Communicating about Overdiagnosis to Health Professionals

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Disclosures & Relevant Relationships

Disclosures
- No financial conflicts

Relevant Relationships
- Editor, JAMA Internal Medicine
- Medicare Payment Advisory Commissioner
Perspective from academic journals

- Traditional focus is on new technology, drugs, procedures
- Important to also publish negative trials
- All treatments have harms
  - Include in article
- JAMA IM – Less is More, launched 2010
- ABIMF – Choosing Wisely, 2012
- Choosing Wisely Canada
- BMJ – Too Much Medicine, 2013
- CMAJ
Agenda

- Clinician & patient expectations
- Examples of evidence
- Prevention & solutions
CLINICIAN & PATIENT EXPECTATIONS
Clinicians’ Expectations of the Benefits and Harms of Treatments, Screening, and Tests

A Systematic Review

Tammy C. Hoffmann, PhD¹; Chris Del Mar, MD, FRACGP¹
Study Goal & Method

- Systematic review of studies that quantitatively assessed clinicians’ expectations of benefits & harms of treatment, test, or screening test
- Screened 8,166 articles. Reviewed 48 articles referencing 13,011 clinicians
- Studies published between 1981 and 2015 from 17 countries
- Assessed 58 outcomes

50+% participants overestimated benefit for 7 outcomes (32% of outcomes) and underestimated benefit for 2 outcomes (9%).

Most participants correctly estimated harm only for 9 outcomes (13%), underestimated harm for 20 outcomes (34%), and overestimated harm for 3 outcomes (5%).
What Does This Tell Us?

- Clinicians…
  - Rarely accurately estimate harms & benefits
  - Tend to overestimate benefits and
  - Underestimate harms
  - Face challenging wealth of evidence for interventions from hundreds of journals
  - Might fall victim to “therapeutic illusion”

- Possible solutions include
  - Shared decision making
  - Up-to-date, concise, and clear summaries of intervention benefits and harms

Treating patient expectations

Review | LESS IS MORE

Patients’ Expectations of the Benefits and Harms of Treatments, Screening, and Tests
A Systematic Review

Tammy C. Hoffmann, PhD; Chris Del Mar, MD, FRACGP

IMPORTANCE Unrealistic patient expectations of the benefits and harms of interventions can influence decision making and may be contributing to increasing intervention uptake and health care costs.

Invited Commentary | Less Is More

February 2015

Patient Perception of Benefits and Harms
The Achilles Heel of High-Value Care

Deborah Korenstein, MD
Patient Expectations

- 30+ studies analyzed by Hoffman and Del Mar in Less is More publication
- Assess patients’ understanding of benefits and harms of treatment
- 22 out of 34 studies (65%), patients overestimated benefits of treatment
- 10 out of 15 studies (67%) in which harms were the focus, patients underestimated the risks or harms
- Improving communication necessary for patients to understand benefits vs. harms and opt for better care


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Commentary | Less Is More

March 28, 2011

Not So Silver Lining

Lisa M. Schwartz, MD, MS; Steven Woloshin, MD, MS; H. Gilbert Welch, MD, MPH

The Opinion Pages | OP-ED COLUMNIST

A Scare, a Scar, a Silver Lining

Nicholas Kristof June 5, 2010

The New York Times
“He survived a brush with overdiagnosis”

- Incidentalomas: Abnormalities picked up by CT scans ordered for other reasons
  - Could be cancer so lead to more testing
  - The paradox of the false alarm
- “Harm is interpreted as benefit”
  - False presumption of benefit: Cost of testing outweighs harm
  - Most cancerous incidentalomas regress or grow too slow to kill

Instead, Patients Can

- Ask: Is this abnormal finding really an incidentaloma, i.e., related to order?
- Get second radiologist’s opinion
- Wait & see with retesting is safe option
- Ensure any testing is necessary:
  - “Do I really need this test? Can we proceed without it?”
  - “Can we try treating this symptom and only resort to testing if treatment does not work?”

