Principles of Conservative Diagnosis

Diagnostic Errors in Medicine Conference Washington DC 9/28/2015

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Financial Conflicts/Disclosures

• Commercial
  – None related (Medware data-mining project)

• Other/Grant Funding
  – AHRQ PROMISES Ambulatory Safety & Malpractice
  – AHRQ – CERT: BWH CERT HIT – Drug Reaction detection
  Chicago (UIC/NW) Patient Safety CERT
  – FDA - CPOE Errors Evaluation (CPOEMS)
  – CRICO – Diagnostic Errors/Pitfalls Grant
  – Gold Foundation– Boundaries Issues

Berwick, who also reviewed the report for the institute, cited one crucial omission--the committee decided not to address over-diagnosis, a diagnosis that is made that is not helpful to patients. "They might not define that as an error," he says, "But I think the task of addressing over-diagnosis is critical."
How can doctors avoid overdiagnosing and incurring unnecessary costs for overtesting?

DR. SINGH: Doctors usually need to balance between ordering additional tests or procedures that often come with their own risks versus risking “underdiagnoses” by not investigating. There is so much national conversation now on overdiagnosis, overtesting, overtreatment and health-care costs. The midpoint of the pendulum is what we need to strive for, and that’s not going to be easy.

Given the stresses of busy practice what levers can be pulled to change culture of diagnostic work

Richard Kronick  AHRQ  DEM Keynote Address 9/28/2015
Why Conservative Diagnosis

• Need general principles,
  – Beyond just list tests to avoid (eg Choose Wisely)

• Need to do right thing for right reasons
  – Not about doing fewer tests,
    but more appropriate testing and better care

• Must be based on respect for clinical challenges, uncertainties, anxieties, and ways clinicians and patients can work together to improve care and outcomes.

Based on Conservative Rx Principles

• AAMC: improved pharmacology teaching
  – Pharmacology, pharmacokinetics, dosing,
  – Prescribing regulations
  – Drug interactions, adverse reactions
  – Use of drug compendia, info resources

• Little/no teach on how to prescribe

• Need for more judicious, rational, careful, cautious, prescribing
  – Healthy skepticism → Conservative Prescribing

Principles for More Conservative Prescribing

Think Before Drugs. More discussion to “just say no” to drugs, alternative medical conditions, therapies, and locally available options for alternative ways of helping patients. 

Promoting More Conservative Prescribing

Commentary

JAMA

Clinical’s Corner
24 Principles of Conservative Rx
6 Domains

A. Think beyond drugs
B. Practice more strategic prescribing
C. Heightened vigilance adverse effects
D. Be cautious/skeptical w/ new drugs
E. Work w/ patients for shared agenda
F. Consider long-term, broader impacts

Schiff & Galanter JAMA 2009
Schiff et al Arch Intern Med 2011

The principles of conservative prescribing
No matter what your politics, a conservative approach to medications is a good idea.

The old, jolly line was “take two advil and call me in the morning.” But, of course, doctors prescribe it more than that these days. The medicine cabinet is crammed full—alendronate, fowaming stasis, stomach acid-reducing proton pump inhibitors, anticoagulants, endocrine drugs, diabetes drugs, sleeping pills, hormones. The notion of many that overuse of prescription drugs tripled between 1997 and 2007, although growth in our collective “pill bill” has slowed recently for most reasons (see sidebar on next page). People who genuinely need medications should take them; indeed, getting effects should be a concern. But saying, “let sleeping dogs lie” is not always the correct option. In fact, when we fail to take the first steps, it is often the only step we take. A prescription avoids the dilemma that the doctor believes you’ve got a problem with your health and that you need to take something, and the patient wonders whether you’re sure you should be worried. There’s a lot of over-prescribing of medications that are often useless or even harmful. It’s important to think beyond the drugs and to consider other options.
Conservative Diagnosis Principles

Combining

• Fundamentals of good diagnosis
  – Need for differential diagnosis
  – Listening to patient; obtaining good history
  – Careful exam
  – Need to match syndrome to findings
  – Understanding limitations diagnostic tests
  – Avoiding known biases
    • Premature closure, availability, hindsight
    – Bayesian probability weighing

With 4 Critical Paradigms….

