TOP TIPS FROM FAMILY PRACTICE

Choosing Wisely XXV

Recommendations from the American Academy of Nursing, American Academy of Pediatrics Section on Orthopaedics, Pediatric Orthopaedic Society of North America, American Society for Apheresis

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This is my 25th article on Choosing Wisely from the Board of Internal Medicine Foundation. As previously noted, each specialty group is developing a "Five, Ten, or More Things that Physicians and Patients Should Know."

I. RECOMMENDATIONS FROM THE AMERICAN ACADEMY OF NURSING (AAN)

I have previously covered the first 10 of the now 25 things that nurses and patients should question.[1] Here I will outline the 11th through the 25th.

11. Induction or augmentation of labor should not be done without a medical indication. Spontaneous labor is safest for the woman and the infant with benefits that improve safety and promote short- and long-term maternal and infant health. Researchers have demonstrated that induction of labor for any reason increases the risk of several complications for women and infants. Research on the risk-to-benefit ratio of elective augmentation of labor is limited. However, many of the risks associated with elective induction may extend to augmentation. In the United States, the average cost of an uncomplicated cesarean birth is 68% higher than the cost of an uncomplicated vaginal birth. Women who deliver vaginally have shorter hospital stays, fewer hospital readmissions, faster recoveries, and fewer infections than those who have cesareans.

12. Opioid pain medication in pregnancy should not be prescribed without discussing and fully weighing the risks to the woman and her fetus. In utero exposure to opioids has risks for the infant, including neonatal abstinence syndrome (NAS) and/or development deficits affecting behavior and cognition. Women who used opioids during pregnancy were four times as likely to have a prolonged hospital stay compared with nonusers, and incurred significantly more per-hospitalization cost.

13. Mothers and their newborns should not be separated at birth unless medically necessary. The mother should be helped to place the newborn in skin-to-skin contact immediately after birth, and encouraged to keep her newborn in her room during hospitalization after the birth. Keeping mothers and newborns together promotes maternal-infant attachment, early and sustained breastfeeding, and physiologic stability.

14. To prevent and/or treat delirium, don't administer "prn" sedative, antipsychotic or hypnotic medications without first assessing for, removing, and treating the underlying causes of delirium, and using nonpharmacologic approaches for prevention and treatment. Numerous medications or medication classes are associated with the development of delirium (e.g., benzodiazepines, anticholinergics, diphenhydramine, sedative-hypnotics). Their administration on a prn basis should be avoided if possible.

15. In an older adult who presents with an altered mental state and/or symptoms of confusion, don't assume a diagnosis of dementia without assessing for delirium, or delirium superimposed on dementia, using a brief, sensitive, validated assessment tool. Delirium occurs in as many as 50% of older adults in the hospital, and delirium superimposed on dementia occurs in as many as 90% of hospitalized older adults.[2]

16. A head CT should not be routinely ordered to assess for shunt failure in children with hydrocephalus. Because CT is the usual mode of imaging for children with hydrocephalus, these patients have a much higher cumulative radiation exposure than the average population. This increases the risk of cancer in these children. Consider head ultrasounds when there is an open fontanel, or a rapid sequence magnetic resonance imaging (MRI) scan, to reduce the amount of exposure to ionizing radiation in these pediatric patients with a ventricular shunt.

17. Don't routinely order an EEG for neurologically healthy children who have a simple febrile seizure. Febrile seizures are the most commonly

occurring seizures in the first 60 months of life. EEG has not been shown to predict recurrence of febrile seizures or future epilepsy in patients with simple febrile seizures.[3]

18. Diazepam should not be administered for muscle spasms after spine surgery. Even though treatment of these spasms should include both pharmacologic and non-pharmacologic interventions, diazepam is particularly problematic due to its long half-life and many active metabolites. Benzodiazepines have been associated with respiratory depression, an increased risk of delirium, and extended in-hospital recovery times. Effective non-pharmacological interventions include heat, cold, repositioning, and massage.

19. Lumbar puncture (LP) opening pressure should not be used as a reliable measure of intracranial pressure in children with severe chronic headaches. There are many limitations with LP measurement as it varies with patient position and level of the manometer. Anesthetic agents can cause false readings. An intracranial monitor measures intracranial pressure over time as the patient goes about daily activities.

20. "Formal" swallow evaluation in stroke patients should not be ordered unless they fail their initial swallow screen. Dysphasia occurs in 50-60% of acute stroke patients. Swallow screening is critical in the rapid identification of a risk of aspiration in patients presenting with acute stroke symptoms.

