Choosing wisely

Avoiding too much medicine

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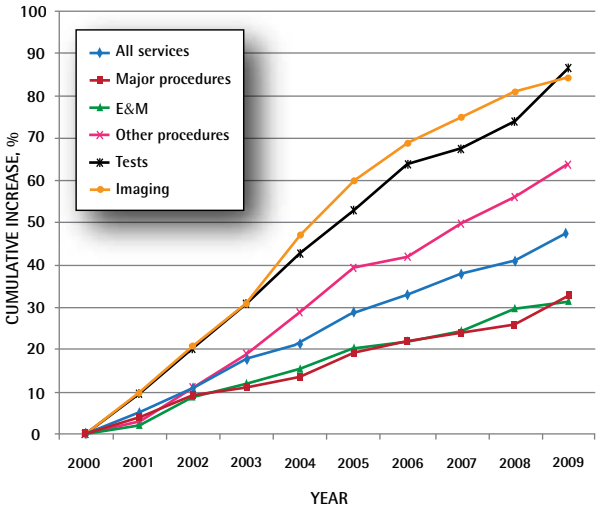
Traditionally, the main concern of the medical profession has been to preclude diagnostic errors, with a primary focus on the issues of underdiagnosis and undertreatment. Therefore, we have witnessed, particularly in the 20th century, the rapid development of laboratory medicine, imaging techniques, and therapeutic procedures. The number of available diagnostic tests and treatments has increased dramatically over the past 2 decades.[1] In fact, the use of imaging studies has grown faster than that of any other physician service (**Figure 1**).[1,2] It is estimated that in the United States overused or misused diagnostic tests cost approximately $210 billion annually (10% of health care costs).[3]

Figure 1. Growth in volume of physician services in the United States per Medicare beneficiary from 2000 to 2009



E&M—evaluation and management services.
Data from the Medicare Payment Advisory Commission.[1]

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Sceptics have long warned us about the downside of too much medicine.[4,5] A growing body of evidence suggests that the increasing numbers of medical tests and procedures drive up health care costs and, above all, can be harmful to patients. Even seemingly safe diagnostic modalities can be potentially harmful or even fatal if they lead to a cascade of additional unnecessary testing and invasive procedures with predictable complication rates.

But what to avoid?

For many years, we have had the benefit of practice guidelines issued by medical societies. However, these recommendations have tended to focus primarily on what procedures to follow, rather than on what tests and treatments to avoid. In an attempt to minimize medical resource overuse and to reduce the risk of harm, the American Board of Internal Medicine Foundation, along with Consumer Reports, partnered with 9 specialty societies to launch the Choosing Wisely campaign in the early spring of 2012.[6] The societies joining the project included the American Academy of Allergy, Asthma and Immunology; the American Academy of Family Physicians (AAFP); the American College of Cardiology; the American College of Physicians; the American College of Radiology; the American Gastroenterological Association; the American Society of Clinical Oncology; the American Society of Nephrology; and the American Society of Nuclear Cardiology. These 9 organizations were asked to choose 5 tests or treatments that were prone to overuse within their areas of expertise. Consequently, a list of 45 tests and therapeutic procedures was announced on April 4, 2012[6]; it has subsequently drawn widespread attention in the media.[7,8] The most important items for each organization are presented in **Table 1**. Eight of the 9 societies listed at least 1 imaging-related test among their 5 items; in all, of 45 items, 24 specifically involved imaging techniques.

Currently, the project brings together more than 40 organizations representing more than 600 000 members. In addition, some medical societies released a new (second or third) list in 2013. The list of partners and the complete inventories of the "Five Things Physicians and Patients Should Question" can be found at **www.choosingwisely.org/doctor-patient-lists**. Each "Five Things" list is the result of a long process within the organization, and each recommendation is accompanied by the reasoning and evidence for its selection.