• Precautionary Principle
  – Shifting burden of proof for new technology
  – Alternative to “risk-benefit” paradigm

• Primary care principles
  – Continuity of care, caring relationships
  – Lessons from evaluation of common symptoms
  – Teamwork

• Key patient safety lessons
  – Situational awareness of pitfalls
  – Safety nets to mitigate inevitable error, harm
  – Culture of safety (learning, systems, avoid blame)

• Critique of market medicine, mindset
  – Healthy skepticism (to counter biases favoring overuse)
  – Longer Term time horizons
1. New model for Patient “Caring”

- Shift construct of what means to be thorough, attentive, cautious, careful, caring
  - Moving from “ordering lots of tests” as measure of thoroughness and taking concerns seriously
- New approach centered more on patient—
  - concerns, outcomes, potential for benefit, harms—rather than on diagnostic label
- Hearing & engaging patient
  - Recognition pt’s role in co-production of dx
  - Pts engaged monitoring, reliable follow-up for safety net to enable practice conservative dx
  - Hearing what matters most: fears, plans, impacts
  - More meaningful shared decision-making

Patients Want Better Diagnosis

- Work with patients’ desires, interest, receptivity in approaching diagnosis conservatively
“Listen to your patient, he is telling you the diagnosis”

---Osler

Listen to what you are telling your patients – potentials for stigmatization, medicalization, legitimization, validation, minimization

2. New Science of Clinical Uncertainty

- Recognize, respect, master, become more comfortable with clinical uncertainties, challenges, ambiguities,
  - Collectively, as well as individual clinicians and patients,
- Appreciation associated patient and provider anxieties.
  - Redesigning care around these insights
    - My cell phone #; proactive f/up systems
Minimizing Diagnostic Error: The Importance of Follow-up and Feedback

An open-loop system (also called a "non-feedback controlled") process is one that makes decisions based solely on preprogrammed criteria and the prevailing model of the system. This approach does not feedback to calibrate its output when the desired goal is achieved. Because open-loop systems do not observe the output of the process, they cannot engage in learning. They may only correct any errors they make or compensate for any deviations in the process. A commonly known example is when we write a message of uncertainty or reassurance that goes out automatically at a certain hour each day, regardless of whether the sky is sunny or cloudy.

To an unexpectedly large extent, clinical diagnosis is an open-loop system. Typically, clinicians learn about their diagnostic successes or failures in isolation of one's own day-to-day lived experience, a knock on the door from a server with a multipart message: a medical resident learning, upon stumbling into a Parking violation in the hospital hallway, that a patient's failure to improve diagnosis. Whereas their emphasis centers around the question of physician overconfidence regarding their own cognitive abilities and diagnostic decisions, I explore many physicians often more aligned with and disaffected than overconfident and complacent. There simply is not enough time in their rapidly changing encounters, and too much "noise" in the multiplicity of both internal and external complaints that patients bring to them. Physicians, particularly early-care patients, or to find easily accurate. Both physicians and patients know this: Thus, we hear frequent complaints from patients about missed appointments facing sufficient time for full and proper evaluation. We also fear physician" confirmation about incorrect numbers of times, being done.

Structural commitment patient role to play
- Embodies/conveys message: uncertainty, caring, reassurance, access if needed
- Allows deployment of test of time, more conservative diagnosis
- Enables differential diagnosis
- Emphasizes that disease is dynamic
- Reinforces culture of learning & improvement
- Illustrates how much disease is self limited
- Makes invisible missed diagnoses visible

Feedback –Key Role in Safety

Exploration of an Automated Approach for Receiving Patient Feedback After Outpatient Acute Care Visits

Elmo S. Bemer, E.D.D., Magde R. Say, M.N.S., Anandaksh K. Panjampaleon, Ph.D.,Michael S. Macek, Ph.D., James M. Wilk, M.D.,Tromma M. Englen, Ph.D., Mark E. Krouse, M.D.,Chester R. Nevin, M.S.H., Shannon Houser, Ph.D., Mark P. Cohen, M.D., and Gordon D. Schaff, M.D.

BACKGROUND: To improve and learn from patient outcomes, particularly with non-curative medical issues, requires establishing systems for follow-up and feedback.

OBJECTIVE: To develop and test an automated approach for receiving patient feedback after outpatient acute care visits.

