Learning Objectives

Using Case scenarios, the attendees will;

1. Consider their current practice of screening adult patients in the following areas:
   - Depression, OSA, COPD, AAA, carotid artery disease, hyperlipidemia
   - Cancers: colorectal, breast, prostate and cervical
   - Communicable diseases: latent TB, syphilis and genital herpes, HIV, hepatitis C

2. Review the 2016-17 USPSTF screening guideline updates for these topics

3. Integrate the current guidelines into their practices and utilize the online website and apps

Disclosures

I have no conflicts to disclose.
US Preventive Services Task Force

- Created in 1984
- Expert panel made up of 16 independent volunteer members including deans, medical directors, practicing clinicians, and professors
- Reviews and assesses research and makes evidence-based recommendations about clinical preventive services
- Recommendations for asymptomatic adults and children in primary care settings
- Risks/Benefits of the tests, treatments, counseling, etc., based on patient’s age, sex and not cost of service

AHRQ-support of the USPSTF

- 1998 – Public Health service Act
- HHS – Agency for Healthcare Research and Quality (AHRQ)

AHRQ’s mission is to produce evidence to make healthcare safer, higher quality, more accessible, equitable and affordable and to work with the HHS and other partners to make sure the evidence is understood and used.
Methods

- Topic nomination
- Draft and final research plans
- Draft Evidence review and recommendation statement
- 4-week public comment period
- Final evidence review and recommendation statement
- Yearly report to Congress to identify gaps and guide future research

USPSTF Grade recommendations

- **A** The USPSTF recommends the service. There is high certainty that the net benefit is substantial.
  - Offer or provide the service.
- **B** The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.
  - Offer or provide the service.
- **C** The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.
  - Offer or provide this service for selected patients depending on individual circumstances.
- **D** The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.
  - Discourage the use of this service.
- **I** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service.
  - Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.
  - Offer or provide this service for selected patients depending on individual circumstances.

Dissemination of the Guidelines

- [www.uspreventiveservicestaskforce.org](http://www.uspreventiveservicestaskforce.org)
- [http://healthfinder.gov](http://healthfinder.gov)
- [http://epss.ahrq.gov](http://epss.ahrq.gov)
- [JAMA](http://jama.ama-assn.org)
Let’s get started...

Case 1

- 56 year old female for yearly exam.
- Her last exam was 5 years ago – no complaints.
- PMH: GERD on OTC PPI
- SH: occ wine 1/week, denies tobacco, married and monogamous
- FH: Mother 84 y/o with DM and Father died at 82 y/o with CAD and HTN

What asymptomatic disease should we screen for?

- Should we do a pelvic exam/pap?
- Order mammogram?
- Order colonoscopy?
- RPR, lipids, EKG, Vitamin D?
Cervical Cancer Screening -2012

- Women 21 to 65 (Pap Smear) or 30-65 (in combo with HPV testing)
- Grade A

The USPSTF recommends screening for cervical cancer in women age 21 to 65 years with cytology (Pap smear) every 3 years or, for women age 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing every 5 years.
Cervical Ca - Women younger than 30 years, HPV testing

- Grade D
- The USPSTF recommends against screening for cervical cancer with HPV testing, alone or in combination with cytology, in women younger than age 30 years.

Cervical CA- Women younger than 21

- Grade D
- The USPSTF recommends against screening for cervical cancer in women younger than age 21 years.

Cervical CA screening

- Women Older than 65, who have had adequate prior screening
- Women who have had a hysterectomy

- Grade D
- The USPSTF recommends against screening for cervical cancer in women older than age 65 years who have had adequate prior screening and are not otherwise at high risk for cervical cancer or those women who have had a hysterectomy with removal of the cervix and who do not have a history of a high-grade precancerous lesion (cervical intraepithelial neoplasia [CIN] grade 2 or 3) or cervical cancer.
Periodic Screening With the Pelvic Examination – Asymptomatic, non-pregnant adult women who are not at increased risk for any specific gynecologic condition

March 2017

■ Grade I

- The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of performing screening pelvic examinations in asymptomatic women for the early detection and treatment of a range of gynecologic conditions.

Breast CA- January 2016

■ Women aged 50 to 74 years Grade B

The USPSTF recommends biennial screening mammography for women aged 50 to 74 years.

- Women aged 40 to 49 years Grade C

The decision to start screening mammography in women prior to age 50 years should be an individual one. Women who place a higher value on the potential benefit than the potential harms may choose to begin biennial screening between the ages of 40 and 49 years.

