

TOP TIPS FROM FAMILY PRACTICE: CHOOSING WISELY XIX

*Recommendations from American Academy of Pediatrics,
Society of Cardiovascular CT, Society of Nuclear Medicine and Imaging*

*Alan S. Peterson, M.D.
Associate Director, Family and Community Medicine
Walter L. Aument Family Health Center*



This is my 19th article on “Choosing Wisely” from the Board of Internal Medicine Foundation. As previously noted, each specialty group is developing “Five or Ten Things Physicians and Patients Should Know.”

I. RECOMMENDATIONS FROM THE AMERICAN ACADEMY OF PEDIATRICS – SECTION ON PERINATAL PEDIATRICS

1. Avoid routine use of anti-reflux medications for treatment of asymptomatic gastroesophageal reflux disease (GERD), or for treatment of apnea and desaturation in preterm infants. GERD is normal in infants. There is little scientific support for the use of H2 antagonists, proton pump inhibitors, and motility agents for the treatment of symptomatic reflux. Several studies show that their use might have adverse physiologic effects as well as an association with necrotizing enterocolitis, infection, and possibly intraventricular hemorrhage and mortality.

2. Antibiotic therapy for initially asymptomatic infants without evidence of bacterial infection should not be routinely continued beyond 48 hours, as there is insufficient evidence to support the practice. Blood culturing systems identify the majority of pathological organisms prior to 48 hours. Prolonged antibiotic use may be associated with necrotizing enterocolitis and death in extremely low birthweight infants.¹

3. Avoid routine use of pneumograms for pre-discharge assessment of ongoing and/or prolonged apnea of prematurity. Cardio-respiratory events are common in both term and preterm infants. In selected cases the role of pneumograms may be indicated where the etiology of events is in doubt. There is no evidence that they reduce acute life-threatening events with routine use.

4. Avoid routine daily chest radiographs for intubated infants unless there is an indication. There is no evidence documenting the effectiveness of daily chest x-rays to reduce adverse outcomes. This also obviously increases radiation exposure.

5. Avoid routine term-equivalent or discharge screening brain MRIs in preterm infants. Findings

on term-equivalent magnetic resonance imaging (MRI) correlate with neurodevelopmental outcomes at discharge and at two and five years of age. There is insufficient evidence that the routine use of such screening brain MRIs in preterm infants improves longterm outcome.²

II RECOMMENDATIONS FROM THE SOCIETY OF CARDIOVASCULAR COMPUTED TOMOGRAPHY

1. Coronary artery calcium scoring should not be used for patients with known coronary artery disease (including stents and bypass grafts). Coronary artery calcium scoring is used to evaluate individuals without known coronary artery disease; it offers limited incremental prognostic value for individuals with known coronary artery disease.

2. Coronary artery calcium scoring should not be ordered for preoperative evaluation for any surgery, irrespective of patient risk. There is no evidence to support the diagnostic or prognostic potential of coronary artery calcium scoring in individuals before surgery. This adds costs and may confound guideline-based evaluations.

3. Coronary artery calcium scoring should not be ordered for screening purposes on low risk asymptomatic individuals, except for those with a family history of premature coronary artery disease. When added to clinical risk scoring, net reclassification of risk by coronary artery calcium scoring is least effective in low-risk individuals.³

4. Coronary CT angiography should not be ordered routinely for screening asymptomatic individuals. Assessment of coronary stenosis severity in these patients by coronary CT angiography rarely offers better discrimination than coronary artery calcium scoring.

5. Coronary CT angiography should not be used in high risk emergency department patients presenting with acute chest pain. (Risk defined by TIMI – Thrombolysis In Myocardial Infarction – risk score for unstable angina/acute coronary syndromes.) Randomized controlled trials of coronary CT angiography for acute chest pain in the emergency department have been limited to low or low-intermediate risk individuals.⁴

III. RECOMMENDATIONS FROM THE SOCIETY OF NUCLEAR MEDICINE AND MOLECULAR IMAGING

1. **Don't use PET/CT for cancer screening in healthy individuals.** The likelihood of finding cancer in healthy adults using PET/CT for screening is extremely low (around 1%). These studies are likely to identify harmless findings that lead to more tests, biopsies, or unnecessary surgery.