METHOD: A three-phase observational study involving follow-up calls three weeks after surgery. Every patient (n = 230) was enrolled, and one week post-discharge, a telecommunication voice response system (IVR) called with three patient subsets was conducted. A limited literature review showed that approximately 6% improvement was seen.
3. Rethinking Symptoms

- Integrating evidence from studies on common sx
  - Recognition that many (even majority) of symptoms defy definitive medical diagnosis
  - Symptoms often self-limited (regardless of whether or not able to be explained)
  - Prevalence of multiple unexplained somatic sx overlapping with “non medical” (psych, other) sx

Kurt Kroenke, M.D., Indiana University School of Medicine
Common symptoms in ambulatory care: incidence, evaluation, therapy, & outcome

- 14 common complaints, 1000 pts
- Total 567 new sx: chest pain, dizziness, fatigue, headache, edema, back pain, dyspnea, insomnia, abdominal pain, numbness, impotence, weight loss, cough, and constipation were noted, with 38 percent of the patients reporting at least one symptom
- Diagnostic testing performed in 2/3
- Organic etiology only 16%

Kroenke Am J Med. 1989

- “The classification, evaluation, and management of common symptoms need to be refined. Diagnostic strategies emphasizing organic causes may be inadequate”

Kroenke Am J Med. 1989

Somatization in primary care

- 191 consecutive patients consulting family physician
- 25 item validated questionnaire for somatoform disorder
- 22.3% of pts fulfilled ICD-10 diagnostic criteria, excluding SD unspecified,
- 30.3% met the criteria (CI: 95%: 23.8–36.9) when the DSM-IV Not Otherwise Specified (NOS) diagnostic group is excluded
- MD’s identified < ½ as having SD

Fink Psychosomatics 1999
Prevalence somatoform disorders among internal medical inpts

- 392 consecutive pts
- 18.1%-20.2% met ICD-10, DSM-IV criteria for SD
- More prevalent among younger women
- Physicians detected ~ 1/3

3. Rethinking symptoms

- Integrating evidence from studies on common sx
  - Recognition that many (even majority) of symptoms defy definitive medical diagnosis
  - Symptoms often self-limited
    - Regardless of whether or not able to be explained
    - Prevalence of multiple unexplained somatic sx overlapping with “non medical” (psych, other) sx
- Disconnecting “symptom—scan-it” reflex
- Sorting acute vs. chronic sx (often not easy)
- Matching sx to diagnoses/syndromes, so isolated sx not misconstrued or mislabeled
- Re-thinking how can best help these pts/sx

4. (Re) Prioritizing Diagnoses

- Waltz between diagnosis and treatment
  - Limited value of diagnosis that don’t change treatment, or where no effective treatment exists
    - Tho recognize/acknowledge/balance other benefits of dx (avoiding needless rx, reassurance, prognosis)
- Targeting high risk patients and diseases
  - Identifying patients at increased risk, or diagnoses requiring urgent treatment
    - Coupled with restraint in low risk, non-urgent situations
- Understanding, measuring, weighing *marginal benefit* of various strategies
  - Incorporating population-based perspectives
Alzheimer's

Some physicians worry that all the talk of early Alzheimer’s and the new biomarker tests is getting ahead of the science—and could unleash a wave of premature, uncertain diagnosis of a devastating disease with no cure

5. Taming Time

• **Better use of time**: shifting to longer horizons
  – Weighing medium and longer term outcomes (benefits; risk) rather than just shorter term focus

• **Adequate time** for clinical encounters
  – Designing more efficient encounters based on process redesign and optimized teamwork

• Engineer **watchful waiting** into common dx situations
  • Systematic, reliable vs current ad hoc f/up, monitoring
  • Understanding when early definitive diagnosis represents best/most conservative strategy
  – Better matching pt’s course with known evolution and expected response to treatment

6. Testing: Appreciating Limitations

• **False +, false -**, poor predictive + values
  • Especially in low prevalence/probability situations
    – Bayes for beginners/masses – stick diagram

• Appreciating **testing error rates**
  • Suboptimal/errors test choice, performance, interpretation
  – Recognizing (often hidden) harms from testing
    • Radiation, procedures' harm, excess anxiety
    • Distraction from more beneficial activities
    – **Parallel vs. serial testing**

• Role of testing in creating overdiagnosis

• Understanding how tests tested, approved, marketed
  – Limited testing, biases
Technology Assessment

