



# CHOOSING WISELY IV AND OTHER TOP TIPS

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This is my fourth *Journal* article on “Choosing Wisely” from The Board of Internal Medicine Foundation.<sup>1,2,3</sup> Each specialty group has or will be developing a minimum “five things physicians and patients should question.” My usual “Top Tips” are included after the Choosing Wisely items.

The Choosing Wisely lists covered in this article complete items from The American Society of Nuclear Cardiology, The American Society of Nephrology, The American Academy of Ophthalmology, The American Academy of Neurology, and five more Choosing Wisely items from The American Academy of Family Practice.

## AMERICAN COLLEGE OF NUCLEAR CARDIOLOGY RECOMMENDATIONS

I will just list the first four which we have covered in the first two articles on this subject. They are:

1. Don't perform stress cardiac imaging or coronary angiography in patients without cardiac symptoms unless high-risk markers are present.
2. Don't perform cardiac imaging for patients who are low risk.
3. Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients.
4. Don't perform cardiac imaging as a pre-operative assessment in patients scheduled to undergo low- or intermediate-risk non-cardiac surgery.

The fifth item is one we have not discussed before:

5. Use methods to *reduce radiation exposure* in cardiac imaging whenever possible, including not performing such tests when limited benefits are likely. The key step to reduce or eliminate radiation exposure is appropriate selection of any test or procedure for a specific person, in keeping with medical recommendations, such as appropriate use criteria. Health care providers should incorporate new methodologies in cardiac imaging to reduce patient exposure to radiation while maintaining high-quality test results.

## AMERICAN SOCIETY OF NEPHROLOGY RECOMMENDATIONS

1. For dialysis patients with limited life expectancy,

don't perform routine cancer screening without signs or symptoms of disease. High mortality among end-stage renal disease patients that are not transplant candidates is not improved by routine cancer screening—e.g. mammography, colonoscopy, PSA and pap smears. It is also not cost effective, as false positive tests can cause harm due to unnecessary procedures, over treatment, misdiagnosis and increased stress. An individualized approach to cancer screening incorporating patients' cancer risk factors, expected survival, and transplant status is required.

2. Don't administer erythropoiesis-stimulating agents to chronic kidney disease (CKD) patients with hemoglobin levels  $\geq 10$  g/dL without symptoms of anemia. Administering these agents to these patients with a goal of normalizing hemoglobin has no demonstrated survival or cardiovascular disease benefit, and it can increase mortality in comparison with a treatment regimen that delays the administration of these drugs or sets up relatively conservative targets. They should be prescribed to maintain hemoglobin at the lowest level that minimizes transfusions and best meets the needs of the individual patient.

3. Avoid nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or chronic disease of all causes, including diabetes. The use of NSAIDs including COX-2 inhibitors, can elevate blood pressure, make antihypertensive drugs less effective, cause fluid retention and worsen kidney function. Other agents such as acetaminophen, tramadol, or *short-term use* of narcotic analgesics may be safer than, and as effective as, NSAIDs. A related study in *The British Medical Journal*<sup>4</sup> stated that adding an NSAID to an antihypertensive regimen that included a diuretic and either an angiotensin converting enzyme inhibitor or an angiotensin receptor blocker may increase the risk of acute kidney injury. Compared with patients on the dual antihypertensive regimen alone, those who were also taking an NSAID had a 31% greater risk of acute kidney injury (rate ratio 1.31, 95% CI 1.12-1.53). The risk was highest within the first 30 days of using the antihypertensive-NSAID combination.

4. Don't place peripherally inserted central catheters (PICC) in Stage III-V CKD patients without consulting nephrology. Venous preservation is critical in these patients as arterio-venous fistulas (AVF) are the best hemodialysis access. Venipunctures damage veins and destroy potential AVF sites; PICC lines and subclavian vein punctures can also cause venous thrombosis and central vein stenosis.