Table 1. Most important items listed by each of the initial 9 organizations included in the Choosing Wisely campaign

RECOMMENDATION	ORGANIZATION
Do not perform unproven diagnostic tests, such as immunoglobulin G testing or an indiscriminate battery of immunoglobulin E tests, in the evaluation of allergy	AAAAI
Do not do imaging for low back pain within the first 6 weeks, unless red flags are present	AAFP
Do not perform stress cardiac imaging or advanced noninvasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present	ACC
Do not obtain screening exercise electrocardiograms in individuals who are asymptomatic and at low risk of coronary artery disease	ACP
Do not do imaging for uncomplicated headache	ACR
For pharmacologic treatment of patients with gastroesophageal reflux disease, long-term acid suppression therapy (proton pump inhibitors or histamine-2 receptor antagonists) should be titrated to the lowest effective dose needed to achieve therapeutic goals	AGA
Do not use cancer-directed therapy for patients with solid tumours with the following characteristics: low performance status, no benefit from previous evidence-based interventions, not eligible for a clinical trial, and no strong evidence supporting the clinical value of further anticancer treatment	ASCO
Do not perform routine cancer screening for dialysis patients with limited life expectancies without signs or symptoms	ASN
Do not perform stress cardiac imaging or coronary angiography in patients without cardiac symptoms unless high-risk markers are present	ASNC

AAAAI—American Academy of Allergy, Asthma and Immunology, AAFP—American Academy of Family Physicians, ACC—American College of Cardiology, ACP—American College of Physicians, ACR—American College of Radiology, AGA—American Gastroenterological Association, ASCO—American Society of Clinical Oncology, ASN—American Society of Nephrology, ASNC—American Society of Nuclear Cardiology.

Five Things and family medicine

The AAFP compiled its Five Things list in 2012 (**Box 1**).[9] It is an endorsement of the 5 recommendations for family medicine previously proposed by the National Physicians Alliance and published in the *Archives of Internal Medicine* as part of its Less is More series.[10] The rationale for the selection of each item on the list is presented on the Choosing Wisely website.[9] The goal was to identify items common in primary care practice, strongly supported by the evidence and literature, that would lead to substantial health benefits, reduce risks and harm, and reduce costs. A working group was assembled for each of the 3 primary care specialties: family medicine, pediatrics, and internal medicine. The field testing with family physicians showed support for the final recommendations, the potential positive effect on quality and cost, and the ease with which the recommendations could be implemented.[9] As part of an ongoing effort to help physicians curtail the practice of ordering unnecessary tests and procedures, the AAFP released its second Choosing Wisely list of recommendations on February 21, 2013, followed by a third list on September 24, 2013 (**Box 1**).[9] The campaign underscores family physicians' long-term commitment to ensuring high-quality, cost-effective care for patients. According to Dr Glen Stream, board chair of the AAFP,

> The American Academy of Family Physicians is committed to the Choosing Wisely campaign and its mission of sharing evidence-based clinical information about tests and procedures to help family physicians and their patients make informed decisions. So much so that the AAFP has extended its involvement, developing a second list of five screenings and treatments that are frequently overused or misused.[11]

The initiative seeks to encourage physicians and patients to follow evidence-based recommendations in managing health problems, while avoiding medical tests and procedures that are unlikely to help. Physicians and patients must both understand that more care is not always better care; in some instances, it can bring more harm than good. This campaign promotes physician-patient dialogue about making wise choices for tests and procedures. These actions will also reduce the rapidly expanding costs of the health care system. The campaign seeks to inform the public that not every test and procedure is appropriate for a particular condition. These lists will also stimulate the debate about the right care, at the right time, for the right patient.

The campaign is reaching millions worldwide through the efforts of consumer partners led by Consumer Reports, the world's largest independent product-testing organization,[12] which has worked with the American Board of Internal Medicine Foundation and the specialty societies distributing patient-friendly resources that facilitate consumer conversations with physicians. The Choosing Wisely consumer partners include the following, among others: Alliance Health Networks, the National Business Coalition on Health, the National

Box 1. List of commonly used tests and treatments to question compiled by the American Academy of Family Physicians

The original "Five Things Physicians and Patients Should Question" released in April 2012

- Do not do imaging for low back pain within the first 6 weeks, unless red flags are present
- Do not routinely prescribe antibiotics for acute mild-to-moderate sinusitis unless symptoms last for 7 or more days, or symptoms worsen after initial clinical improvement
- Do not use dual-energy x-ray absorptiometry screening for osteoporosis in women younger than 65 years or men younger than 70 years with no risk factors
- Do not order annual electrocardiograms or any other cardiac screening for low-risk patients without symptoms
- Do not perform Papanicolaou tests for women younger than 21 years or who have had a hysterectomy for noncancer disease

