EDITORIAL

Too Much Medicine Happens Too Often
The Teachable Moment and a Call for Manuscripts From Clinical Trainees

Tanner J. Caverly, MD, MPH; Brandon P. Combs, MD; Christopher Moriates, MD;
Neel Shah, MD, MPP; Deborah Grady, MD, MPH

A columnist at the *New York Times* asked readers, "Have you experienced too much medicine?" She received more than 1000 responses detailing examples ranging from unnecessary testing and hospitalizations to useless office visits and specialist referrals.[1] Patients are not the only ones worried about too much medicine: 42% of a national sample of primary care physicians believe that patients in their own practice are receiving too much medical care.[2]

Too much medicine, or overuse, occurs in at least 3 contexts: when benefits from medical care are negligible, when the potential for harm exceeds the potential benefit,[3] or when a fully informed patient would decide to forego the service. Examples of overuse include overtesting (eg, routinely ordering preoperative chest x-rays; see the Perspective in this issue[4]) and overtreatment (eg, coronary revascularization in patients with stable angina not receiving optimal medical therapy). Spending on overuse is thought to substantially contribute to the unsustainable growth in US health care costs.[5] Wasteful health care is estimated to cost $750 billion annually,[6] limiting equitable access to necessary health care[6] and crowding out spending on other priorities such as public health, education, and valuable social programs. When passed on to our patients, health care costs can be financially catastrophic.[7]

Related article

The costs of overuse are not measured in dollars alone. Overtesting and overtreatment expose patients to potential harms and downstream complications[8]—and often lead to net harm. Far beyond cost consciousness, the ethical case for avoiding overuse, "first, do no harm," is a powerful appeal to our professionalism.[8] All thoughtful physicians want to minimize harms from overuse. The challenge is recognizing when an intervention is likely to represent overuse.

Recognizing Overuse and the Harms From Overuse

Recognizing overuse and its downstream harms does not come easily for most US physicians, particularly in the moment of clinical decision making. A well-described bias in the way humans think may help explain why. Emotions alone can determine beliefs about benefit and harm regardless of the facts (known as the *affect heuristic*).[9] There are many reasons to believe that physicians are primed to feel positively about the health care services they provide. In the United States, there is a deeply held cultural belief that more health care is better and that earlier is better, beliefs that are strongly reinforced by financial and legal incentives.[10] These beliefs can generate optimistic feelings about commonly prescribed tests and treatments, causing us to overvalue their benefits and minimize their harms. Downstream harms from overtesting and overtreatment may be completely invisible to clinicians because of this cognitive bias, as well as another fact: these harms often occur long after an unnecessary test or treatment is ordered (eg, harm related to excision of an incidentaloma followed up over many years).

Call for Manuscripts and Instructions for Authors

Teachable Moments, a new focus in *JAMA Internal Medicine*, is an attempt to improve recognition among trainees at all levels of the harms that result from the overuse of health care services. We will highlight narratives written by trainees describing (1) unnecessary care resulting in harm or harm that was narrowly avoided or (2) the misdiagnosis of patient preferences[11] that subsequently led to unnecessary care and harm or harm that was narrowly avoided. Manuscripts should be between 600 and 800 words, provide a clinical vignette that documents overuse of medical care, and include a summary of the evidence that documents that the care provided was unnecessary. We invite submissions from all clinical trainees: professional students, graduate students, postdoctoral students, residents, and fellows. Submissions should follow the Instructions for Authors for *JAMA Internal Medicine* (http://www.jamainternalmedicine.com/public/instructionsforauthors.aspx).

A Teachable Moment from internal medicine residents in this issue describes unnecessary testing that led to patient harm. This vignette demonstrates why testing is never "routine" for our patients and also how easy it is to overlook the harms that can result from overuse. Niess and Prochazka[4] identified a cascade of incidental findings that resulted from a preoperative chest x-ray. In our clinical experience, the practice of routinely ordering a preoperative chest x-ray is still commonplace. Some readers may be surprised at the lack of evidence supporting this practice and the professional consensus that endorses abandoning routine preoperative chest x-rays in the vast majority of cases.

There have been few incentives to examine whether a routine practice is truly necessary. Indeed, performance measures, a fee-for-service payment system, and malpractice fears

Downloaded From: http://archinte.jamanetwork.com/ by University of Colorado - Denver HSL, Brandon Combs on 10/05/2013

all promote ever more health care services.[2] Nonetheless, trainees with fresh eyes on medical practice may be uniquely positioned to notice examples of overuse and help drive a needed change in culture. With this new focus, we provide space for trainees to reflect on some of the assumptions, habits, incentives, and cognitive biases that lead us to provide "too much medicine."

