Editorials

Choosing Wisely: Top Interventions to Improve Health and Reduce Harm, While Lowering Costs

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Sometimes, the hardest thing for a physician to do is nothing: not ordering magnetic resonance imaging for a patient with acute, uncomplicated back pain; not prescribing antibiotics for a simple upper respiratory tract infection; not reaching for the prescription pad when patients—exhorted by a television advertisement—ask if some new medicine is "right for them." And although patients are sometimes a source of excess utilization, physicians, responding to conventional practices, current fads, and the rituals of medicine, often order tests or treatments that don't stand up to clinical scrutiny. How do we do better? How do we know not only *what* to do, but also *what not* to do?

For years, we've had the benefit of practice guidelines, although these tend to focus mainly on what to do. A new program, the Choosing Wisely campaign, now prompts physicians and patients to avoid unnecessary testing and treatment, things that not only don't help, but that also may lead to harm.

Initially sponsored by nine medical specialty societies, the campaign consists of specialty-specific top-five lists of common tests and procedures that are often performed unnecessarily, when they are not likely to improve a patient's health. The primary focus of the campaign is to improve health care quality and reduce harm by avoiding unnecessary interventions, with the added benefit of lowering costs. Even seemingly innocuous interventions, such as magnetic resonance imaging or a simple blood test, can be harmful, even fatal, if they lead to additional testing, invasive procedures, and a small but predictable rate of complications.

More information about the Choosing Wisely campaign is available at http://choosingwisely.org. In addition, Consumer Reports Health is helping get the word out to consumers (http://consumerhealthchoices.org/campaigns/choosing-wisely). The campaign's lead paper was recently published as part of the "Less Is More" series in *Archives of Internal Medicine*, and contains the top-five lists from family medicine, internal medicine, and pediatrics.[1] However, given family medicine's broad scope, segregating various items into specialty-specific lists is somewhat artificial. To avoid unnecessarily limiting these lists to just five areas in which quality of care could be improved, I've compiled all the relevant items from the three primary care specialties *(see accompanying table on page 30)*.

Other medical specialties have already joined the campaign and will contribute their top-five lists in the coming months. To help our readers, *American Family Physician* will maintain a running catalog of items relevant to family medicine on our Web site (see "Choosing Wisely: Top Interventions to Improve Health Care Quality and Reduce Harm" at http://www.aafp.org/online/en/home/publications/journals/afp/ebmtoolkit/choosingwisely.html).

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REFERENCE

1. Good Stewardship Working Group. The "top 5" lists in primary care: meeting the responsibility of professionalism. *Arch Intern Med*. 2011;171(15):1385-1390. ■

Table. Interventions to Improve Health Care Quality and Reduce Harm: Consolidated Items from Primary Care's Top-Five Lists

Intervention	*Background and rationale*	*Source of recommendation*
Don't perform imaging for low back pain within the first six weeks unless red flags are present (FM, IM) NOTE: *Red flags include, but are not limited to, severe or progressive neurologic deficits or when serious underlying conditions such as osteomyelitis are suspected*	Imaging of the lumbar spine before six weeks does not improve outcomes, but does increase costs Low back pain is the fifth most common reason for all physician visits	Agency for Health Care Policy and Research Cochrane Database of Systematic Reviews
Don't routinely prescribe antibiotics for acute, mild to moderate sinusitis unless symptoms (which must include purulent nasal secretions *and* maxillary pain or facial or dental tenderness to percussion) last for at least seven days *or* symptoms worsen after initial clinical improvement (FM)	Most cases of maxillary sinusitis in the ambulatory setting are caused by a viral infection that will resolve on its own Despite consistent recommendations to the contrary, antibiotics are prescribed in more than 80 percent of outpatient visits for acute sinusitis Sinusitis accounts for 16 million office visits and $5.8 billion in annual health care costs	*Annals of Internal Medicine* Cochrane Database of Systematic Reviews
Don't order annual electrocardiography or any other cardiac screening for asymptomatic, low-risk patients (FM, IM)	Little evidence that detection of coronary artery stenosis improves health outcomes in asymptomatic patients at low risk of coronary heart disease False-positive test results are likely to lead to harm through unnecessary invasive procedures, overtreatment, and misdiagnosis Potential harms of routine annual screening exceed the potential benefit	USPSTF
Don't perform Pap tests in patients younger than 21 years or in women after hysterectomy for benign disease (FM)	Most dysplasia in adolescents regresses spontaneously; therefore, screening Pap tests in this age group can lead to unnecessary anxiety, morbidity, and cost Pap tests have low yield in women after hysterectomy for benign disease, and there is poor evidence for improved outcomes	American College of Obstetricians and Gynecologists (for age) USPSTF (for hysterectomy)
Don't use dual energy x-ray absorptiometry to screen for osteoporosis in women younger than 65 years or in men younger than 70 years with no risk factors (FM, IM) NOTE: *Risk factors include, but are not limited to, fractures after 50 years of age, prolonged exposure to corticosteroids, diet deficient in calcium or vitamin D, cigarette smoking, alcoholism, and thin/small build*	Not cost-effective in younger, low-risk patients, but cost-effective in older patients	American Association of Clinical Endocrinologists American College of Preventive Medicine National Osteoporosis Foundation USPSTF
Don't obtain blood chemistry panels (e.g., basic metabolic panel) or perform urinalyses for screening in asymptomatic, healthy adults (IM)	Only lipid screening yielded a significant number of positive results among asymptomatic patients Screen for type 2 diabetes mellitus in asymptomatic adults with hypertension	USPSTF
Use only generic statins when initiating lipid-lowering drug therapy (IM)	All statins are effective in decreasing mortality, heart attacks, and strokes when dose is titrated to effect appropriate LDL cholesterol reduction Switch to more expensive brand-name statins (atorvastatin [Lipitor] or rosuvastatin [Crestor]) only if generic statins cause clinical reactions or do not achieve LDL cholesterol goals	CURVES and MERCURY trials and meta-analyses