• Critical, unbiased assessment
• What is marginal contribution
  – Vs. duplicate testing
• Repeat testing
• Levels of efficacy of a diagnostic test
Levels of Efficacy of Diagnostic Test

1. Technical Efficacy
   - Resolution, sharpness, artifact

2. Diagnostic Accuracy Efficacy
   - Yield of Abnormal findings in case series
   - % Correct Dx in Case Series
   - Sensitivity, specificity
   - Area under ROC curve

3. Diagnostic Thinking Efficacy
   - % of cases judged "helpful" for Dx
   - Change in clinician's pre and post probabilities

Fryback Med Decismkg 1991

4. Therapeutic Efficacy
   - % of cases judged "helpful" for Rx
   - # of procedures avoided due to test information
   - % of cases therapy changed from pre-test plans

5. Patient Outcomes Efficacy
   - % pts improved with vs. without test
   - Morbidity avoided due to test information
   - Change quality adjusted life years
   - Marginal Benefit Impact

6. Societal Efficacy
   - Benefit cost analysis from societal viewpoint
   - Cost-Effectiveness from societal viewpoint.
   - Comparative and marginal allocational benefits

Fryback Med Decismkg 1991
The reason the all American boy prefers beauty to brains is that he can see better than he can think

-Farrah Fawcett
Measurement of Post-void Residual Bladder Volumes in Hospitalized Older Adults

Zvi Shnider, MD,1,2 Ilia Foger, MD,1,2 Paul Fries, MD
1Department of Medicine & Geriatrics Hospital, Soroka, Israel; 2Stroke Management Pneumatics of Medicine, Technion, Israel Institute of Technology, Haifa, Israel; 3School of Public Health, Jacobs School of Medicine, The Johns University, El Fars, Israel.

ABSTRACT

Background: It is commonly recommended to administer or closely follow patients with post-void residual volumes of 150 ml or more, but the frequency of such findings in geriatric hospitalized patients and the need for intervention are unclear.

Aims: The aim of this study was to assess the frequency of post-void residual volumes of 150 ml or more and the need for intervention in 241 hospitalized patients aged 70 years or more who were hospitalized in a regional hospital general medical-surgical departments. One hundred and ninety-two patients included the need for an indwelling catheter and/or evacuation of urinary retention during the hospitalization.

Results: Post-void residual volumes of 150 ml or more were noted in 218 (74.1%) patients aged 70 years or more in the study group. The following parameters were associated with post-void residual volumes of 150 ml or more: male sex (73.1% vs. 62.0%, p = 0.004), and MCI or worse in 65 (27.1% vs. 12.8, p = 0.001). The rate of indwelling catheter was 15.7% (19/120). Results of post-void residual volumes did not predict the need for catheterization in those without other criteria, although those with indications for indwelling catheter had a significantly higher frequency of post-void residual volumes (500 ml, L.P. c. 2.02) compared with those without such indications.

Conclusions: Post-void residual volumes in hospitalized patients is common. Full measurements of post-void residual volumes did not have a defined clinical utility. However, the study had limited power to determine the benefit or potential harms of urinary catheterization for increased post-void residual volumes.

KEYWORDS: Catheterization, Geriatric patients; Post-void residual

CLINICAL SIGNIFICANCE

• Urinary retention is common in hospitalized patients aged 70 years or more.

• The measurement of post-voiding residual volumes in geriatric hospitalized patients has questionable clinical utility.

• The study suggests that restrictive criteria with reinforcement during daily staff meetings could reduce indwelling catheterization rates without adverse consequences.
The Overuse of Serum Ceruloplasmin Measurement

Elliott B. Tupper, MD,* David O. Rahni, MD,* Ramey Amsden, MD, DPhi,* Michelle Lai, MD, MPH*†
*Division of Gastroenterology, †Department of Medicine, ‡Department of Pathology, Division of Gastroenterology, Beth Israel Deaconess Medical Center, Boston, Mass.

** IMPACT **

** BACKGROUND: **Wilson disease is rare, found in 3 of 100,000 people (0.03%). Ceruloplasmin is often ordered to evaluate liver enzyme elevations. Because Wilson disease often presents before middle age, the American Association for the Study of Liver Disease recommends screening patients between the ages of 7 and 55 years with liver abnormalities of uncertain cause. We evaluate guideline adherence and the clinical and economic impact of current clinical use of ceruloplasmin.