The second "Five Things Physicians and Patients Should Question" released in February 2013

- Do not schedule elective, non-medically indicated inductions of labour or cesarean deliveries before 39 weeks, 0 days gestational age*
- Avoid elective, non–medically indicated labour induction between 39 weeks, 0 days, and 41 weeks, 0 days, unless the cervix is deemed favourable*
- Do not screen for carotid artery stenosis in asymptomatic adult patients
- Do not screen women older than 65 years of age for cervical cancer who have had adequate previous screening and are not otherwise at high risk of cervical cancer
- Do not screen women younger than 30 years of age for cervical cancer with human papillomavirus testing, alone or in combination with cytology

The third "Five Things Physicians and Patients Should Question" released in September 2013

- Do not prescribe antibiotics for otitis media in children aged 2 to 12 years with nonsevere symptoms where the observation option is reasonable
- Do not perform voiding cystourethrogram routinely in first febrile urinary tract infection in children aged 2 to 24 months
- Do not routinely screen for prostate cancer using prostate-specific antigen testing or digital rectal examination
- Do not screen adolescents for scoliosis
- Do not require a pelvic examination or other physical examination to prescribe oral contraceptive medications

Data from the American Academy of Family Physicians.[9]
*Written in collaboration with the American College of Obstetricians and Gynecologists to develop the final language.

Partnership for Women and Families, Union Plus, and Wikipedia.[13] Such lists will not only help patients stay informed about common diagnostic and therapeutic procedures but will also enable them to make wise treatment decisions.

Limitations of the recommendations

As the list of medical services expands and becomes more widely implemented, the Choosing Wisely campaign will permit physicians to provide safe, effective, high-quality care with the additional benefit of lowering health care costs. By establishing these recommendations as standards of care, the societies reduce the risk that doing less might spur malpractice suits, which currently prompt many doctors to overtest and overtreat—so-called *defensive medicine*.[14]

The proposed recommendations could serve as a road map to help physicians and patients navigate a maze of diagnostic and therapeutic interventions. However, some experts express caution, warning that the recommendations could be misinterpreted and applied too broadly at the expense of patient health. Some say that the group's advice might make tailoring care for the individual patient harder. Both medical professionals and patients need to be aware that the necessity of tests is a highly individual matter. We have to bear in mind that the choice of diagnostic and therapeutic modalities might not be the same for any 2 patients, even those with the same condition.

As this campaign is relatively new, it is too soon to tell whether it has reduced the use of tests and treatments itemized in the Five Things lists. At some point a rigorous evaluation of the methods used by the project will be needed. Future studies should spur conversation about what is appropriate and necessary treatment, and not whether these recommendations should be used to establish coverage decisions or exclusions.

Worldwide action

The Choosing Wisely campaign builds on the standards and ideas set by the Physician Charter,[15] the Less is More series of the *Archives of Internal Medicine*,[16,17] and the National Physicians Alliance.[10] Recently, more institutions joined the effort to combat overmedicalization, producing the Avoiding Avoidable Care (**http://avoidablecare.org**) and Selling Sickness (**http://sellingsickness.com**) conferences, as well as the Preventing Overdiagnosis conference (**www.preventingoverdiagnosis.net**), of which *BMJ* was a partner.[18]

Although the Five Things project is prepared by American specialty societies, medical resource overuse is a problem in many countries around the world and needs international action. In Canada, a similar campaign called Choosing Wisely Canada (**www.choosingwiselycanada.org**) was launched on April 2, 2014.[19]

Several societies took part in the initial wave, including the Canadian Cardiovascular Society, the Canadian Association of Radiologists, the Canadian Medical Association Forum on General and Family Practice Issues, the Canadian Orthopaedic Association, the Canadian Society of Internal Medicine, the Canadian Rheumatology Association, the Canadian Geriatrics Society, the Canadian Association of General Surgeons, and the College of Family Physicians of Canada, who are all interested in working collaboratively to move this forward. The Canadian Medical Association has the support of 30 medical societies, currently at various stages of engagement in the campaign.[19]

The hope is that all of these projects will prompt discussions among physicians, patients, consumer advocates, policy makers, and health care reformers about the appropriateness of many frequently ordered diagnostic tests and therapeutic interventions. What is more, all of these campaigns are important policy initiatives that could restore public trust in the medical profession.