Changing a Local Culture of Overuse: The Do No Harm Project

The Do No Harm Project,[12] which began at the University of Colorado School of Medicine, uses clinical vignettes to bring attention to harms that stem from the overuse of health services. The project was started out of a desire to spark local discussions around harms from overuse, discussions that were not previously occurring. Writing up a vignette is familiar to medical trainees and faculty and can be completed amidst busy clinical rotations. If our experience at Colorado is representative, trainees are very enthusiastic about documenting and reducing overuse of medical care and enjoy the chance to reflect on their surrounding medical culture. Narratives that humanize the harm from overuse provide fertile ground to reflect on our own practices, igniting discussions about our professional obligation to improve patient safety and minimize low-value services. Ideally, these discussions will motivate change. We hope they motivate new educational activities, local interventions aimed at reducing overuse, and other grassroots efforts that provide a needed foil to a culture of "more is better."

Conclusion

We believe that making an ethical case for avoiding ineffective interventions—"first, do no harm"—is an important and persuasive motivator to limit overuse that goes beyond cost consciousness. Emphasis on avoiding harm mandates that ineffective interventions be avoided because every test, drug, or procedure has the potential to cause harm. Interventions with marginal potential to benefit patients such that even a small harm can outweigh this benefit should likewise be avoided. Finally, "do no harm" emphasizes the crucial importance of incorporating informed patient preference into medical decisions. Through Teachable Moments, we aim to raise renewed awareness around the importance of doing "as much as possible for the patient and as little as possible to the patient."[13] With this call for manuscripts from trainees around the country, we appeal to the highest ideals of our profession.

ARTICLE INFORMATION

Author Affiliations: VA Center for Clinical Management Research, Ann Arbor VA Health System, University of Michigan Medical School, Ann Arbor (Caverly); University of Colorado Anschutz Medical Campus, Aurora (Combs); University of California, San Francisco (Moriates, Grady); Harvard Medical School, Boston, Massachusetts (Shah).

Corresponding Author: Tanner J. Caverly, MD, MPH, VA Center for Clinical Management Research, Ann Arbor VA Health System, University of Michigan, 2800 Plymouth Rd, Bldg 16, Room 326W, Ann Arbor, MI 48109-2800 (tcaverly@med.umich.edu).

Published Online: September 30, 2013. doi:10.1001/jamainternmed.2013.9967.

Conflict of Interest Disclosures: None reported.

Funding/Support: This publication was supported by the National Center for Advancing Translational Sciences, National Institutes of Health, through UCSF-CTSI grant No. UL1 TR000004. Dr Caverly is supported by an institutional T32HP1006 grant.

Role of the Sponsor: The funding sources had no role in the preparation, review, or approval of the manuscript and decision to submit the manuscript for publication.

Disclaimer: The contents of this article are solely the responsibility of the authors and do not necessarily represent the official views of the National Institutes of Health.

Additional Contributions: We thank Patricia A. Gabow, MD, former chief executive officer of Denver Health and Hospital Authority, for a conversation that generated the idea for the Teachable Moment.

REFERENCES

1. Parker-Pope T. Overtreatment is taking a harmful toll. *New York Times* Well blog. http://well.blogs.nytimes.com/2012/08/27/overtreatment-is-taking-a-harmful-toll/. Accessed May 1, 2013.

2. Sirovich BE, Woloshin S, Schwartz LM. Too little? too much? primary care physicians' views on US health care: a brief report. *Arch Intern Med*. 2011;171(17):1582-1585.

3. Chassin MR, Galvin RW; Institute of Medicine National Roundtable on Health Care Quality. The urgent need to improve health care quality. *JAMA*. 1998;280(11):1000-1005.

4. Niess M, Prochazka A. Preoperative chest x-rays: a teachable moment [published online September 30, 2013]. *JAMA Intern Med*. doi:10.1001/jamainternmed.2013.10531.

5. Berwick DM, Hackbarth AD. Eliminating waste in US health care. *JAMA*. 2012;307(14):1513-1516.

6. Best care at lowest cost: the path to continuously learning healthcare in America. Institute of Medicine. http://www.iom.edu/Reports/2012/Best-Care-at-Lower-Cost-The-Path-to-Continuously-Learning-Health-Care-in-America.aspx. Accessed August 30, 2013.

7. Himmelstein DU, Thorne D, Warren E, Woolhandler S. Medical bankruptcy in the United States, 2007: results of a national study. *Am J Med*. 2009;122(8):741-746.

8. Brody H. From an ethics of rationing to an ethics of waste avoidance. *N Engl J Med*. 2012;366(21):1949-1951.

9. Kahneman D. *Thinking, Fast and Slow.* New York, NY: Farrar, Straus & Giroux; 2011.

10. Fisher ES, Welch HG. Avoiding the unintended consequences of growth in medical care: how might more be worse? *JAMA*. 1999;281(5):446-453.

11. Mulley AG, Trimble C, Elwyn G. Stop the silent misdiagnosis: patients' preferences matter. *BMJ*. 2012;345:e6572.

12. The Do No Harm Project. University of Colorado School of Medicine. http://www.medschool.ucdenver.edu/gim/donoharmproject. Accessed April 29 2013.

13. Lown B. Social responsibility of physicians [essay 29]. Presented at: Avoiding Avoidable Care Conference; Cambridge, Massachusetts; April 26, 2012.

Downloaded From: http://archinte.jamanetwork.com/ by University of Colorado - Denver HSL, Brandon Combs on 10/05/2013