5. Don't initiate chronic dialysis without insuring a shared decision-making process between patients, their families, and their physicians. This includes eliciting individual patient goals and preferences and providing information on prognosis and expected benefits and harms of dialysis. Limited observational data suggests that survival may not differ substantially for older adults with a high burden of comorbidity who initiate chronic dialysis versus those managed conservatively.

#### AMERICAN ACADEMY OF NEUROLOGY RECOMMENDATIONS

1. Don't perform electroencephalography (EEG) for headache disorders. Clinical features have better diagnostic accuracy for primary headaches. If a mass lesion is suspected clinically, neuroimaging has a higher sensitivity than EEG for initial evaluation.

2. *Don't perform carotid ultrasound for syncope without other neurological symptoms.* Syncope is common, carotid disease causes focal neurological symptoms, and indiscriminate use of ultrasound results in unnecessary procedures.

3. For migraine, reserve opioids and butalbital as last resorts. Non-opioid analgesics often work, and migraine-specific treatments are available. Opioids and butalbital increase the risk for analgesia-overuse headaches and chronic headaches. Opioids can be considered *for up to nine days per month* when other treatments fail or medical comorbidity prevents use of first-line treatments.

In a related article found in *Worst Pills, Best Pills News*, medication over-use headache (MOH) is defined as the cause of a headache that occurs on 15 or more days per month, presents a dull pain with light to moderate intensity, and is on both sides of the head.<sup>6</sup> This isn't due to excessive dosage, but rather to the frequency of usage. This can be from consistent use of ergotamines or triptans, opioids, or combination analgesic medications for 10 or more days per month for more than three months. Consistent use of even acetaminophen or aspirin or any combination of ergotamine, triptans or opioids for 15 or more days per month for more than three months can also cause these MOHs. There

is now evidence-based agreement that all drugs used for treatment of headache can cause MOH, based on the fact that the headache begins or worsens during overuse of medication and that the headache disappears after successful withdrawal, usually within two months. The goal of stopping the medication was to ultimately improve the future effectiveness of the drugs for more intermittent use while also stopping the chronic MOH headaches and getting the drugs out of patients' systems. A tapering approach might involve inpatient withdrawal therapy for those patients overusing opioids, benzodiazepines or barbiturates.

4. Don't prescribe disease-modifying therapies (DMTs) for those with progressive, nonrelapsing multiple sclerosis (MS). DMTs have not shown efficacy in reducing disability in progressive MS and have potentially adverse effects. DMTs should not be started for primary or nonrelapsing, secondary progressive MS; however, some patients on a DMT long-term may have transitioned to secondary progressive MS with no relapses for three years, but may still relapse or worsen upon DMT withdrawal.

5. Don't recommend carotid endarterectomy (CEA) for asymptomatic carotid stenosis unless the complication rate is below 3%. To obtain a benefit for patients with asymptomatic carotid disease, angiographic and surgical complication rates must be very low.

#### AMERICAN ACADEMY OF OPHTHAMOLOGY RECOMMENDATIONS<sup>7</sup>

1. Don't perform preoperative medical tests such as an EKG or a blood glucose prior to eye surgery unless there are specific signs indicating a need for them. The National Eye Institute estimated *a decade ago* that the federal price tag for cataract surgery in the elderly, for example, was \$3.4 billion a year and rising!

2. Don't routinely order imaging tests when there are no signs or symptoms of significant eye disease. Examples of routine imaging include: Visual-field testing; optical coherence tomography (OCT) testing; retinal imaging of patients with diabetes; and neuroimaging or fundus photography. If symptoms or signs of disease are present, then imaging tests may be needed to evaluate further and to help in treatment planning.

