



CHOOSING WISELY XXXI

Recommendations from the American Medical Society for Sports Medicine, American Orthopaedic Foot & Ankle Society, and the American Academy of Pediatrics Section on Surgery

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This is my 31st article on Choosing Wisely from the 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 THE AMERICAN MEDICAL SOCIETY FOR SPORTS MEDICINE (AMSSM)

1. To evaluate an acute concussion, do not order a brain CT or brain MRI unless there are progressive neurological symptoms or focal neurological findings on exam, or there is concern for a skull fracture. Concussion is a clinical diagnosis. CT is best utilized for skull fracture and intracranial bleeding, whereas MRI may be ordered for prolonged symptoms, worsening symptoms, or other suspected structural pathology.

2. For athletes with infectious mononucleosis, do not routinely order an abdominal ultrasound examination. Splenic enlargement is common in patients with infectious mononucleosis. Rupture is at increased risk in the first 3-4 weeks of infection. Splenic diameters vary greatly, so comparing splenic size to population norms is not a valid way to assess splenic enlargement.

3. Patients with amenorrhea or menstrual dysfunction due to the female athlete triad (low energy availability with or without disordered eating, menstrual dysfunction, and low bone mineral density) should not receive oral contraceptive pills as initial treatment. The underlying cause of the menstrual dysfunction is energy imbalance. Treatment includes increasing caloric intake and/or decreasing energy expenditure (exercise) to restore normal menses. This can take up to 12 months or longer. The recommended approach is multi-disciplinary treatment that includes a physician, dietitian, mental health professional (when appropriate), and support from coaches, family members and friends.¹

4. A patient with anterior knee pain without mechanical symptoms or effusion should not have a knee MRI unless the patient has not improved following the completion of an appropriate functional

rehabilitation program. The most common cause of anterior knee pain is patellofemoral pain syndrome. Treatment is focused on a guided exercise program to correct lumbopelvic and lower limb strength and flexibility and balances. If pain persists, if there is recurrent swelling or if mechanical symptoms such as locking and painful clicking are present, and radiographs are non-diagnostic, an MRI may be useful.

5. Patients with degenerative meniscal tears and no mechanical symptoms should not have knee arthroscopy as initial management. Degenerative meniscal tears may respond to non-operative treatment such as exercise to improve muscle strength, endurance and flexibility. Other treatment options include mild analgesics, anti-inflammatory medication, activity modification, or corticosteroid injection.²

II. RECOMMENDATIONS FROM THE AMERICAN ORTHOPAEDIC FOOT & ANKLE SOCIETY (AOFAS)

1. Surgery for a bunion or hammertoe should not be performed in patients without symptoms. Foot surgery for cosmetic reasons is not supported by medical research. Patients having surgery for bunions and hammertoes are at risk for a wide range of complications such as nerve damage, infection, bone healing problems, and toe stiffness.

2. Patients with asymptomatic symmetric flat feet or high arches should not use shoe inserts. Symmetric flat feet or high arches are common conditions that are generally asymptomatic. The development of the arch is not related to external supports, and there is no evidence for any support in asymptomatic patients.³

3. Plantar fasciitis should not be treated with surgery before trying six months of non-operative care. With six months of consistent, non-operative treatment, plantar fasciitis will resolve in up to 97% of patients. Surgery has a much lower rate of success and has the added possibility of post-operative complications.

4. X-ray evaluation of the foot and ankle in the absence of injury should not be done without

weight-bearing. When compared to non-weight-bearing X-rays, deformities of the forefoot, midfoot, and hindfoot have been shown to increase on weight-bearing X-rays, which give the most accurate assessment of the functional bony anatomy of the foot and ankle.

5. Morton's (intermetatarsal) neuromas should not be injected with alcohol. Alcohol can permanently damage the nerve without giving effective pain relief. At five year follow-up, alcohol injection for Morton's neuroma has both a high recurrence rate and a high rate of complications, including bruising, scar formation, dysesthesia, severe pain and infection.

III. RECOMMENDATIONS FROM THE AMERICAN ACADEMY OF PEDIATRICS SECTION ON SURGERY

1. Pediatric trauma patients should not have routine whole-body CT scanning (PAN-scanning). Radiation from CT scans places children at a low, but a real risk of potentially developing fatal malignancies later in life. Decision rules have been developed to guide the judicious use of CT scans for evaluating traumatic head, cervical spine, chest, and abdominal/pelvic injuries.⁴

2. In the evaluation of suspected appendicitis in children, a CT scan should not be the first modality. Ultrasound should be done first, with a CT scan or an MRI considered in equivocal cases. Ultrasound is cost effective, avoids radiation exposure, and has excellent accuracy, with a reported sensitivity and specificity of 94% in experienced hands. Other options to consider prior to the CT scan may include an evaluation by a surgeon, observation with serial exams, repeat ultrasound after a period of observation, and MRI, which has been shown to have diagnostic accuracy similar to CT.

3. Antireflux operations (funduplications) are unnecessary with gastrostomy insertion in most children who are otherwise growing and thriving with gastric feedings. Many patients undergo surgery without a trial of medical therapy, which should be initiated first. This is especially true in children with cardiac, pulmonary, and neurological comorbidities. There are insufficient data to support the concept of fundoplication in the absence of reflux, regardless of patient comorbidities. Expert opinion-based guidelines state that fundoplication can be considered in infants and children with GERD who also meet any of the following criteria: (1) life-threatening complications (e.g., cardiorespiratory failure of GERD after failure of optimal medical treatment); (2) symptoms refractory to optimal therapy; (3) chronic conditions (e.g. neurologically impaired cystic fibrosis) with a significant risk of GERD-related complications; or (4) the need for

chronic pharmacotherapy for control of signs and/or symptoms of GERD.