21. Graduated compression stockings should not routinely be used in surgical patients as mechanical prophylaxis for postoperative venous thromboembolism (VTE). Consider using intermittent pneumatic compression (IPC) devices instead. Current guidelines that recommend mechanical devices prefer IPC devices except for women at high risk for VTE after cesarean delivery. Compared with graduated compression stockings, IPC devices minimize adverse effects to skin, promote patient comfort, and permit clinical assessment.

22. Don't use continuous cardiac-respiratory monitoring or pulse oximetry for children and adolescents admitted to the hospital, unless indicated by objectively scored cardiovascular, respiratory, and behavioral parameters. High levels of false alarms in the work environment can mask clinically significant alarms that are silenced or unrecognized if clinicians become desensitized. Continuous bedside monitoring should not be used in place of hourly safety checks.

23. In hemodynamically normal pediatric patients with isolated blunt solid organ injury, routine repetition of hemoglobin and hematocrit is not necessary. Clinical instability is defined by physiologic criteria such as age-specific tachycardia or hypotension, tachypnea, low urine output, altered mental status, or any significant clinical deterioration that warrants increased level of care and investigation.

24. Long-term care residents with dementia who display behavioral and psychological symptoms of distress should not have physical or chemical restraints, outside of emergency situations. Whenever possible, the first approach should be an assessment for unmet needs or environmental triggers, and intervention using non-pharmacological approaches.

25. Hair should not be removed at the surgical site, including the hair on the patient's head. If hair must be removed it should be clipped not shaved. Removing hair at the surgical site has long been associated with an increased rate of surgical site infections because of razor-induced microtrauma. In the landmark nonexperimental study of 23,649 surgical wounds, Cruise (1973) found a 2.3% infection rate for surgical sites shaved with a razor, 1.7% for sites that were clipped, and 0.9% when no hair was removed.[4]

II. RECOMMENDATIONS FROM THE AMERICAN ACADEMY OF PEDIATRICS SECTION ON ORTHOPAEDICS AND THE PEDIATRIC ORTHOPAEDIC SOCIETY OF NORTH AMERICA

1. If a baby has no risk factors and has a clinically stable hip examination, there is no need to order a screening hip ultrasound to rule out developmental hip dysplasia or developmental hip dislocation. Hip dysplasia only occurs in approximately 7/1000 births. Ultrasound has a substantial false positive rate, is costly and time-intensive, and the findings may be misleading to parents and physicians. This recommendation is in accordance with the 2016 AAP Clinical Report regarding the use of ultrasound in early detection of developmental dysplasia of the hip.[5]

2. A child less than 8 years of age with simple in-toeing gait should not have radiographs or bracing or surgery. Mild in-toeing is usually a physiologic phenomenon reflecting ongoing maturation of the skeleton. Metatarsus adductus, femoral anteversion, and tibial torsion all contribute to in-toeing and tend to improve with growth.

3. A child with minimally symptomatic or asymptomatic flat feet should not have custom

orthotics or shoe inserts ordered. Flexible flat feet are normal physiological variants commonly found in children and adults. Unlike a painful or rigid flatfoot that requires further workup, if an arch is present when standing on tiptoe, the foot can be managed with observation or over-the-counter orthotics.

4. Most musculoskeletal conditions in children do not require advanced imaging studies (MRI or CT) until all appropriate clinical, laboratory and plain radiographic examinations have been completed. History, physical examination, and appropriate radiographs remain the primary diagnostic modalities in pediatric orthopedics. Examples would include, but not be limited to, the workup of injury or pain (spine, knees and ankles), possible infection, and deformity.

5. If a buckle (torus) fracture is no longer tender or painful, follow up X-rays are not indicated. These fractures are very common in young children, especially in the distal radius. They are inherently stable and do not necessarily require a formal cast, unless severe pain or instability necessitates a cast for one month. Instead, immobilization with a simple wrist brace or removable splint is often preferable. If the fracture is non-tender to palpation at four weeks post-injury, full activities can be resumed and no further radiograph is required.[6]

III. RECOMMENDATIONS FROM THE AMERICAN SOCIETY FOR APHERESIS (ASFA)

Apheresis is a medical technology in which the blood of a donor or patient is passed through an extracorporeal apparatus that separates a particular constituent (e.g. platelets or plasma) and returns the remainder to the circulation.

1. If peripheral vein access is a safe and effective option, do not place a central venous catheter for apheresis. For most adult patients and donors, peripheral venous access is the safest, quickest and most easily achievable route for performing a limited number of apheresis procedures.

2. Plasma does not need to be used as a replacement fluid for therapeutic plasma exchange unless there is a clear indication to replete a plasma component. Plasma is limited, with additional concern for potential transmission of infectious agents and transfusion reactions. Albumin is an effective replacement fluid for therapeutic plasma exchange and is a safe alternative to plasma when a pathogenic protein or solute is removed without the need to replete any plasma component.