3. *Don't prescribe antibiotics for pink eye* that is caused by an adenovirus. Adenoviral conjunctivitis and bacterial conjunctivitis are different forms of infection that can be diagnosed by the ophthalmologist by clinical signs and symptoms, and if needed, by cultures. Antibiotics are useful for patients with bacterial

conjunctivitis, particularly if moderate to severe, but they are not useful for adenoviral conjunctivitis. The overuse of antibiotics can lead to the emergence of bacteria that don't respond readily to available treatments. In cases of diagnostic uncertainty, patients may be followed closely to see if the condition resolves on its own, or if further treatment is required.

4. Don't routinely provide antibiotics before and after injections into the vitreous cavity of the eye.

5. Don't treat dry eye by inserting punctal plugs before attempting other options, such as medical treatments with artificial tears, lubricants, and compresses.

#### FIVE ADDITIONAL RECOMMENDATIONS FROM THE AMERICAN ACADEMY OF FAMILY PHYSICIANS

The first five recommendations from The Academy of Family Physicians were previously reviewed by me.<sup>1</sup> These are five more:

1. Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age. Delivery prior to this has been shown to be associated with an increased risk of learning disabilities and a potential increase in morbidity and mortality. There are clear medical indications for delivery prior to 39 weeks and 0 days based on maternal and/or fetal conditions. A mature lung test, in the absence of appropriate clinical criteria, is not an indication for delivery.

2. Avoid elective, non-medically indicated inductions of labor between 39 weeks, 0 days and 41 weeks, 0 days unless the cervix is deemed favorable. Ideally, labor should start on its own initiative whenever possible. Higher Cesarean delivery rates result from inductions of labor when the cervix is unfavorable. Healthcare clinicians should discuss the risks and benefits with their patients before inductions of labor without medical indications.

3. Don't screen for carotid artery stenosis (CAS) in asymptomatic adult patients. There is good evidence that for adult patients with no symptoms of carotid artery stenosis, the harms of screening outweigh the benefits. Screening could lead to non-indicated operations that result in serious harms, including death, stroke, and heart attack. Please refer back to The American Academy of Neurology item #5 that I mentioned earlier in this article.

4. Don't screen women older than 65 years of age for cervical cancer if they have had adequate prior screening and are not otherwise at high risk for cervical cancer. There is adequate evidence that screening such women provides little to no benefit.

5. Don't screen women younger than 30 years of age for cervical cancer with HPV (*human papillomavirus*) testing alone or in combination with cytology. There is adequate evidence in this group of women of moderate harm from such HPV testing, including more frequent testing and invasive diagnostic procedures such as colposcopy and cervical biopsy. Abnormal screening test results are also associated with psychological harms, anxiety, and distress.

Such screening also increases the spending of our health dollars. According to The American Academy of Family Practice Board Chair, Glen Stream, MD, "It has been estimated that nearly one-third of healthcare delivered in the United States is unnecessary. Tests and procedures that lack evidence of their effectiveness put our patients at risk and drive up the cost of care."

#### OTHER TOP TIPS

##### HOW DOCTORS DIE – IT'S NOT LIKE THE REST OF US, BUT IT SHOULD BE

Dr. Don Givler, a previous graduate of our residency program, sent me this article and asked if I would place it in my column.<sup>8</sup> It is authored by Dr. Ken Murray a Clinical Assistant Professor of Family Medicine at USC. He has some very interesting comments about death and about how physicians die differently from the rest of the population.

Physicians usually tend to be fairly serene when faced with death themselves. Generally we know the choices and have access to the sort of medical care that we would want. People generally fear dying in pain and dying alone. They want to make sure that no heroic measures such as CPR will be used if there is no chance of a further meaningful life. We've all seen "futile care" being given to other people. Physicians, of course, want nothing to do with that for themselves.

Dr. Murray wonders why doctors administer so much care that they wouldn't want for themselves. He breaks the reasons into three categories: patients, doctors, and the system. He presents a scenario in which someone has lost consciousness and is admitted to the emergency room. A) There are no advance directives and the family wants everything done. The doctors do it, whether it is reasonable or not. Many people think of CPR as a reliable life-saver but he points out that in fact the long term results are usually poor. B) Doctors play an enabling role also, and though some doctors are stronger at communication than others, the pressures we all face are similar. C) The third party is, of course, the larger system that frequently encourages excessive treatment and, of course, there is the fear of litigation and the tort system.