■ Women aged 75 years or older Grade I

The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening mammography in women aged 75 years or older.

American Cancer Society Recommendations

■ The ACS recommends that women with an average risk of breast cancer should undergo regular screening mammography starting at age 45 years (strong recommendation).

- Women aged 45 to 54 years should be screened annually (qualified recommendation).

- Women 55 years and older should transition to biennial screening or have the opportunity to continue screening annually (qualified recommendation).
Other comments:

Women with a parent, sibling, or child with breast cancer are at higher risk for breast cancer and thus may benefit more than average-risk women from beginning screening in their 40s.

Women with dense breasts

- Grade I

  The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of adjunctive screening for breast cancer using breast ultrasonography, magnetic resonance imaging, DBT, or other methods in women identified to have dense breasts on an otherwise negative screening mammogram.

December 2013 - BRCA risk assessment and genetic counseling/testing (updating)

- The USPSTF recommends that primary care providers screen women who have family members with breast, ovarian, tubal, or peritoneal cancer with one of several screening tools designed to identify susceptibility genes (BRCA1 or BRCA2).
- Women with positive screening results should receive genetic counseling and, if indicated after counseling, BRCA testing.  Grade B
- Women Whose Family History is not Associated with an Increased Risk:
  - The USPSTF recommends against routine genetic counseling or BRCA testing for women whose family history is not associated with an increased risk for potentially harmful mutations in the BRCA2 or BRCA1 genes.  Grade D
Vitamin D deficiency - 2014

- Grade I

- The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for vitamin D deficiency in asymptomatic adults.
EKG - 2012

- The USPSTF recommends against screening with resting or exercise electrocardiography (ECG) for the prediction of coronary heart disease (CHD) events in asymptomatic adults at low risk for CHD events.

- Grade: D

Case 2

- 54 year old male CC of ED and feeling tired.
- PMH: Hypertension on Lisinopril 20mg/HCTZ 12.5mg and seasonal rhinitis on OTC Nasacort spray.
- SH: CPA recently divorced. Intends to start dating. Drinks 2-3 glasses alcohol on weekends and never smoked.
- VS: 136/78  P= 76  2 hr pp BS = 106 with BMI 35.
In addition to diabetes and hypothyroidism, what should you screen for?

- OSA
- Hyperlipidemia
- STI
- Hepatitis C

OSA in Asymptomatic adults – January 2017

- The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for obstructive sleep apnea (OSA) in asymptomatic adults.
- Grade I
OSA

- Risk factors associated with OSA include male sex, older age (40 to 70 years), postmenopausal status, higher BMI, and craniofacial and upper airway abnormalities. The evidence on other risk factors, such as smoking, alcohol and sedative use, and nasal congestion, is sparse or mixed.
- Observational studies have reported an association between severe OSA and mortality risk. In theory, screening for OSA could improve mortality by identifying OSA early and providing treatment before it can adversely influence mortality. Although studies generally show that treatment of OSA with CPAP and MADs (mandibular advancement devices) improves intermediate outcomes, such as AHI and ESS score, there is a lack of studies demonstrating that change in AHI or ESS score improves health outcomes, and no well-controlled trials have demonstrated an improvement in mortality with treatment of OSA.

The USPSTF and screening for obstructive sleep apnea: Dispelling misconceptions

- Cleveland Clinic Journal of Medicine. 2017 June;84(6):429-431
- REENA MEHRA, MD, MS
- NANCY FOLDVARY-SCHAEFER, DO, MS

Statin therapy for Primary prevention—November 2016

- Grade B
- Identification of dyslipidemia and calculation of 10-year CVD event risk requires universal lipids screening in adults ages 40 to 75 years.
- The USPSTF recommends that adults without a history of cardiovascular disease use a low- to moderate-dose statin for the prevention of CVD events and mortality when all of the following criteria are met: 1) they are ages 40 to 75 years; 2) they have 1 or more CVD risk factors (i.e., dyslipidemia, diabetes, hypertension, or smoking); and 3) they have a calculated 10-year risk of a cardiovascular event of 10% or greater.
ACC/AHA 2013 Guidelines- Key points

Primary Prevention
- LDL-C ≥190mg/dl - age over 21
- R/O secondary causes
- Treat - High Intensity
- LDL-C 70-189mg/dl - age 40-75
  - ≥7.5% - High Intensity
  - 5-7.5% - Moderate Intensity
  - <5% - Lifestyle Modification