2. **Don't perform routine annual stress testing after coronary artery revascularization.** Annual stress testing in patients without symptoms does not usually change management and may lead to unnecessary testing without any impact on patient management.

3. **Don't use nuclear medicine thyroid scans to evaluate thyroid nodules in patients with normal thyroid gland function.** This scanning does not conclusively determine whether thyroid nodules are benign or malignant. Cold nodules on the scans will require biopsy. These scans are useful to evaluate the functional status of thyroid nodules in patients who are hyperthyroid.⁵

4. **Avoid using CT angiography to diagnose pulmonary embolism in young women with a normal chest X-ray.** Consider a radionuclide lung study ("V/Q study") instead. When there is a clinical question of whether there are pulmonary emboli present, a V/Q study can provide the answer with lower overall radiation dose to the breast than can a CT angiogram, even when performed with a breast shield.

5. **Don't use PET imaging to evaluate a patient with dementia unless the patient has been assessed by a specialist in this field.** The potential benefit of PET is unlikely to justify the cost or the radiation risk if there is no objective evidence of dementia. Some types of dementia have overlapping patterns in PET imaging. Clinical evaluation and the imaging often provide added information and should be assessed together to make a reliable diagnosis and to plan care. It is not currently known what a positive PET result in a cognitively normal person means. The validity of β -amyloid PET imaging for individual prediction has not been established.⁶

Top Tips

GUIDELINES ON PALLIATIVE CARE BY THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY⁷

Palliative care should be started as soon as a patient's cancer becomes advanced. Dedicated palliative care services should be offered early in the disease course, concurrent with active treatment for both inpatients and outpatients with advanced cancer.

These components of care may include the following:

- Rapport and relationship building with patients and family caregivers; management of distress and functional status as reflected in symptoms such as pain, dyspnea, fatigue, sleep disturbance, mood, nausea, or constipation; exploration of understanding, and education about, the illness and prognosis; clarification of treatment goals; assessment and support of coping needs (e.g. provision of dignity therapy); assistance with medical decision making; coordination with other care providers; provision of referrals to other care providers as indicated.
- For newly diagnosed patients with advanced cancer, palliative care should begin early – within eight weeks after diagnosis.
- Among patients with cancer with high symptom burden and/or unmet physical or psychosocial needs, outpatient cancer patient care programs should use dedicated resources (palliative care clinicians) to deliver palliative care services as a complement to existing program tools.
- For patients with earlier advanced cancer, for whom family caregivers will provide care in the outpatient setting, nurses, social workers, or other providers may initiate caregiver-tailored palliative care support. These measures could include telephone coaching, education, referrals, and face-to-face meetings.
- Telephone support should be offered to family caregivers who may live in rural areas or who are unable to travel to the provider.

STATIN USE FOR PRIMARY PREVENTION: UPDATE OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATIONS

This new recommendation, published in November 2016, is an update to the 2008 USPSTF Recommendations on Screening for Lipid Disorders in Adults. It reviews available evidence on the benefits and harms of screening and treatment for dyslipidemia in adults, the effectiveness of statins in reducing cardiovascular disease (CVD) events and mortality in adults without a history of CVD, and effects of various medical treatments in adults without a history of CVD events. The updated statement recommends initiating a low to moderate-dose statin for adults aged 40-75 years of age who do not have a history of CVD but who have one or more CVD risk factors, and a calculated 10-year CVD event risk of 10% or greater. The task force gave the evidence a grade B recommendation (meaning there is a high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial).

It also recommended that clinicians selectively offer low to moderate-dose statins to adults 40-75 years of age without a history of CVD who have one or more CVD risk factors and a calculated 10-year CVD event risk of 7.5% to 10%. This received a grade C recommendation meaning that there is at least moderate certainty that the net benefit is small.

The USPSTF also concludes that “the current evidence is insufficient to assess the balance of benefits and harms of initiating statin use for the primary prevention of CVD events and mortality in adults 76 years of age and older without a history of heart attack or stroke.”