4. Most children with umbilical hernias should not be referred to a pediatric surgeon until around age 4-5 years. Umbilical hernias, resulting from failure of complete closure of the umbilical ring after birth, affect up to 25% of newborns. Unlike inguinal hernias, or umbilical hernias in adults, about 85% of umbilical hernias close spontaneously by age 5 years. Those over 1.5 cm in diameter have a lower likelihood of spontaneous closure. Non-operative closure techniques such as umbilical strapping are generally ineffective, can lead to skin breakdown, and should be avoided. Recurrence of umbilical hernias is more common in children who had them repaired at an early age (less than 4 years of age).⁵

5. Post-operative opioid requirements in pediatric patients may be reduced by acetaminophen and/or non-steroidal anti-inflammatory medications. Significant decreases in opioid consumption can be achieved with a concurrent use of non-steroidal anti-inflammatory drugs and/or acetaminophen in infants and children undergoing surgery of moderate or major severity, especially within the first 24 hours following surgery. Perioperative NSAIDs can also reduce the incidence of nausea and vomiting, which aids in early ambulation.

Top Tips

EXTREME RISK PROTECTION ORDERS (ERPOS) TO PREVENT MASS SHOOTINGS: A CASE HISTORY SERIES⁶

This article from the *Annals of Internal Medicine* online (August 20, 2019) explains some of the issues surrounding individualized, urgent interventions to reduce firearm access. Some include Extreme Risk Protection Orders – also known as “red flag” orders – that can provide a rapid, focused response when there is a high risk of imminent firearm violence.

Both risk warrants and ERPOs rely on actions by judges or other judicial offices. They protect due process while providing immediate recovery of firearms and a time-limited prohibition on possession and purchase of firearms and ammunition. Studies thus far suggest such interventions are most commonly used to prevent suicide, and are effective for that purpose.

Authorizing legislation has often been enacted after public mass shootings, but previously there have only been two reported cases of ERPOs being used in an effort to prevent them. California enacted the nation's first ERPO statute in 2016, and the authors of this study present a series of 21 cases from 2016 - 2018 in which ERPOs were used in efforts to prevent mass shootings.

Most subjects made explicit threats and owned firearms. As of early August 2019, none of the threatened shootings had occurred, and no other homicides or suicides by persons subject to the orders were identified.

When it is inappropriate or ineffective to carry out an arrest or psychiatric hospitalization, ERPOs provide a rapid, sharply focused response when there is an imminent risk of firearm violence. Petitions can be submitted to the court by family members, by law enforcement, and – in Maryland – by physicians and other health professionals. As of August 2019, 15 states and the District of Columbia have enacted ERPO statutes. Two other states use a related firearm recovery procedure known as a risk warrant, which can be issued by a judge following a request from law enforcement. Urgent, individualized intervention can play a roll in efforts to prevent mass shootings, in health care settings, and elsewhere.

U.S. PREVENTIVE SERVICES TASK FORCE EXPANDS BRCA SCREENING RECOMMENDATIONS FOR WOMEN AT RISK ⁷

The USPSTF recommends that primary care clinicians assess women with elevated risk for BRCA-related cancer with a brief familial risk assessment tool. The final recommendation appears in *JAMA*.

An assessment like the Ontario Family History Assessment Tool should be performed in women who have a personal or family history of breast, ovarian, tubal, or peritoneal cancer or those with an ancestry that's associated with BRCA1/2 genetic mutations, like those of Ashkenazi Jewish descent (Grade B recommendation). The recommendation to screen women with a history of breast or ovarian cancer but who are now cancer-free is a change from the group's 2013 recommendations, as is the emphasis on ancestry. If positive, patients should be provided genetic counseling and possibly genetic testing.

The USPSTF also says that routine risk assessment, genetic counseling, and genetic testing should not be performed in women who don't meet the above criteria (Grade D statement). The change dramatically expands

the number of testable patients in the primary care setting.

ANTIBIOTIC OVERUSE AND ADVERSE EVENTS IN PATIENTS WITH COMMUNITY-ACQUIRED PNEUMONIA ⁸

For patients with community-acquired pneumonia (CAP), short-course antibiotic therapy (i.e. five to seven days) has been shown in several meta-analyses to be as effective as longer-course therapy. Nonetheless, CAP is one of the most common diagnoses associated with antibiotic overuse. In this cohort study that evaluated over 6,400 patients hospitalized with pneumonia in the United States from 2017 to 2018, about two-thirds received antibiotics for an excessive duration. Among patients with CAP, the median overall antibiotic duration was eight days and the median excess duration was two days. Most of the excess antibiotic use was prescribed after the patient left the hospital. Longer courses of therapy were not associated with greater treatment success. Patient-reported adverse events such as diarrhea and rash were 5% higher for each excessive day of antibiotic use. As we have been trying to teach for years—longer courses of antibiotics for CAP are likely to cause more harm than benefit.

ICU STETHOSCOPES TEAMING WITH BACTERIA ⁹

This study found staphylococcus, *Pseudomonas*, and *Acinetobacter*, among others, on the stethoscopes. When users clean their stethoscopes, only rarely were they able to significantly reduce bacterial contamination to a level considered clean. One of the authors, Ronald Collman, M.D., from the University of Pennsylvania, told ABC News that physicians are not generally taught in medical schools to clean their stethoscopes, but they should be. He suggests cleaning the stethoscope regularly and always between patients with a disinfectant or at least 70% alcohol, which should be readily available.

DNA analysis of bacteria on stethoscopes in an ICU found that contaminants related to health care associated infections are common on these devices.

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