3. In patients with stroke from sickle cell disease who have iron overload, don't continue simple transfusions if red blood cell exchange transfusion is available. Exchange transfusion is a more effective method to prevent both recurrent strokes and complications of iron overload.[7]

4. Routine monitoring of coagulation tests is not necessary during a course of therapeutic plasma exchange unless the plasma exchange is performed daily. For most indications, therapeutic plasma exchange can be performed on an intermittent schedule using replacement fluid that is clotting-factor deficient, without the need for routine monitoring of the patient's coagulation tests.

5. A series of apheresis procedures should not be continued without a predefined, objective goal. If it becomes apparent that the goal cannot be reached, or that adverse effects outweigh potential benefits, the series should be stopped.

Top Tips

UPDATED GUIDELINES FOR THE EARLY MANAGEMENT OF PATIENTS WITH ACUTE ISCHEMIC STROKE [8]

New, important recommendations have come from the DAWN and DEFUSE 3 studies earlier this year, of an extended time window for mechanical thrombectomy in patients selected on the basis of a combination of clinical and imaging criteria.

The DAWN trial selected patients within 6 to 24 hours of the time they were last known to be well who had a clinical deficit that was disproportionately severe, compared with the volume of infarction on diffusion-weighted MRI or perfusion CT. At 90 days, the rate of functional independence was greater for the thrombectomy group compared with standard care (49% vs. 13%).

The DEFUSE 3 trial selected patients within 6 to 16 hours of the time they were last known to be well, who had a mismatch between the volume of hypo-perfused tissue and a volume of infarction on diffusion-weighted MRI or CT perfusion imaging. At 90 days, the percentage of patients who were functionally independent was higher with mechanical thrombectomy compared with medical therapy alone (45% vs. 17%).

These studies support the use of mechanical thrombectomy from 16 to 24 hours for selected patients who present to a stroke center with expertise in both mechanical thrombectomy and infarct volume determination using MRI or perfusion CT. Specifically, mechanical

thrombectomy is recommended (I, A) for acute-stroke patients with anterior circulation large vessel occlusion within 6 to 16 hours, if they meet either DAWN or DEFUSE-3 eligibility criteria; it is reasonable (IIa, B-Randomized) within 6 to 24 hours for DAWN-eligible patients.

Intracranial vascular imaging is recommended during the initial imaging evaluation for patients who otherwise meet criteria for endovascular therapy (I, A). CT angiography is recommended before obtaining a serum creatinine if the patient does not have a history of renal impairment. Vascular imaging should not delay administration of TPA if indicated.

Routine diagnostic testing such as cholesterol testing, sleep apnea screening, and echocardiography did not show any benefit and were not recommended.

Lancaster General Health is developing the capability to perform mechanical thrombectomy along with lytic therapy.

OBESITY LINKED TO 12 CANCER TYPES

Ten years ago, the World Cancer Research Fund found evidence for an association between obesity and five cancers. They have now released a report showing that obesity and overweight increase a person's risk for many more cancers: mouth/pharynx/larynx, esophageal, stomach, pancreatic, gallbladder, liver, colorectal, breast, ovarian, endometrial, prostate and kidney.
They did not single out any specific foods or nutrients; rather, different patterns of diet and physical activity throughout life combine to increase susceptibility to cancer. There is specific evidence of an association between BMI and risk of breast cancer.

Though obesity in adulthood appeared to increase the risk of postmenopausal breast cancer, higher BMI before menopause decreased the risk of premenopausal breast cancer, and higher BMI between the ages of 18-30 decreased the risk of pre- and postmenopausal breast cancer. Nonetheless, the World Cancer Research Fund recommends maintaining a healthy weight throughout all stages of life.

They also found that drinking alcohol increased the risk of six cancers including colorectal, breast, liver, pharynx/larynx, esophagus and stomach. With this information the Alcohol Health Alliance UK said that it is clear from the evidence that drinking alcohol cannot be justified for other health benefits—to prevent heart disease, for example.

Ten cancer prevention recommendations included:

- Limit consumption of red and processed meat.
- Maintain a healthy weight.
- Do not use supplements for cancer prevention.
- Be physically active.
- Eat a diet rich in whole grains, vegetables, fruits and beans.
- Limit consumption of "fast foods" and other processed foods high in fat, starches or sugars.
- Limit consumption of sugar-sweetened drinks.
- Limit alcohol consumption.
- Breastfeed babies, if able.
- Follow these recommendations after a diagnosis of cancer is made, if possible.