EXAMPLES OF EVIDENCE
Editorial
July 2017

Cancer Screening, Overdiagnosis, and Regulatory Capture

H. Gilbert Welch, MD, MPH
Case of Thyroid Cancer

- US Preventive Services Task Force (USPSTF) recommends against thyroid cancer screening because harms outweigh benefits.

- High prevalence/rare death mismatch.

- Mortality from thyroid cancer has remained stable despite dramatic increase in incidence suggesting overdiagnosis.

Welch HG. Cancer Screening, Overdiagnosis, and Regulatory Capture. JAMA Internal Medicine. 2017;177(7):915.
Welch HG. Cancer Screening, Overdiagnosis, and Regulatory Capture. *JAMA Internal Medicine.* 2017;177(7):915.
Conflict of Interests

- Task Force decision easy scientifically but not politically
  - USPSTF Transparency and Accountability Act introduced in Nov 2016 would add to experts on panel “relevant stakeholders from the medical products manufacturing community.”

- Important that “Task Force remain independent of professional and financial interests”

Welch HG. Cancer Screening, Overdiagnosis, and Regulatory Capture. *JAMA Internal Medicine*. 2017;177(7):915.
LESS IS MORE

Osteoporosis Overtreatment in a Regional Health Care System

Joshua J. Fenton, MD, MPH1,2; John A. Robbins, MD, MSH2,3; Anna Lee D. Amamath, MD, MPH4; Peter Franks, MD1,2

[Image of normal bone and osteoporotic bone]
Study question: Can the inclusion of data not relevant for diagnosis lead to overtreatment?

Retrospective cohort study

- 6,150 women aged 40-85 years
  - 1912 (31%) received new osteoporosis drug treatment
  - 1254 (20%) had 1+ osteoporosis risk factor
Overdiagnosis leads to Overtreatment

- Two-thirds of new drug prescription potentially inappropriate
  - Diagnosis based on nondiagnostic abnormalities based on international guidelines
  - Additionally, women without risk factors treated who might not have even needed screening

PREVENTION
Setting a research agenda for medical overuse

Although overuse in medicine is gaining increased attention, many questions remain unanswered. **Dan Morgan and colleagues** propose an agenda for coordinated research to improve our understanding of the problem.

Daniel J Morgan *associate professor*¹, Shannon Brownlee *writer*², Aaron L Leppin *postdoctoral research fellow*³, Nancy Kressin *professor*⁴, Sanket S Dhruva *research fellow*⁵, Les Levin *professor*⁶, Bruce E Landon *professor*⁷, Mark A Zezza *vice president*⁸, Harald Schmidt *assistant professor*⁹, Vikas Saini *president*¹⁰, Adam G Elshaug *Associate Professor and HCFRF Principal Research Fellow and, Senior Fellow*¹¹¹²
What We Know About Overuse

- Overuse is “care in the absence of a clear medical basis for use or when the benefit of therapy does not outweigh risks.” (Institute of Medicine)
- Related terms: Overutilization, overmedicalization, and low value care
- Related concepts: Overdiagnosis and overtreatment

Relation between overdiagnosis, overtreatment, and overuse

* Overuse*

Overdiagnosis
- and diagnosis of abnormalities not related to disease (false positive results)

Overtreatment
- Overdiagnosed disease
- Wrong practice
- Unwanted care

* including overtesting and other unnecessary medical evaluations

What’s The Harm?

- Estimates of scope of overuse: 10% to 30% of all care depending on the definition and method used (surveys of physicians or patients or claims data)
- Such excess care associated with higher risk adjusted mortality

Solutions

- Enhanced translation and dissemination of the clinical science
- Improve compliance with clinical guidelines
- Intensify research efforts to risk-reduction therapies to prevent perioperative cardiac events

THANK YOU!