continued

NOTE: *FM = from family medicine's top-five list; IM = from internal medicine's top-five list; Ped = from pediatrics' top-five list.*

AAFP = American Academy of Family Physicians; AAP = American Academy of Pediatrics; LDL = low-density lipoprotein; Pap = Papanicolaou; USPSTF = U.S. Preventive Services Task Force.

Table. Interventions to Improve Health Care Quality and Reduce Harm: Consolidated Items from Primary Care's Top-Five Lists *(continued)*

Intervention	*Background and rationale*	*Source of recommendation*
Don't prescribe antibiotics for pharyngitis unless the child tests positive for streptococcal infection (Ped)	Most cases of pharyngitis are viral and will not respond to antibiotics, yet antibiotics are prescribed more than half of the time Antibiotic use has potential risks to the child, increases bacterial antibiotic resistance, and adds to health care expenses The absence of fever, cervical lymphadenopathy, and tonsillar exudates, and the presence of cough suggest a viral etiology; screening for streptococcal infection may be unnecessary if these criteria are present Confirmation of streptococcal infection is necessary before antibiotic use can be justified	Agency for Healthcare Research and Quality Cochrane Database of Systematic Reviews Essential Evidence Plus
Don't obtain diagnostic images for minor head injuries in children without loss of consciousness or other risk factors (Ped)	Imaging in low-risk patients rarely detects traumatic abnormalities, and of the abnormalities detected, few, if any, require surgery Higher risk factors include dizziness, external signs of injury, changes in neurologic function, a dangerous mechanism of injury (e.g., bicycle-related injury, a fall from 3 ft or more or five stairs), age younger than two years, Glasgow Coma Scale score of less than 15, and evidence of basilar skull fracture (e.g., "raccoon eyes," hemotympanum) Early exposure to radiation poses a significant risk of radiation-attributed cancers—as high as one case in 1,400 infants exposed to cranial computed tomography	AAFP/AAP guidelines
Don't refer children who have otitis media with effusion early in the course of the problem (Ped)	Many cases of otitis media with effusion resolve spontaneously within three months with no adverse consequences Reasons for early referral include craniofacial or neurologic abnormalities, language delay or learning problems, and suspected structural abnormalities of the eardrum or middle ear	AAFP/AAP guidelines National Institute for Health and Clinical Excellence
Advise that children not use cough and cold medications (Ped)	There is little evidence that over-the-counter cough and cold medications reduce cough or rhinorrhea, or shorten the duration of illness in children; rather, they can cause adverse consequences, including death Yet, more than 10 percent of children use a cough and cold medication every week	AAP Cochrane Database of Systematic Reviews U.S. Food and Drug Administration
Use inhaled corticosteroids to appropriately control asthma in children (Ped)	Use of a controlling medication for persistent asthma reduces asthma exacerbations, emergency department visits, and hospital admissions Threshold: More than four wheezing episodes *or* two episodes requiring oral corticosteroids within six months Inhaled corticosteroids are relatively safe and well tolerated	National Asthma Education and Prevention Program

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