Secondary Prevention
- Clinical ASCVD *
- Age ≥75 with no safety concerns-
  - High Intensity
- Age >75 or safety concerns-
  - Moderate Intensity

THE NEW LIPID GUIDELINES:
WHAT DO PRIMARY CARE CLINICIANS THINK?
Sina Jamé, MD,a Eve Wittenberg, PhD,b Michael B. Potter, MD,c Kirsten E. Fleischmann, MD, MPH,a,d
aDepartment of Medicine, University of California, San Francisco (UCSF), San Francisco; bCenter for Health Decision Science, Harvard School of Public Health, Boston, Mass; cDepartment of Family and Community Medicine and dDivision of Cardiology, Department of Medicine, UCSF, San Francisco.
Key points from study

- 600 PCPs in the San Francisco area given an on-line survey about ACC/AHA guidelines in 2014-183 completed it.
- 96% aware of the guidelines
  - 25% adopted them for the majority of their pts
  - 38% adopted them for a few pts
  - 37% not yet used them with any pts

Barriers to Adopting the Guidelines

- Did not know them well enough, seemed very complex
- Disagreed with the guidelines
- Difficulty using the risk calculator, too cumbersome
- Concern with over treatment
- Validity of the risk calculator
- Lack of applicability to racial and ethnic minorities
STI-Behavioral Counseling-2014

Grade B

- The USPSTF recommends intensive behavioral counseling interventions to reduce the likelihood of acquiring an STI for all sexually active adolescents and for adults at increased risk.
- The USPSTF has issued recommendations on screening for other STIs, including chlamydia and gonorrhea, hepatitis B virus, human immunodeficiency virus (HIV), and syphilis.

Genital Herpes-2016

Asymptomatic adolescents and adults, including those who are pregnant

Grade D

- The USPSTF recommends against routine serologic screening for genital herpes simplex virus (HSV) infection in asymptomatic adolescents and adults, including those who are pregnant.

June 2016 - Syphilis screening: non-pregnant persons

- The USPSTF recommends screening for syphilis infection in persons who are at increased risk for infection.
- Grade A
June 2013 Hepatitis C virus infection screening: adults

■ Grade B

■ The USPSTF recommends screening for hepatitis C virus (HCV) infection in persons at high risk for infection. The USPSTF also recommends offering one-time screening for HCV infection to adults born between 1945 and 1965.

Hepatitis C - Risk Factor Information:

■ The most important risk factor for HCV infection is past or current injection drug use.

■ Another established risk factor for HCV infection is receipt of a blood transfusion before 1992. Because of the implementation of screening programs for donated blood, blood transfusions are no longer an important source of HCV infection. In contrast, 60% of new HCV infections occur in persons who report injection drug use within the past 6 months.

■ Additional risk factors include long-term hemodialysis, being born to an HCV-infected mother, incarceration, intranasal drug use, getting an unregulated tattoo, and other percutaneous exposures (such as in health care workers or from having surgery before the implementation of universal precautions).

Hepatitis C - Frequency of Screening:

■ Persons in the birth cohort and those who are at risk because of potential exposure before universal blood screening and are not otherwise at increased risk need only be screened once.

■ Persons with continued risk for HCV infection (injection drug users) should be screened periodically.
HIV- 2013

Grade: A

The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years. Younger adolescents and older adults who are at increased risk should also be screened.

HIV: pre-exposure prophylaxis (PrEP)
Feb 2017 – draft research plan stage

Case 3

- 70 year old male for yearly physical
- PMH: CAD, HTN and OA
- Meds: atorvastatin 20mg, lisinopril 10mg, metoprolol 50mg, ASA 81 mg and Celebrex 200mg
- NKDA
- ROS: denies changes in weight, HA, visual changes, weakness, palpitations or syncope
AAA - 2014

- Grade: B
- The U.S. Preventive Services Task Force (USPSTF) recommends one-time screening for abdominal aortic aneurysm (AAA) with ultrasonography in men ages 65 to 75 years who have ever smoked.

- Evidence is adequate to support one-time screening in men who have ever smoked. All of the population-based RCTs of AAA screening used a one-time screening approach, and several fair- to good-quality prospective cohort studies show that AAA-associated mortality over 5 to 12 years is low (0.0% to 2.4%) in men with initially normal results on ultrasonography.

Carotid Disease - 2014

- Grade: D
- The USPSTF recommends against screening for asymptomatic carotid artery stenosis in the general adult population.