In contrast, doctors don't over-treat themselves at the end of life. They constantly see the consequences of doing so. They see that hospice care, which focuses on providing terminally ill patients with comfort and dignity rather than futile treatments, provides most people with much better final days.

He finishes by stating that most of us want a life of quality, not just one of quantity. We all need to make sure that our Advance Directives and our POLSTs are made out well in advance so that our choices will be followed. There will be no heroics for us.

A follow up article written a year later by Dr. Murray, entitled "Doctors Really Do Die Differently,"<sup>9</sup> documents more thoroughly—with multiple references—the assertions made in the previous article. For example, according to The Johns Hopkins Precursors Study, 65% of doctors had created an Advance Directive but only about 20% of the public does this. Ninety percent of the Johns Hopkins doctors in this study said that they did not want CPR performed on themselves; only about 25% of the public gives the same answer.

For his assertion that CPR is rarely as effective as people seem to think he cites a *New England Journal of Medicine* study in 1996 that reported CPR was successful in about 75% of attempts, and then contrasted that with the 2010 study of more than 95,000 cases of CPR in Japan where only 8% of patients survived for more than one month. He feels there is a yearning among ordinary patients to have more peaceful deaths and quotes from an article called "Moving Toward Peace: An Analysis of the Concept of a Good Death" by Karen Kehl. She ranked the attributes of an ideal death as follows: being in control, being comfortable, having a sense of closure, having one's values affirmed, trusting in care providers, and recognizing impending death. Hospitals cannot help with many of these things.

Murray feels we don't like to think about death, and avoidance is one reason why so many Americans fail to arrange an Advance Directive, even when they are severely ill. Unwanted futile measures, prolonged deaths, and hospital deaths remain commonplace in America and many other places. They don't have to be. It requires doctors and others to come to terms with the inevitable.

Multiple thoughtful responses followed this article, and I earnestly ask you to take the time to look at some of them.

#### **GUIDELINES NOT HELPFUL IN PATIENTS WITH MULTIPLE CONDITIONS<sup>10</sup>**

I present lots of guidelines in these Top Tips, but the authors of this article basically state that

evidence-based guidelines, while laudable, are based largely on studies of younger patients with single conditions and without regard to the practicalities of real-world application. The British authors reviewed five guidelines from England's National Institute of Health and Clinical Excellence (NICE). This group uses high-quality evidence and explicit development methods. The guidelines addressed problems common in the elderly which included type II diabetes, care of patients after acute myocardial infarction, degenerative joint disease, chronic obstructive pulmonary disease, and depression. They stated that at least two-thirds of the patients with each of these conditions has significant comorbidities. The authors then extracted recommendations from each guideline and determined whether the recommendations gave explicit advice on caring for the elderly and for patients with comorbid conditions; whether the advice was patient-centered; and whether it contained advice that promoted adherence to guidelines. The authors also extracted recommendations for self-care, drug treatment, and follow-up.

They created two hypothetical elderly patients, one with all five conditions and one with just diabetes and COPD. All co-morbidities were considered only mild to moderate in severity. They then applied relevant guidelines to assess their impact on implementation in each patient and found significant variability in adherence to guidelines. Each guideline mentioned the need to individualize care to the patients' needs and preferences, but rarely provided specific tools to do so.

The patient with five medical conditions would have been required to take 11 drugs, plus an additional 10 recommended drugs; make 9 self-care or life style changes; attend 8 to 10 primary care appointments; and attend multiple appointments for counseling, smoking cessation, and pulmonary rehabilitation! For the patient with two conditions, 5 medications were required and up to 8 more were recommended. Additionally the patient would have had to make 6 self-care or lifestyle changes, make 5-8 primary care visits, and attend multiple appointments for smoking cessation and pulmonary rehabilitation.