** METHODS: **We reviewed all ceruloplasmin measurements at a clinical laboratory that serves a large primary care network, specialty clinics, and an academic tertiary care center between January 1, 2005, and December 31, 2010.

** RESULTS: **Ceruloplasmin was measured 5,023 times in 5,023 unique patients, resulting in 6,161 unique tests ordered in 5,023 unique patients, resulting in 6 (0.16%) new Wilson disease dx.

Ceruloplasmin’s positive predictive value was 8.4% (95% confidence interval, 7.5-9.3) and false-positive rate was 98.1% (95% confidence interval, 96.2-99.1). A total of 1109 ceruloplasmin levels (20.8%) ordered in 1066 patients (age > 55 years : None w/ Wilson disease).

“Shotgun” approach to liver disease diagnosis: Ceruloplasmin measured same day as hepatitis B (81.0%), hepatitis C (76.0%), autoimmune hepatitis (75.1%), and hemochromatosis (73.1%). Of 424 positive ceruloplasmin results, 91% were not pursued further.

** OVER-ORDERING CERULOPLASMIN **

- Ceruloplasmin measured 5,325 times in 5,023 unique patients, resulting in 8 (0.16%) new Wilson disease dx.
- Ceruloplasmin’s positive predictive value 8.4% and false-positive rate 98.1%
- Total of 1109 ceruloplasmin levels (20.8%) ordered in 1066 patients age > 55 years : None w/ Wilson disease.
- “Shotgun” approach to liver disease diagnosis: Ceruloplasmin measured same day as hepatitis B (81.0%), hepatitis C (76.0%), autoimmune hepatitis (75.1%), and hemochromatosis (73.1%).
- Of 424 positive ceruloplasmin results, 91% were not pursued further.

** 7. CONTINUITY RELATIONSHIPS **

- Longitudinal primary care relationships - foundation building better, conservative diagnosis
  - Informational continuity
  - Shared decision-making partnerships
- Continuity, longer term, trusting relationships
  - Trusting non-conflicted relationships require financial neutrality of clinical decision-making
    - Avoiding incentives to order more tests (imaging in offices)
    - Likewise, rewards for ordering fewer tests which poison conversation, trust, and can create conflicts of interests.
- Easy access, reliable follow-up, is key
  - Making doing right thing, not testing, easiest path
Diagnostic Alliance

- Countering conditions that undermine building a "therapeutic alliance"
- Based on understanding that diagnosis is co-produced by clinician and patient
- Trust, continuity, time are keys to unlock door to non-defensive partnering medicine

Original Investigation
The Association Between Continuity of Care and the Overuse of Medical Procedures
Max J. Rokose, MPH; Joel R. Nagel, MD, MPH; Craig Povohar, MD, MPH

**Importance**: Both the overuse of unnecessary medical procedures and poor continuity of care are thought to contribute to high health care spending and poor patient outcomes.

**Objective**: To investigate the association between care continuity and use of potentially unnecessary procedures.

**Design, Setting, and Participants**: Observational retrospective cohort (n = 1,208,250 patients aged 40-64 years) using 5% Medicare fee for service claims from 2008.

**Main Outcomes and Measures**: We evaluated continuity using the finest-grained continuity of care index. We measured overuse using a previously validated set of 19 potentially overused procedures.

**Results**: Among patients, 14.7% of patients received at least 1 potentially overused procedure during the calendar year, for each 10% increase in the continuity score (0-1), patients had 1.17 (95% CI 1.17-1.18) more of these either overused procedures than those with lower scores (0-0.9). 0.98-0.91, P < .001 and 1 therapeutic procedure (0.95-0.88, P < .001). Continuity, higher continuity was significantly associated with increased continuity for 3.

JAMA Intern Med
2015
8. Diagnostic Safety Lessons/Pitfalls

- Patient safety – translating/applying lessons
  - Decreased reliance on human memory
    - For asking key questions for reliable history,
    - For considering an accurately weighing diagnoses/probabilities
  - Where safety fails: processes and handoffs
    - Reliable systems, augments/more important than brilliant dx
  - Situational awareness: learning/anticipating failures
  - Transparency to uncover, facilitate learning from errors
  - Safety culture: understanding systems; blame free accountable care

