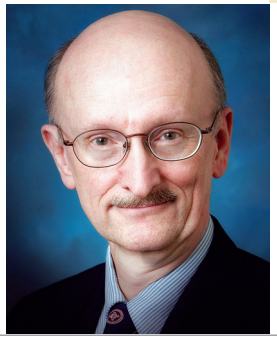
Recommendations from American Academy of Pediatrics Section on Neurological Surgery, American Society of Health-System Pharmacists



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This is my 36th article on Choosing Wisely from the American Board of Internal Medicine Foundation. As previously noted, each specialty group is developing "Five or more Things that Physicians and Patients Should Know."

I. RECOMMENDATIONS FROM AMERICAN ACADEMY OF PEDIATRICS SECTION ON NEUROLOGICAL SURGERY

1. Routine imaging should not be performed for evaluation of infant head shape. The above is not necessary and exposes the child to unnecessary radiation. Plagiocephaly can be diagnosed by clinical examination. Most craniosynostosis presentations can also be discerned on clinical examination.

2. Trauma of the cervical spine in an awake and alert patient does not require imaging without considering the use of clinical decision making (CDM) tools for cervical spine clearance. Again we wish to avoid unnecessary radiation exposure. CDM tools incorporate three or more variables from history, physical examination, or simple clinical tests to guide patient management. Results from National Emergency X-Radiography Utilization Study (NEXUS) and the Pediatric Emergency Care Applied Research Network (PECARN) provide a high negative predictive value for significant cervical spine injuries in pediatric patients. Low-risk criteria from NEXUS include: no posterior midline cervical spine tenderness; no evidence of intoxication; normal level of consciousness; no focal neurological deficit; and no painful distracting injuries. PECARN developed a model that was highly sensitive for a normal cervical spine in the absence of: altered mental status, focal neurologic findings, neck pain, torticollis, substantial torso injury, conditions predisposing to cervical spine injury, high-risk motor vehicle crash, and diving.[1]

3. Imaging or routine elective procedures requiring sedation or general anesthesia for very young children with low-risk asymptomatic lesions should not be performed routinely. Routine magnetic resonance imaging requiring anesthesia is typically not recommended. Low-risk asymptomatic lesions such as rubbery small scalp masses representing dermoid cysts or shallow midline sacral dimples do not routinely require intervention in the young infant.

The U.S. Food and Drug Administration's Drug Safety Communication on pediatric anesthesia has warned[2] that general anesthesia and sedation drugs used in children younger than three years for anesthesia of more than three hours, or repeated use of anesthetics, may affect development of the child's brain. Consequently, the risks and benefits of elective imaging or procedures should be carefully weighed.[3] If imaging is necessary, consider approaches such as feed-and-wrap for MRI in infants, or referral to specialists.

4. Evaluation of VP shunt function in a patient without signs or symptoms of shunt malfunction should not be routinely performed. Routine imaging to evaluate ventricle size in an asymptomatic patient with hydrocephalus is not necessary. When imaging is needed it should only be ordered by specialists treating hydrocephalus. To prevent radiation exposure, a rapid brain MRI is the usual recommended option.

5. Developmentally normal and clinically asymptomatic infants with macrocephaly should not routinely obtain a CT or MRI scan. Most infants with macrocephaly do not have abnormalities that require neuroimaging or neurosurgical evaluation. Reserve imaging for those infants with clinical concerns such as abnormal findings on neurological examination, significant developmental delay, or rapidly increasing head circumference measurements (such as those crossing growth curves). For infants with an open fontanelle, ultrasonography of the head should be considered the first-line test.[4]

II. RECOMMENDATIONS FROM THE AMERICAN SOCIETY OF HEALTH-SYSTEM PHARMACISTS

1. Before treating any symptoms with medications, determine if an existing therapy is causing side

effects, adverse events, or medication interactions, whether there is a lack of adherence; and whether it would be appropriate to reduce dosage, discontinue a medication, or substitute another medication. Consider patient compliance with their pre-existing medication and whether their current dose is effective at controlling/treating symptoms. Medications are often prescribed to treat symptoms that are really side effects of other medications.