Clinicians are advised to determine 10-year CVD risk using the pooled cohort equations developed by The American College of Cardiology/American Heart Association.⁸

BEST PRACTICES FOR ANTIBIOTIC USE IN RESPIRATORY TRACT INFECTIONS

Antibiotic resistance is rising along with the cost of medications. We need to understand best practices regarding outpatient antibiotic use. (These important topics were discussed in recent articles in this Journal.^{9,10})

The Centers for Disease Control and Prevention (CDC) encourages watchful waiting in uncomplicated cases of acute rhinosinusitis. Macrolides (e.g. azithromycin, fidaxomicin) are not recommended because resistance in *Streptococcus pneumoniae* has reached approximately 40%. First line therapy is typically amoxicillin or amoxicillin/clavulanate. Most (90%-98%) of rhinosinusitis cases are viral. Even when the causative agent is bacterial, antibiotics may not be helpful.

Again, CDC guidelines recommend reserving antibiotic treatment for those patients who: have onset of severe symptoms; have had persistent symptoms lasting longer than 10 days; experience double sickening (worsening symptoms after a typical viral illness lasting five days had begun improving); have facial pain or purulent nasal discharge lasting at least three consecutive days; or have a temperature higher than 102.2° F.

The CDC and The American College of Physicians state that testing and initiation of antibiotic therapy are not recommended in patients with bronchitis unless pneumonia is suspected. Treatment of symptoms include decongestants, cough suppressants, β -agonists, and first-generation antihistamines. Colored sputum does not necessarily indicate bacterial infection. Antibiotic treatment is not suggested just because of a longer duration of cough.

The American College of Physicians and CDC urge patient education because antibiotics are ineffective in treating the common cold. Nonsteroidal anti-inflammatory drugs may be given for symptomatic relief for pain or myalgias. Evidence to support the use of antihistamines, nasal saline irrigation, opioids, and intranasal steroids is lacking in treatment of the common cold. Change in nasal discharge color is not an indication for antibiotic treatment.

In the treatment of group-A Streptococcal pharyngitis don't administer antibiotics until a rapid antigen detection test is found to be positive. Amoxicillin and penicillin V are first-line treatments. Resistance to clindamycin and azithromycin has increased. Antibiotics are usually unnecessary in those with sore throats as one can reassure patients that conservative treatment is usually sufficient and that symptoms usually last less than a week.

GUIDELINES ON MANAGING THE DIABETIC FOOT¹¹

The Society for Vascular Surgery Medicine collaborated with The American Podiatric Medical Association to create evidence-based guidelines to improve the care of patients with a diabetic foot. There are five major areas and I will only comment on the stronger recommendations under each.

- **Prevention of diabetic foot ulcers.** Diabetics should have an annual foot evaluation performed by a physician. This should include the Semmes-Weinstein monofilament test to assess for peripheral neuropathy. Patients and family should be educated about preventative foot care. Those high-risk patients, such as those with significant neuropathy, foot deformities, or previous amputations should be provided with custom therapeutic foot wear. Prophylactic arterial revascularization is not recommended for preventing diabetic foot ulcers.

- **Offloading for patients with diabetic foot ulcers.** Patients with plantar diabetic foot ulcers should be provided a total contact cast or irremovable fixed ankle walking boot for offloading. In those with non-plantar wounds, any modality that relieves pressure at the ulcer site can be used, such as a surgical sandal or heel relief shoe. Prevention of recurrence after a healed diabetic foot ulcer in high risk patients should use therapeutic footwear with pressure-relieving insoles. This should include those with a history of diabetic foot ulcer, partial foot amputation, or Charcot foot.

- **Diagnosis of diabetic foot osteomyelitis.** In those with a high risk of diabetic foot osteomyelitis, the diagnosis should be confirmed using bone culture and

histologic findings. When the bone is debrided a sample can be taken. In those where more sensitive or specific imaging is needed, particularly if soft tissue abscess is suspected or diagnosis of osteomyelitis is uncertain after standard imaging, magnetic resonance imaging is recommended.