- Diagnosis pitfalls; don’t miss diagnoses/situations

Diagnostic Risk

Situational Awareness

- Specialized type of situational awareness
- High reliability organizations/theory
  - High worry anticipation of what can go wrong
  - Preoccupied w/ risks recognizing/preventing
- Appreciation diagnosis uncertainty, limitations
  - Limitations of tests, systems’ vulnerabilities
  - Knowing when “over head” need for help
- Making failures visible
- Don’t miss diagnoses, red flag symptoms
- Diagnostic pitfalls – potentially useful construct
Perhaps the most important distinguishing feature of high-reliability organizations is their collective preoccupation with the possibility of failure. They expect to make errors and train their workforce to recognize and recover them. They continually rehearse familiar scenarios of failure and strive hard to imagine novel ones. Instead of isolating failures, they generalize them. Instead of making local repairs, they look for system reforms.

Diagnostic pitfalls

- Clinical situations where patterns of, or vulnerabilities to, errors leading to missed, delayed or wrong diagnosis
- Process failures: e.g communication dropped balls, failed referrals and test f/up
- Disease/diagnosis-specific hazards such as mistaking disease A for disease B, failure to appreciate limitations of diagnostic tests, misinterpreting urgency or atypical disease presentation, or difficulties in diagnosing patients with underlying chronic or mental health conditions.

Schiff et al CRICO Diagnostic Pitfalls Grant Project 2015

9. Cancer, Cancer, Cancer

- Inevitability of delays
  - Never dx’ed at moment 1st abnormal cell mitosis
- Easily overlooked since can present with virtually any symptom and any symptom can be cancer
  -Leading malpractice allegation—delayed cancer dx
- Cancer fear
  - Developing new ways to address understandable dread
  - “Early diagnosis” central to paradigm
  - Making more productive: upstream & downstream interventions
### Schiell et al. JAMA Intern Med 2013

#### Cases Closed: Allegations by Close Year

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>Diagnosed-related</td>
<td>72</td>
<td>82</td>
<td>79</td>
<td>83</td>
<td>81</td>
<td>397</td>
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<tr>
<td>Medication-related</td>
<td>11</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>16</td>
<td>68</td>
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<tr>
<td>Medical Treatment</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>41</td>
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<td>Communication</td>
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<td>4</td>
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<td>5</td>
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<td>Violation of Rights</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>11</td>
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<td>Safety &amp; Security</td>
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<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>0</td>
<td>2</td>
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<td>Surgical Treatment</td>
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<td>1</td>
<td>0</td>
<td>3</td>
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<tr>
<td>Breach of Confidentiality</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
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<tr>
<td><strong>Total Number of Cases</strong></td>
<td><strong>108</strong></td>
<td><strong>109</strong></td>
<td><strong>107</strong></td>
<td><strong>116</strong></td>
<td><strong>111</strong></td>
<td><strong>551</strong></td>
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</tbody>
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N=551 CRICO and Cowens participants; PL cases closed 2005–2009 naming General Medicine staff/fellow physicians (excl. Hospitals) and excluding ED locations.

#### Cases Closed: Top Final Diagnoses

<table>
<thead>
<tr>
<th>Final Diagnosis</th>
<th>Number of Cases</th>
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<tbody>
<tr>
<td>Cancer</td>
<td>116</td>
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<tr>
<td>Disease of the heart</td>
<td>45</td>
</tr>
<tr>
<td>Disease of blood vessels</td>
<td>27</td>
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<tr>
<td>Infection</td>
<td>22</td>
</tr>
<tr>
<td>Neurovascular disease</td>
<td>16</td>
</tr>
<tr>
<td>Lower gastrointestinal disorders</td>
<td>9</td>
</tr>
<tr>
<td>Orthopedic Injury</td>
<td>7</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>5</td>
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</table>

<table>
<thead>
<tr>
<th>Final Diagnosis</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal</td>
<td>64</td>
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<tr>
<td>Lung</td>
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<tr>
<td>Prostate</td>
<td>26</td>
</tr>
<tr>
<td>Breast</td>
<td>18</td>
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<tr>
<td>Other (0)</td>
<td>10</td>
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<tr>
<td>Other neoplasms</td>
<td>8</td>
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<tr>
<td>Uterine organs</td>
<td>6</td>
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<td>Lymphatic and hematopoietic tissue</td>
<td>6</td>
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<tr>
<td>Head and neck</td>
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<td>Others and other</td>
<td>5</td>
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</tbody>
</table>

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**The New York Times**

**Opinion**

**The Great Prostate Mistake**

By RICHARD J. ARLIN

Published: March 9, 2010

Tucson

EACH year some 30 million American men undergo testing for prostate-specific antigen, an enzyme made by the prostate. Approved by the Food and Drug Administration in 1994, the P.S.A. test is the most commonly used tool for detecting prostate cancer.