2. Patients on five or more medications or indefinitely on continuing medications should not be prescribed added medications without a comprehensive review of their existing medications, including over-the-counter medications and dietary supplements, to determine whether any of the medications or supplements should or can be discontinued. Studies have shown that patients taking five or more medications often find it difficult to understand and adhere to complex medication regimens. A comprehensive review, including medical conditions, should be done at periodic intervals – at least annually – to determine if the medications are still needed and if any medications can be discontinued.[5]

3. Medications should not be continued based solely on the medication history unless the history has been verified with the patient by a medication-use expert (e.g., a pharmacist) and the need for continued therapy has been established. The history should include the drug name, dose, units, frequency, and the last dose taken; and indication if available. The patient or caregiver should be the primary source of truth, with medical records and pharmacy refill information as secondary resources when taking medication history. The patient or caregiver should be interviewed by someone with medication use knowledge, ideally a pharmacist, and medications should be continued only if there is an associated patient indication. At a minimum, the health care worker taking the history should have access to robust drug information resources.

4. Medications that were being taken prior to admission should not automatically be prescribed at discharge without verifying that they are still needed, and the new discharge medications will not result in duplication, drug interactions, or adverse events. Treatments and procedures during a hospitalization may impact a patient's ongoing need for medication they were receiving prior to admission. The Joint Commission recommends a thorough medical review at admission and discharge to prevent any unnecessary medications being continued. Any duplicate or overlapping therapies should be changed, and specific changes should be clearly communicated to the patient/caregiver or receiving pharmacy.

5. Oral liquid medications should only be prescribed and administered in milliliters (mL), not teaspoons or tablespoons, when measuring with an approved dosing device (e.g. medication cup or oral syringe). Serious medication errors, including patient deaths, have occurred because oral liquids were prescribed and/or administered using English measurement units such as teaspoons or tablespoons. Safety organizations and agencies such as The Centers for Disease Control and Prevention (CDC) and The Institute for Safe Medication Practices (ISMP) have recommended using only the metric system units (e.g. mL) for measurement, and using a measuring device containing only metric markings.[6]

Top Tips

NO CAROTID STENOSIS SCREENING IN ASYMPTOMATIC PATIENTS

The U.S. Preventative Services Task Force (USPSTF) reaffirmed the 2014 recommendation against routinely screening for asymptomatic carotid artery stenosis in adults. The grade D recommendation, published in *JAMA*, applies to those without a history of transient ischemic attack, stroke or neurologic symptoms related to the carotid arteries.

The task force says it "concludes with moderate certainty that the harms of screening...outweigh the benefits." In a *JAMA Neurology* editorial, Dr. Seemant Chaturvedi wrote: "On the whole, the USPSTF conclusion appears reasonable. No well-done clinical trial has justified a change in the overall recommendation that routine screening is not warranted. However, other questions remain as important issues." Among them: "Can we identify asymptomatic patients at high enough risk for stroke to justify revascularization?"

GUIDELINES STRONGLY RECOMMEND VARENICLINE FOR SMOKING CESSATION

Varenicline is strongly recommended over the nicotine patch and bupropion for adults who are trying to quit smoking, according to new guidelines from The American Thoracic Society.[7]

Among other recommendations:

- Varenicline is recommended over e-cigarettes for smoking cessation, but the Society cautioned that

the strength of the recommendation could change if adverse events continue to be reported with e-cigarettes.

- The use of varenicline plus a nicotine patch is preferred over varenicline monotherapy.
- For patients who are starting a controller therapy (e.g., varenicline, nicotine patch, bupropion), a treatment duration greater than 12 weeks is strongly recommended over a lesser period.
- Varenicline is also strongly recommended over the patch for patients with a comorbid psychiatric condition and for those who aren't ready to quit.

CO-ADMINISTRATION OF COVID VACCINE WITH OTHER VACCINES AND MEDICATIONS

Although we seem to learn new scientific evidence about COVID every day, following is our understanding of several issues as of April 2021.

The American Society of Interventional Pain Physicians (ASIPP) recommends that if patients have received short-acting corticosteroids, such as dexamethasone and betamethasone, it may be appropriate to wait two weeks before vaccinating for COVID. If they received long-acting steroids, e.g. methylprednisolone or triamcinolone, in a dose of 80 mg or greater, it may be appropriate to wait at least four weeks prior to the vaccination to avoid any interference. They also recommend that after vaccination, interventional pain procedures with steroids should be delayed for two weeks after the second or final dose of the vaccine.

If COVID-19 vaccines are administered within 14 days of one another, doses do not need to be repeated for either vaccine. Because data are lacking on the safety and efficacy of COVID-19 vaccines administered simultaneously with other vaccines, the CDC recently released recommendations that the vaccine series should routinely be administered alone, with a minimum of 14 days before or after administration of any other vaccine. None of the currently authorized COVID-19 vaccines contain live virus.