- **Wound care for diabetic foot ulcers.** These ulcers should be evaluated every one to four weeks, with measurement of wound size to assess healing progress. Sharp debridement of devitalized tissue and surrounding callus material should be done to evaluate for infection initially and at one- to four-week intervals. Urgent surgical intervention for infections involving abscess, gas, or necrotizing fasciitis should be done. Dressing products should maintain a moist wound bed, control exudate, and avoid maceration of intact skin. Follow the treatment guidelines of the Infectious Diseases Society of America.

If there is less than 50% reduction in the wound area after a month of standard care, evaluation should be obtained of the vascular status, infection control, and offloading, and adjunctive therapy should be considered. Options include negative pressure therapy, biologics (e.g., platelet-derived growth factor, living cellular therapy, extracellular matrix products, amniotic membrane products), and hyperbaric oxygen therapy.

- **Diabetic foot ulcer and peripheral arterial disease.** Those with diabetic foot ulcers should have pedal perfusion assessed each year using measurement

of ankle-brachial index, ankle and pedal Doppler arterial waveforms, and toe systolic pressure or transcutaneous oxygen pressure. Those with concomitant peripheral arterial disease should have revascularization with surgical bypass or endovascular therapy.

LIFETIME RISK FOR MELANOMA IN THE U.S. IS 1 IN 28¹²

The overall burden of disease for melanoma is increasing and rising rates are not simply artifacts from increased detection of indolent disease. Using the National Cancer statistics, researchers examined trends in melanoma diagnoses between 2009 and 2016. The incidence of invasive melanoma rose during that period with greater increases for in situ than for invasive disease. The incidence of and mortality from invasive melanoma has risen steadily for at least the past two decades. Similar trends are being seen worldwide despite numerous efforts to enhance primary prevention and early detection.

An estimated 76,380 Americans will have been diagnosed with invasive melanoma in 2016. Raw incidence rates per 100,000 populations also climbed from 22.2 to 23.6.

Actual incidence rates may be higher than noted in this study because melanoma is not a reportable disease in many states and some tumors that are biopsied and excised in an outpatient setting may bypass hospital tumor registries if they are processed in nonhospital pathology laboratories.

REFERENCES

1. Cotton, CM et al. Duration of empirical antibiotic therapy for infants suspected of early-onset sepsis. *Curr Opin Pediatr.* 2013 Apr;25(2):167-71.
2. Setanin, S et al. Predictive value of neonatal brain MRI on the neurodevelopmental outcome of premature infants by five years of age. *Acta Paediatr* 2013 May;102(5):492-7.
3. www.ncbi.nlm.nih.gov/pubmed/17015792.
4. Litt, HI et al. CT angiography for safe discharge of patients with possible acute coronary syndromes. *N. Eng J Med*[internet]. 2012 Apr 12;366(15):1393-403.
5. Cooper, DS, et al. American Thyroid Association Guidelines Task Force on Thyroid Nodules and Differentiated Thyroid Cancer. Revised American Association Management Guidelines for Patient with Thyroid Nodules and Differentiated Thyroid Cancer. *Thyroid*[internet]. 2009 Nov[cited 2012 Oct 19];19(11):1167-214.
6. Vlassenko, AG, et al. Amyloid- β Plaque Growth in Cognitively Normal Adults: longitudinal [11C] Pittsburgh compound B data. *Ann Neurol* [Internet]. 2011 Nov [cited 2012 Oct 19];70(5):857-61.
7. Ferrell, BR, et al. Integration of Palliative Care into Standard Oncology Care: American Society of Clinical Oncology Clinical Practice Guideline Update. *J Clin Oncol.* Published online before print Oct 28, 2016. <http://www.ascopubs.org/doi/ful/10.1200/JCO.2006.70.1474>.
8. USPSTF. Statin use for primary prevention of cardiovascular disease in adults: USPSTF Recommendation Statement. *JAMA.* 2016;316(19):1997-2007.
9. Eberts M. The rising cost of prescription Medications. *J Lanc Gen Hosp.* 2016; 11(4): 100-105.
10. M'ikanatha NM. Antibiotic stewardship in ambulatory care settings and surveillance for enteric pathogens in Pennsylvania. *J Lanc Gen Hosp.* 2016; 11 (3): 75-80.
11. *J Vasc Surg.* February 2016; 63(2 suppl):35-21S.
12. *JAMA Dermatology* published online Dec 21, 2016.