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Competing interests
None declared

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References

1. Medicare Payment Advisory Commission. *A data book: health care spending and the Medicare program*. Washington, DC: Medicare Payment Advisory Commission; 2013.
2. Iglehart JK. Health insurers and medical-imaging policy—a work in progress. *N Engl J Med* 2009;360(10):1030-7.
3. Clarke JL, Laskowski RJ, Coons C, Hood V, Slavin PL, Nash DB, et al. Proceedings of the Christiana Care Health System Value Institute Value Symposium. *Am J Med Qual* 2012;27(6 Suppl):3S-20S.
4. Brownlee S. *Overtreated: why too much medicine is making us sicker and poorer.* New York, NY: Bloomsbury; 2008.
5. Moynihan R, Smith R. Too much medicine? *BMJ* 2002;324(7342):859-60.
6. American Board of Internal Medicine Foundation [press release]. *Choosing Wisely: five things physicians and patients should question.* Washington, DC: American Board of Internal Medicine Foundation; 2012. Available from: **www.choosingwisely.org/choosing-wisely-five-things-physicians-and-patients-should-question-press-release-april-4-2012/.** Accessed 2014 Aug 19.
7. Rabin RC. Doctor panels recommend fewer tests for patients. *The New York Times* 2012 Apr 4. Available from: **www.nytimes.com/2012/04/04/health/doctor-panels-urge-fewer-routine-tests.html?_r=0.** Accessed 2013 Mar 18.
8. Jaslow R. Doctors unveil "Choosing Wisely" campaign to cut unnecessary medical tests. *CBS News* 2013 Jul 26. Available from: **www.cbsnews.com/8301-504763_162-57409204-10391704/doctors-unveil-choosing-wisely-campaign-to-cut-unnecessary-medical-tests/.** Accessed 2013 Mar 18.
9. American Academy of Family Physicians. *Fifteen things physicians and patients should question.* Philadelphia, PA: Choosing Wisely; 2013. Available from: **www.choosingwisely.org/doctor-patient-lists/american-academy-of-family-physicians/**. Accessed 2013 Jun 17.
10. Good Stewardship Working Group. The "top 5" lists in primary care: meeting the responsibility of professionalism. *Arch Intern Med* 2011;171(15):1385-90. Epub 2011 May 23.
11. American Academy of Family Physicians [press release]. *American Academy of Family Physicians identifies list of commonly used tests and treatments to questions*. Leawood, KS: American Academy of Family Physicians; 2013. Available from: **www.aafp.org/media-center/releases-statements/all/2013/choosing-wisely-phase-two.html#contentpar_gridblock_0**. Accessed 2013 Jun 17.
12. Consumer Reports [website]. *How we test.* Consumer Reports; 2014. Available from: **www.consumerreports.org/cro/about-us/whats-behind-the-ratings/testing/index.htm**. Accessed 2014 Aug 19.
13. Choosing Wisely [website]. *Choosing Wisely consumer partners.* Philadelphia, PA: Choosing Wisely; 2014. Available from: **www.choosingwisely.org/partners/choosing-wisely-consumer-partners/**. Accessed 2014 Aug 19.
14. Brody JE. When costly medical care just adds to the pain. *The New York Times* 2012 May 28. Available from: **http://well.blogs.nytimes.com/2012/05/28/when-costly-medical-care-just-adds-to-the-pain/?ref=janeebrody**. Accessed 2013 Jul 5.
15. ABIM Foundation; ACP-ASIM Foundation; European Federation of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med* 2002;136(3):243-6.
16. Grady D, Redberg RF. Less is more: how less health care can result in better health. *Arch Intern Med* 2010;170(9):749-50.
17. Redberg R, Katz M, Grady D. Diagnostic tests: another frontier for less is more: or why talking to your patient is a safe and effective method of reassurance. *Arch Intern Med* 2011;171(7):619. Epub 2010 Dec 13.
18. Moynihan R, Glasziou P, Woloshin S, Schwartz L, Santa J, Godlee F. Winding back the harms of too much medicine. *BMJ* 2013;346:f1271.
19. Canadian Medical Association [website]. *Choosing Wisely Canada*. Ottawa, ON: Canadian Medical Association; 2014. Available from: **www.cma.ca/En/Pages/choosing-wisely-canada.aspx**. Accessed 2014 Aug 19.