COVID-19 and other vaccines may be administered within a shorter period when the benefits of vaccination are deemed to outweigh the potential unknown risks of co-administration of vaccines. Examples include vaccination with tetanus-toxoid as part of wound management; vaccination for rabies prophylaxis post-exposure; vaccination for measles or hepatitis A during an outbreak; to avoid barriers to or delays in COVID-19 vaccination (e.g., in long-term care facility residents, or for health care personnel who receive influenza or other vaccinations before or upon admission or onboarding). [8]

IMPORTANT GUIDELINE CHANGES FOR PRIMARY CARE

1. The American Cancer Society's Cervical Cancer Screening Guidelines have changed significantly. The recommendation for screening is now simply HPV testing every five years starting at age 25. Cervical cancer screening can end at age 65, as long as there have been two negative HPV tests in the past 10 years. Guidelines recognize that there is a transition, and until we make the change fully to HPV testing, it's OK to do cytology testing (PAP smears every three years, or co-testing with cytology and HPV every five years). We are moving away from PAP smears.

2. CDC's bottom line about the treatment of latent TB is that INH is out and rifampin is in. This is based on efficacy, with the new regimens being much shorter and with less hepatic toxicity. Rifampin-based regimens are recommended specifically, which makes it easy for us as well as the patients: four months of daily Rifampin.

3. The American Thoracic Society guidelines on treatment of tobacco dependence is, as I have already mentioned, all about varenicline. Varenicline is associated with about 40% better quit rates than either bupropion or nicotine patch. Dual therapy again works better than varenicline alone, so it's best to combine nicotine replacement therapy and varenicline.

4. The American Thoracic Society's guidelines on Pharmacological Management of COPD contain many new medicines for COPD in the last few years.

Patients with COPD who have shortness of breath and have had an exacerbation in the past year are to receive triple therapy with an inhaled corticosteroid plus LAMA/LABA (long-acting muscarinic antagonist/long-acting b2-agonist) therapy because it reduces the risk for future exacerbations.

For patients with COPD who experience shortness of breath but have not had an exacerbation in the past year, dual bronchodilator therapy with a long-acting muscarinic antagonist and a long-acting beta agonist is recommended over monotherapy.

5. The American College of Cardiology's Expert Consensus Pathway on Therapies for Cardiovascular Risk Reduction in Patients with Type 2 Diabetes have recommended prescribing an SGLT2 inhibitor or a GLP-1 receptor agonist as part of the medical regimen for those with diabetes and heart failure, diabetic kidney disease, atherosclerotic cardiovascular disease (ASCVD), or at risk ASCVD. The guidelines say that although there have been no

clinical trials looking at combining two drugs for cardiovascular risk reduction, the strategy is reasonable if clinically indicated.

6. The International Society of Hypertension Guidelines defines Grade 1 hypertension as a blood pressure of 140-159/90-99. Remember that The American Heart Association guidelines define stage one hypertension as 130-139/80-89. So now we have a choice of goals. Both guidelines suggest we should confirm the diagnosis with out-of-office blood pressure measurements. For high-risk patients with confirmed Grade 1 hypertension and high cardiovascular risk, start treatment with pharmacologic therapy. For those at lower cardiovascular risk, first try 3-6 months of lifestyle modification. If the goal is not achieved, then begin pharmacologic therapy.

CHANGES IN CDC GONORRHEA TREATMENT RECOMMENDATIONS

A recent Pennsylvania Health Alert Network item summarized changes in Gonorrhea treatment.

- With the ongoing threat of antibiotic resistance in gonorrhea, the CDC released a change to the recommended treatment for gonorrhea.[9]
- Gonorrhea continues to remain a significant public health challenge in the United States and Pennsylvania. In 2020, reported gonorrhea in Pennsylvania (exclusive of Philadelphia) increased 21% – from 9,012 cases in 2019 to an estimated 10,891 cases in 2020.
- The estimated 10,891 cases reported in 2020 is historic, representing the highest number reported in Pennsylvania (exclusive of Philadelphia) in nearly 40 years.
- Young adults aged 15 to 30 comprise a disproportionate number of cases, representing 63% of all reported gonorrhea cases in 2020.
- Providers are encouraged to maintain a high index of suspicion for the emergence of resistant gonorrhea by immediately reporting any suspected treatment failures to 1-877-PA-HEALTH.
- The CDC recommends a single 500 mg intramuscular dose of ceftriaxone for uncomplicated gonorrhea. When Chlamydial infection has not been excluded, treatment should be administered for co-infection with Chlamydia trachomatis, using oral doxycycline (100 mg twice daily for seven days).
- Providers are encouraged to adopt these new CDC Gonorrhea treatment recommendations.

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