



CHOOSING WISELY XVI

TOPICS FROM THE SOCIETY FOR MATERNAL-FETAL MEDICINE,
AMERICAN COLLEGE OF SURGEONS, AND HIV MEDICINE ASSOCIATION

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This is my 16th article on “Choosing Wisely” from the Board of Internal Medicine Foundation. As previously noted, each specialty group is developing “Five or 10 Things Physicians and Patients Should Know.”

I. RECOMMENDATIONS FROM THE SOCIETY FOR MATERNAL-FETAL MEDICINE

The Society for Maternal-Fetal Medicine’s first five items were published with “Choosing Wisely VIII.”¹ That list is as follows:

1. Don’t do an inherited thrombophilia evaluation for women with histories of pregnancy loss, intrauterine growth restriction (IUGR), preeclampsia, and abruptio.
2. Don’t place a cerclage in women with short cervix who are pregnant with twins.
3. Don’t offer non-invasive prenatal testing (NIPT) to low-risk patients, nor make irreversible decisions based on the results of this screening test.
4. Don’t screen for intrauterine growth restrictions (IUGR) with Doppler blood flow studies.
5. Don’t use progesterone for preterm birth prevention in uncomplicated multifetal gestations.

The following are the most recent five items that this group advises physicians and patients to question.

6. **For preterm birth risk assessment in asymptomatic women before 16 weeks of gestation or beyond 24 weeks of gestation, don’t perform routine cervical length screening.** The predictive ability of cervical length measurement prior to 16 weeks and beyond 24 weeks has not been proven to be effective.²

7. **In women with the diagnosis of gestational diabetes, who are well controlled by diet alone and without other indications for testing, don’t perform antenatal testing.** Adequate glycemic control for gestational diabetes is paramount to decrease adverse outcomes, including stillbirth. If control is achieved with nutritional modification and glucose monitoring, there is no further gain from further antepartum testing such as the biophysical profile (BPP) or non-stress test (NST) in the absence of other co-morbidities.

8. **Even those at high risk should not be placed**

on activity restriction to prevent preterm birth. There are multiple studies documenting untoward effects of routine activity restriction on the mother and family, and negative psychosocial effects are known to occur. No studies document improved outcomes in women at risk for preterm birth placed on activity restriction, including bed rest.

9. **After cfDNA aneuploidy screening has already been performed, don’t order serum aneuploidy screening.** Cell free DNA (cfDNA) and serum biochemistry are both screening tests for fetal aneuploidy. When the reports of either test show low risk, there is limited clinical value of also performing the other screen. Serum screening may identify some aneuploidies not detected by cfDNA, but the yield is too low to justify the test if cfDNA screening has already been performed.³

10. **Routine prenatal laboratory studies should not include serologic studies for cytomegalovirus and toxoplasma.** These studies have poor predictive value and potential harm due to false positive tests. They should be reserved for situations in which there is clinical or ultrasound suspicion of maternal or fetal infection.

II. RECOMMENDATIONS FROM THE AMERICAN COLLEGE OF SURGEONS

1. **For clinical stage I or II breast cancer with clinically negative lymph nodes, don’t perform axillary node dissection without first attempting sentinel node biopsy.** When the sentinel lymph node(s) are negative for cancer, no axillary dissection should be performed. Biopsy of a sentinel node is proven effective at staging the axilla for positive lymph nodes, is proven to have fewer short and long-term side effects, and in particular is associated with a markedly lower risk of lymphedema. If one or two sentinel nodes are involved with cancer that is not extensive in the node, axillary node dissection should still not be performed if the patient is having breast-conserving surgery and is to receive whole breast radiation and stage appropriate systematic therapy.

2. **In patients with minor or single system trauma avoid the routine use of “whole-body” diagnostic computed tomography (CT) scanning.** “Whole-body”

CT scanning improves early diagnosis of injury and may positively impact survival in polytrauma patients. Radiation exposure as well as costs associated with these studies must be considered especially in patients with low energy mechanisms of injury and absent physical examination findings consistent with major trauma.⁴

3. Avoid colorectal cancer screening tests in asymptomatic patients with a life expectancy of less than 10 years and no family or personal history of colorectal neoplasia. Screening and surveillance modalities are inappropriate when the risks exceed the benefits. These risks increase with increasing age and comorbidities.