The test’s popularity has led to a hugely
The test’s popularity has led to a hugely expensive public health disaster. It’s an issue I am painfully familiar with — I discovered P.S.A. in 1970.

As Congress searches for ways to cut costs in our health care system, a significant savings could come from changing the way the antigen is used to screen for prostate cancer.

So why is it still used? Because drug companies continue peddling the tests and advocacy groups push “prostate cancer awareness” by encouraging men to get screened. Shamefully, the American Urological Association still recommends screening, while the National Cancer Institute is vague on the issue, stating that the evidence is unclear.

I never dreamed that my discovery four decades ago would lead to such a profit-driven public health disaster. The medical community must confront reality and stop the inappropriate use of P.S.A. screening. Doing so would save billions of dollars and rescue millions of men from unnecessary, debilitating treatments.
10. Encountering Specialists and ED’s

- Role of specialists
  - As drivers of non conservative dx
  - Potential as stewards for conservative dx
    - Population support for conservative and correct diagnosis

- ED visits
  - Worst 1st care after hours access of any nation
  - Understanding imperatives/special nature of diagnosis in ED: need to exclude urgent diagnosis
  - Poor knowledge and often unreliable f/up of pt as drivers; ways to offset.

Percent of Primary Care Physicians Reporting After-Hours Arrangement to See Doctor or Nurse Without Going to an ER

![Bar Chart]

Source: S. Schoen et al., *Health Affairs*, 28, no. 6 (2009): w1171-w1183

11. Prospective guidance/guidelines

- Role in prospectively grappling
  - To define path as well
  - Providing support for conservative diagnosis
  - Tool in hands of MDs to educate/enforce w/ patients
  - Specific language to guide conversations
- PSA- Paradigm shifting (re)assessment
- Graphic representation to convey information on risks and benefits
- Helping ensure fairness in “coverage” recommendations and practices
- Illuminating controversies, areas of uncertainty
12. Understanding, Overcoming Barriers

- Fragmentation, lack of coordination as key driver of poor and wasteful diagnosis
  - Duplicated efforts, testing, silo'd information, failures in shared understanding of patient
- Patient hopes and fears; media role
- Clinicians biases, natural desires, own needs
  - Intellectual curiosity, desires to be "more scientific;" pride, or avoiding embarrassment/regret/guilt of missing a dx
  - Recognizing, self reflection on purposes fulfills;
- Misconceptions
- Medical-legal

What to Call This?

- Conservative Diagnosis
- Judicious "
- Mindful "
- Patient Centered "
- Shared "
- Listening "
- Relationship-based "
- Modest "
- Prudent "
- Realistic "
- Honest "
- Rational "
- Appropriate "
- Cautious "
- Skillful "
- Smarter "
- Effective "
- Safer "

- Most countries found that bringing cost into the discussion diminishes both physician and patient engagement.

However, the financing in different countries may diminish how the message is received; for example in some countries, the concept of value or waste reduction many be acceptable or desirable to the public.

Levinson, Choose Wisely Working Group BMJ QSHC 2015
Misguided approaches

- High deductible, co-pay, coinsurance, multitier
  - “Skin in the game” false formulation
- Utilization review/ prior authorization
- Blame patients for anxieties
- Blame physicians for uncertainties
  - Diagnosis uncertainties
  - Lack clarity/evidence about indications
- Cutting access, time w/ MD, blocking consults
- Malpractice caps.

Conclusion

- Conservative diagnosis- first and foremost a way of respecting patients, our limits
- Not fundamentally about saying no to people
  - Can’t ignore legitimate fears, uncertainties
- Rather it is saying yes- enabling helping, supportive worrying, safety nets
- Creating new science of collaboration around uncertainty
- Rather than less is more... More is less
  - More support for pt; more careful watching, more hearing from patient, more understanding of tests, more focused testing, more worry-free lives, and diagnostic fewer errors

Diagnosis Errors and Over-diagnosis:
Two Sides of Same Coin