I think this article really points out what is already evident to most primary care providers—it is extremely difficult for many patients with multiple conditions to follow all advice that is given. Do we wonder why some patients get lost in the shuffle? Do we then label them non-compliant? Many patients make decisions to choose what they feel is most important. We need to be there to help them sort through the priorities. We also need to be realistic.

## NEW GUIDELINES FOR DIAGNOSIS AND MANAGEMENT OF GERD<sup>11</sup>

Speaking of guidelines, the American College of Gastroenterology has published new guidelines for diagnosing and managing gastroesophageal reflux disease (GERD). This is an update from the 2005 guidelines and some of the new or changed ideas are:

1. Weight loss is suggested as an effective lifestyle measure for GERD. This is in addition to elevation of the head of the bed for patients with nocturnal GERD symptoms. They state that avoidance of foods thought to provoke reflux is not routinely advised for most of these patients.

2. Routine screening and treatment of *H. pylori* infection are *not* recommended because there isn't enough evidence that testing and treatment will affect GERD. Another reason is concern that infected patients on long term proton pump inhibitors (PPI) might develop atrophic gastritis.

3. Guidelines continue to advise against *routine* biopsies of the distal esophagus to diagnose GERD, but eosinophilic esophagitis has become more recognized since the 2005 guidelines particularly in patients with dysphagia and GERD. Therefore biopsies of the distal and mid esophagus should be obtained when eosinophilic esophagitis is suspected.

4. Multiple concerns have been considered recently regarding the long-term safety of PPIs. The risk of osteoporosis appears to be confined to patients with other risk factors for hip fracture; there does not appear to be an increased risk of cardiovascular events in patients using clopidogrel; and PPI therapy does appear to be a risk factor for the development of *Clostridium difficile* infection.

5. GERD can be a cofactor for extra-esophageal symptoms including cough, laryngitis, and asthma. In patients with typical GERD symptoms, a PPI trial is reasonable, but in those without GERD symptoms reflux monitoring should be considered first. An evaluation for non-GERD causes should also be done in

all patients with cough, laryngitis and asthma.

6. Endoscopic treatment is not recommended for GERD. Obese patients should consider gastric bypass surgery as treatment for heartburn symptoms.

There are multiple other guidelines for GERD that I recommend you review. They include those for establishing the diagnosis, management, surgical options, risks associated with PPIs, extra-esophageal presentations of GERD, management for GERD refractory to treatment with PPIs, and complications associated with GERD.

## SPEED BUMPS AND THE DIAGNOSIS OF ACUTE APPENDICITIS<sup>12</sup>

Many of the older physicians reading this are going to say this is nothing new. Indeed, for many years some of us have been asking this question of those presenting with possible appendicitis: "Did driving over any railroad tracks or bumps in the road on the way to the office seem to make your pain worse?" This study aroused my interest, however, because the *lack* of pain was especially effective for ruling *out* appendicitis, and compared favorably with other features used during clinical assessment.

This study recruited 101 patients who presented to a single hospital and were referred to a surgical team for suspected appendicitis. They were all asked four questions about the journey to the hospital, including whether they had traveled over a speed bump (an elevation in the road designed to slow driving speed) and whether it worsened their pain. Sixty-four patients had traveled over a speed bump. Of those, 53% had confirmed appendicitis, 97% of whom were "speed bump positive". Of those without appendicitis, 70% also reported pain. So the speed bump question was very good at identifying patients without appendicitis (negative predictive value = 90%; 95% CI, 56%-100%), though not as effective at identifying patients with appendicitis (positive predictive value = 61%; 47%-74%). The authors state that these scores are better than the scores for other signs and symptoms such as migratory pain, nausea or vomiting, or rebound tenderness!!

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