4. Ambulatory patients with unremarkable history and physical exam should not receive admission or preoperative chest X-rays. Only 2% of such images lead to a change in the management. It is reasonable to obtain a chest X-ray if acute cardiopulmonary disease is suspected or there is a history of chronic stable cardiopulmonary diseases in patients older than 70 who have not had chest radiography within six months.⁵

5. In children with suspected appendicitis do not get a CT for the evaluation until after an ultrasound has been considered as an option. If the ultrasound is equivocal, it may be followed by CT. This approach is cost-effective, reduces potential radiation risks and has excellent accuracy, with reported sensitivity and specificity of 94% in experienced hands.

III. RECOMMENDATIONS FROM HIV MEDICINE ASSOCIATION

(The following recommendations do not supersede grant reporting requirements.)

1. Unnecessary CD4 tests should be avoided. The CD4 is not required with every test of viral load, which is a better indicator of the patient's response to therapy. CD4 monitoring is also unnecessary in patients with stable viral suppression. The CD4 count should be monitored every three to six months for the first two years after treatment is initiated, and – if the viral load is undetectable after two years – yearly thereafter if it is 300-500 cells/mm³. If it is consistently above 500 cells/mm³ then further monitoring is optional.⁶

2. When ordering CD4 counts don't order complex lymphocyte panels. Only CD4 counts and percentages should be ordered rather than other lymphocyte panels. More complex lymphocyte panels are unnecessary and increase costs even more.

3. Avoid quarterly viral load testing of patients who have durable viral suppression unless clinically indicated. Viral load testing should be conducted before beginning treatment, 2-8 weeks after initiation

or modification of therapy, and then every 3-4 months to confirm continuous suppression. If the patient is stable clinically with durable virological suppression over two years, the interval may be extended to six months, though some still require a visit every 3-4 months to make sure comorbid conditions are stable. Assessment should include other social changes that might impact adherence to HIV medication. Multidisciplinary practices can consider interim visits with other non-prescribing members of the practitioner team to support adherence to treatment.

4. Routine testing for Glucose-6 phosphatase dehydrogenase (G6PD) deficiency should not be performed in patients whose race/ethnicity does not predispose them to it. G6PD deficiency testing upon entering to care and before starting therapy with an antioxidant drug is recommended only in HIV-infected patients who are predisposed to this genetic disorder that can cause hemolytic anemia. This most frequently occurs in populations of African, Asian, and Mediterranean descent in those with HIV.

5. Those HIV-infected patients who have a high likelihood of being infected with CMV don't need routine testing for CMV IgG. Cytomegalovirus (CMV) IgG testing is only recommended in those who are at lower risk for CMV to detect latency in the infection. Men who have sex with men, and injection drug users, are high risk and can be assumed to be CMV positive. Those of low risk should be tested to foster patient counseling and avoidance of CMV infection through practicing safe sex and to avoid transfusion except with CMV-negative blood products. Those at lower risk are patients who are heterosexual and have not injected drugs. They should be tested for latent CMV infection with an anti-CMV IgG upon initiation of care.⁷

Top Tips

ARE GUIDELINES BEST PLANS FOR DECISION MAKING?

Shared decision making is one of the Institute of Medicine's six pillars of high-quality care. Some treatments are of uncertain benefit or require significant trade-offs between benefit and harms.

Increased deliberation and consensus can be obtained by using decision support from decision aids. These decision aids have three goals. First: simply state the decision that needs to be made, as patients frequently don't realize they have a choice. Second: provide evidence-based information about the disease, its treatment options, benefits, harms, and uncertainties. Third: help patients recognize the values-sensitive nature of their decision.

The evidence for decision aids is strong. The Cochrane Group conducted a systematic review of decision aids for people facing health treatment or screening decisions in a total of 115 studies.⁸ Patients showed overwhelming improvement in knowledge scores, accuracy in predicting risk, and significantly lower scores of “feeling uninformed.” These decision aids also reduced practitioner-controlled decision making by 34%.

Many barriers decrease the use of these aids. One is the likelihood that in certain populations, such as the elderly with cognitive defects or non-English speakers, decision aids will slow decisions and change work flow. Another is the leveling of power in the doctor-patient relationship, as many physicians prefer the traditional paternalistic form of practice. A third is the concern that these aids are a way for government to ration care.