NEW AND REVISED RECOMMENDATIONS FROM THE U.S. PREVENTIVE SERVICES TASK FORCE (USPSTF)

Over the past year the USPSTF has made 14 recommendations for 12 conditions. One of their pronouncements was the unusual reversal of a previous "D" recommendation against screening for scoliosis in adolescents, changing it to an "I" statement (insufficient evidence).

A&B recommendations:

- Prescribe a daily supplement containing 0.4 – 0.8 mg (400-800 mcg) of folic acid for all women who are planning or capable of pregnancy. (A)
- Screen for obesity in children ≥ to 6 years of age and adolescents, and offer (or refer for) comprehensive intensive behavioral interventions to promote improvements in weight status. (B)
- Screen for preeclampsia in pregnant women with blood pressure measurements throughout pregnancy. (B)
- Perform vision screening at least once in all children 3 to 5 years of age, to detect amblyopia or its risk factors. (B)

D recommendations (recommending *against* this service):

- Avoid using combined estrogen and progestin for the primary prevention of chronic conditions in postmenopausal women.
- Avoid using estrogen alone for the primary prevention of chronic conditions in postmenopausal women who have had a hysterectomy.
- Avoid screening for ovarian cancer in asymptomatic women. (This recommendation applies to asymptomatic women who are not known to have a high-risk hereditary cancer syndrome).
- Avoid screening for thyroid cancer in asymptomatic adults.

I statements (insufficient evidence):

- Vision screening in children under 3 years of age.
- Screening for obstructive sleep apnea in asymptomatic adults.
- Screening for celiac disease in asymptomatic individuals of any age.
- Performing screening pelvic examinations in asymptomatic women for the early detection and treatment of a range of gynecologic conditions.
- Screening for adolescent idiopathic scoliosis in children and adolescents ages 10 to 18 years.

C recommendations (selectively offering or providing this service to individuals based on professional judgment and patient preference):

- Individualize the decision to advise behavioral counseling to promote a healthful diet and physical activity for non-obese adults without hypertension, dyslipidemia, abnormal blood glucose levels, or diabetes.

FEDERAL "RIGHT TO TRY" LAW ENACTED*

The Right to Try law permits terminally ill patients who have exhausted approved treatment options, and who are unable to participate in a clinical trial of an investigational new drug, to receive the drug after it has passed only the first of three phases of testing required for marketing approval. Phase 1 testing requires only 20-80 healthy volunteers to determine a drug's most frequent side effects and how it is metabolized or excreted. While it can reveal unacceptable toxicity, Phase 1 does not establish effectiveness. Most drugs that move past Phase 1 testing do not get approved for marketing because they are found to be unsafe and/or ineffective.

President Trump recently signed this law, which had been opposed by a coalition of more than 100 non-governmental organizations. The Food and Drug Administration (FDA) already has "compassionate use" programs with safeguards that enable people with serious and life-threatening diseases to receive investigational medical devices, drugs, and biologics outside of clinical trials. The agency sometimes requires dosing and safety improvements but grants 99% of requests that it receives, and enables treatment to begin within 30 days (or five working days after emergency requests). The new law removes FDA's consultative rule in ensuring safety, and it fails to ensure informed consent. It also "limits the liability of a sponsor, manufacturer, prescriber or dispenser that provides, or declines to provide, an eligible investigational drug to an eligible patient in accordance with the bill."

Sen. Ron Johnson, who sponsored the legislation, said recently that its goal was to "diminish the FDA's power over people's lives, not increase it." It was based on a model bill drafted by the Goldwater Institute, a libertarian think tank that opposes the FDA's regulatory power.

David Gorski, M.D., Ph.D., recently wrote: "Right-to-try is only a little about helping patients. It's far more about dismantling the FDA and giving drug and device manufacturers more freedom to market drugs and devices with much less testing." [9]

* **Editor's Note:** I discussed the issues surrounding "Right to Try" laws at some length in the Winter 2015 issue of JLGH: (Bonchek LI, "Right to Die and "Right to Try." J Lanc Gen Hosp 2015 (4); 10:97-98. http://www.jlgh.org/Past-Issues/Volume-10---Issue-4/Editor-s-Desk---Right-to-Die-and-Right-to-Try-.aspx). At that time, 24 states already had Right to Try laws, so this new federal law is not as revolutionary as it might seem. One of the concerns it arouses, however, bears re-emphasis: will widening of access to the Right to Try, remove patients from the pool of subjects eligible for randomization? This phenomenon could make it more difficult to conduct the randomized Phase I and Phase II trials that are essential to developing new drugs.

Another concern is that – since this process inevitably involves physicians – they may face a conflict between their desire to assist an individual patient, and their wish to support the traditional randomized studies by which the effectiveness of new therapies is explored.

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