% of health care expenditures may be unnecessary; varied reasons
- Hurting other societal needs, including jobs, economy, and other contributors to health
- Physicians believe they are paid to do more; exposed to legal punishment if they do less
- Need public education about harms of unnecessary care: both direct and indirect
- Expect a backlash to efforts to reduce overuse
- “Newly Approved” ≠ new & improved
- Overuse can be surgically trimmed; across-the-board cuts will include essential services

Marginal Treatments: Other Recent Examples

- **Avastin** for Breast cancer: $88,000/yr per pt.; FDA: not effective, serious side effects
- **Coronary stents** for stable coronary disease: do not reduce heart attacks, save lives. Often used in asymptomatic pts, or without trial of optimal medical therapy
- **Pulmonary artery catheters** in intensive care: no survival advantage ($2 billion/year, decades)
- **Avandia** for diabetes: increased heart risks ($3 billion/year world-wide)
Top 5 Activities for which Less is More: Primary Care (Family Medicine)

- Imaging for low back pain without “red flags”
- Antibiotics for acute sinusitis <7 days
- Annual ECG or other cardiac screening for asymptomatic low risk pts. (USPSTF)
- Pap tests for women <21 yrs or post-hysterectomy for benign disease
- DEXA for osteoporosis in women under 65 or men under 70 with no risk factors


Example: End-of-Life Care:
Hospitalized patients over age 80

- Only 30% wanted life-sustaining treatments; the rest wanted comfort care
- Yet 63% received life-prolonging care, including intensive care unit, ventilator care, surgery, renal dialysis

Example: Drug Efficacy Problem

- ALLHAT: thiazides > than newer drugs at preventing hypertension complications.
- Use ↓ in favor of newer drugs at 15x higher cost.
- ↑ use of diuretics: might prevent 70,000 MI’s/year
  Cost: $1.2 billion/yr.

Over-confident about medical technology: Can modern medicine “cure almost any illness for people who have access to the most advanced technology and treatment?”

<table>
<thead>
<tr>
<th>Percent “Yes”</th>
<th>Life Expectancy</th>
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<tbody>
<tr>
<td>American:</td>
<td>77.8 yrs</td>
</tr>
<tr>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>Canadians:</td>
<td>80.2 yrs</td>
</tr>
<tr>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>Germans:</td>
<td>79.0 yrs</td>
</tr>
<tr>
<td>11%</td>
<td></td>
</tr>
</tbody>
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Orszag: major contributors to growth in health care spending?
3 analyses of cost increases, 1940-1990

• Aging of population: 2%
• Administrative costs: ~10%
• Price increases: ~20%
• Personal income growth: ~20%
• Defensive medicine: 0%
• Technology related changes in medical care: 50% or more

Smith, Heffler & Freeland, 2000; Cutler, 1999; Newhouse, 1992

Outline: A Discussion on Medical Overuse

1. Examples of medical overuse; reasons
2. Doctors’ views of medical overuse
3. Opportunity costs (what society loses)
4. Barriers to reducing overuse
5. Possible ways forward