Nonetheless, improvement in decision quality may result in a reduction in uptake of a treatment proven effective in populations and recommended in guideline statements. Doctors may be the experts in medical science, but many patients are experts in what is best for them. The Centers for Medicare and Medicaid Services (CMS) are trying to nudge us in the direction of using these decision aids.

LATENT TB SCREENING FOR AT-RISK ADULTS

Tuberculosis causes 1.6 million deaths/year globally. The Centers for Disease Control and Prevention announced March 25 in the Morbidity and Mortality Weekly Report that for the first time in nearly a quarter century, the number of U.S. tuberculosis cases has increased. Twenty-nine states had more cases in 2015 than 2014. Public health officials conjecture that “reduced or stagnant funding for prevention efforts nationwide” may be behind the increase. **Approximately 30% of persons exposed to Mycobacterium tuberculosis will develop latent tuberculosis infection (LTBI). If untreated, approximately 5-10% of these people will progress to active TB.**

Those considered at high risk for LTBI include:

- Healthcare workers and those who work in high-risk congregate settings.
- People who are in frequent contact with those who have active TB.
- Patients with silicosis.
- People who are immunosuppressed, including those with HIV, patients undergoing chemotherapy treatment or treatment with tumor necrosis factor-alpha inhibitors, and those receiving or who just received an organ transplant.

- Foreign-born persons from Mexico, the Philippines, VietNam, India, China, Haiti, and Guatemala.

- Persons who live in or have lived in high-risk congregate settings, including homeless shelters and correctional facilities.

- Persons who were born in, or are former residents of, countries with increased tuberculosis prevalence.

No evidence suggests an optimum frequency of screening. The United States Preventive Services Task Force (USPSTF) has posted a draft “B” recommendation. The USPSTF recommends testing via either the tuberculosis skin test (TST) or the Interferon Gamma Release Assay (IGRA) per their guidelines. TST requires intradermal placement of purified protein derivative and interpretation of response 48 to 72 hours later. IGRA requires a single venous blood sample and laboratory processing within 8 to 30 hours after collection. IGRA tests may be preferred for patients who have received a Bacillus Calmette-Guérin (BCG) vaccination or those who may be unlikely to return for TST interpretation. In the event of positive tests, CDC has suggested four possible recommended treatment regimens with durations for as little as three months or up to nine months, depending upon the treatment utilized. Medications in various combinations and durations include Rifampin, Isoniazid or Isoniazid plus Rifapentine. Any non-daily dosing regimen should be directly observed therapy.

The American Academy of Family Practice is reviewing this draft recommendation and will release its own recommendation after the task force publishes its final recommendation statement.⁹

AMERICAN HEART ASSOCIATION UPDATES CPR GUIDELINES

Important points for health care providers include:

- Newborns with poor muscle tone and breathing and meconium in the amniotic fluid should receive CPR under a radiant warmer for faster oxygen delivery. There is not enough evidence to recommend routine intubation.

- For targeted temperature management, clinicians should aim for 32 to 36 degrees Celsius and maintain that temperature for at least 24 hours.

- To reduce the time to first compression, providers should attempt to simultaneously perform certain CPR steps, such as checking for pulse and breath.

- The recommended chest compression depth is 2 to 2.4 inches at a rate of 100 to 120 per minute.

NEW VTE GUIDELINES

The American College of Chest Physicians

released the latest evidence-based guidelines on anti-thrombosis for venous thromboembolism (VTE).¹⁰ Recently changed or added recommendations include:

- Patients with low-risk pulmonary embolism (PE) may be treated at home or receive an early discharge.

- In patients who have deep vein thrombosis (DVT) of the leg, compression stockings are not recommended to prevent post-thrombotic syndrome (PTS). Patients with PTS symptoms may receive a “trial of graduated compression stockings.”

- Those with unprovoked proximal DVT or PE who are stopping anticoagulation should receive aspirin to reduce the risk of recurrent VTE, assuming aspirin is not contraindicated.

- In patients without cancer who have DVT or PE, guidelines suggest using non-vitamin K antagonist oral anticoagulants (NOACs) – dabigatran, rivaroxaban, apixaban, or edoxaban – instead of vitamin K antagonists for the first three months’ treatment and beyond.

- For patients with VTE and cancer, the new guidelines recommend low-molecular weight heparin (LMWH) over vitamin-K antagonist therapy and the NOACs.

- Suggestions as to which patients diagnosed with isolated sub-segmental pulmonary embolism should, and should not, receive anticoagulant therapy are given.

- Recommendations regarding who should stop anticoagulation at three months or receive extended therapy have not changed.

- For patients with VTE treated with anticoagulants, an IVC filter is not recommended.

- Thrombolytic therapy for PE with hypotension is recommended, and systemic therapy is preferred over catheter directed thrombolysis.

- For recurrent VTE on a non-low molecular weight heparin, LMWH is suggested, and for recurrent

VTE on LMWH, the dose of LMWH should be increased.

LOW P VALUES —THE DEBATE GOES ON

The use of the P value has more than doubled from 7.3% in 1990 to 15.6% in 2014.

Unfortunately, use of the P value statistic as the only measure of success or failure is too often misleading. P values are fairly easy to derive with automated software, and are often used to claim that a study was successful, which makes it more likely to be published and also makes it easier to obtain funding for further studies.

P values as a measure of statistical significance are intended to help readers interpret scientific conclusions, but they cannot assure that a result is true, or conversely that something has no effect. The operational meaning of a P value < 0.05 is merely one that should cause a repeat of the experiment. If repeated studies also have a significant P value, one can more assuredly conclude that the observed effects were unlikely to have been the result of chance alone.

A study analyzed more than 12 million abstracts¹¹ and found that 96% of the abstracts with P values had at least one that was “statistically significant,” a proportion thought to be unrealistic. The study emphasized that few articles include confidence intervals, which are really more important than P values. Statisticians and epidemiologists for many years have been recommending added indicators such as effect size, which includes odds ratios and risk differences, as well as confidence intervals, which indicate a degree of certainty about the results. Advocates also recommend the use of false-discovery rates or Bayes factor calculations, which estimate how likely a result is to be true or false.

It seems reasonable to caution against changing one’s practice on the basis of a single study that is “statistically significant.”

REFERENCES

1. Peterson, A. Choosing Wisely VIII. *J Lanc Gen Hosp*. 2014; 9:58-63
2. Ozdemir, I et al. Ultrasonographic cervical length measurement at 10-14 and 20-24 weeks gestation and the risk of preterm delivery. *Eur J Obstet Gynecol Reprod Biol*. 2007 Feb;130(2):176-9.
3. Committee Opinion No 640: Cell-Free DNA Screening for Fetal Aneuploidy. *Obstet Gynecol*. 2015;126(3):e31-7.
4. Ahmadinia, K et al. Radiation exposure has increased in trauma patients over time. *J Trauma*. 2012 Feb;72(2):410-5.
5. Amorosa, JK et al. Expert Panel on Thoracic Imaging. ACR Appropriateness Criteria routine chest radiographs in ICU patients. (Internet). Reston (VA): American College of Radiology (ACR); 2011. 6 p.
6. Ahn, JY et al. TREAT Asia HIV Observational Databases (TAHOD). Implementation and operational research: Effects of CD4 monitoring frequency on clinical endpoints in clinically stable HIV-infected patients with viral suppression. *J Acquir Immune Defic Syndr*. 2015 Jul 1;69(3):e85-92.
7. Panel on Opportunistic Infections in HIV-infected Adults and Adolescents. Guidelines for prevention and treatment of opportunistic infections in HIV-infected adults and adolescents: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America; 2015 Apr. 414 p. Available at http://www.aidsinfo.nih.gov/contestfiles/lvguidelines/adult_oi.pdf.
8. Stacey, D et al. Decision aids for people facing health treatment or screening decisions. *J Cochrane Database Syst Rev*. 2014;1:CD001431. Abstract
9. Latent Tuberculosis Infection: Screening [draft recommendation statement]. Rockvale, MD:U.S. Preventative Services Task Force. Published March 2016. Accessed March 10, 2016. *Circulation* 2015;132:5315-5367.
10. *Chest*. 2006. Doi:10.1016/j.chest.2015.11.206
11. *JAMA*. 2016;315:1113-1115, 1141-1148