- The major risk factors for carotid artery stenosis include older age, male sex, hypertension, smoking, hypercholesterolemia, diabetes mellitus, and heart disease. Despite evidence on important risk factors, there are no externally validated, reliable methods to determine who is at increased risk for carotid artery stenosis or for stroke when carotid artery stenosis is present.

Colorectal Screening - 2016

- Adults age 50-75
  - Grade A
  - The USPSTF recommends screening for colorectal cancer starting at age 50 years and continuing until age 75 years

- Adults age 76-85
  - Grade C
  - The decision to screen for colorectal cancer in adults aged 76 to 85 years should be an individual one, taking into account the patient’s overall health and prior screening history.
Colorectal cancer: Risk Factor Information

- For the vast majority of adults, the most important risk factor for colorectal cancer is older age. Most cases of colorectal cancer occur among adults older than 50 years; the median age at diagnosis is 68 years.
- A positive family history (excluding known inherited familial syndromes) is thought to be linked to about 20% of cases of colorectal cancer. About 3% to 10% of the population has a first-degree relative with colorectal cancer.
- Other professional organizations recommend that patients with a family history of colorectal cancer (a first-degree relative with early-onset colorectal cancer or multiple first-degree relatives with the disease) be screened more frequently starting at a younger age, and with colonoscopy.

Screening tests used

- FOBT yearly – 3 specimens needed
- FIT yearly – single specimen
- FIT-DNA – every 1-3 years (increased sensitivity)
- Colonoscopy – every 10 years
- CT colonoscopy – every 5 years
- Flexible sigmoidoscopy – every 5 years (less commonly available)
- Flex sig + FIT

Prostate CA- Screening guidelines under review

- Men ages 55-69
  - Grade C
  - Screening offers a small potential benefit of reducing the chance of dying of prostate cancer.
  - However, many men will experience potential harms of screening, including false-positive results that require additional workup, overtreatment, and treatment complications such as incontinence and impotence.

- Men age 70 and older
  - Grade D
  - The USPSTF recommends against PSA-based screening for prostate cancer in men age 70 years and older.
Case 4

- 24 year old female with CC of fatigue and insomnia
- PMH: Hypothyroidism on levothyroid 100mcg, Nuvaring for contraception
- PSH: C-section 4 months ago (G2P2) Other child is 4 years old
- FDLMP 3 weeks ago

Depression - January 2016 Depression screening: adults

- Grade B

The USPSTF recommends screening for depression in the general adult population, including pregnant and postpartum women. Screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up.
Depression

- **Risk Factor Information:**

  - The USPSTF recommends screening in all adults regardless of risk factors. However, a number of factors are associated with an increased risk of depression.

  - Women, young and middle-aged adults, and nonwhite persons have higher rates of depression than their counterparts, as do persons who are undereducated, previously married, or unemployed.

- **Depression Risk Con’t**

  - Other groups who are at increased risk of developing depression include persons with chronic illnesses (e.g., cancer or cardiovascular disease), other mental health disorders (including substance misuse), or a family history of psychiatric disorders.

  - Among older adults, risk factors for depression include disability and poor health status related to medical illness, complicated grief, chronic sleep disturbance, loneliness, and a history of depression.

  - Risk factors for depression during pregnancy and postpartum include poor self-esteem, child-care stress, prenatal anxiety, life stress, decreased social support, single/unpartnered relationship status, history of depression, difficult infant temperament, previous postpartum depression, lower socioeconomic status, and unintended pregnancy.
Case 5

- 38 year old male for follow-up from recent treatment for acute trachea-bronchitis 2 weeks ago. Today denies sputum production, fever, hemoptysis or weight loss. No other complaints.
- PMH: Negative
- PSH: Tonsillectomy
- SH: 1.5 ppd x 15 years, 1-2 beers each night

COPD – April 2016

- Grade: D

  - The USPSTF recommends against screening with spirometry for chronic obstructive pulmonary disease (COPD) in asymptomatic adults.

Rational

- Prevention of exposure to cigarette smoke and other toxic fumes is the best way to prevent COPD. Interventions to prevent the initiation of tobacco use are an effective way to prevent exposure to cigarette smoke. Current smokers should receive smoking cessation counseling and be offered behavioral and pharmacological therapies to stop smoking.

  - The USPSTF recommends that clinicians ask all adults, including pregnant women, about tobacco use and provide tobacco cessation interventions for those who use tobacco products.
COPD - Clinical Considerations:

- This recommendation statement applies to asymptomatic adults who do not recognize or report respiratory symptoms. It does not apply to at-risk persons who present to clinicians with symptoms such as chronic cough, sputum production, dyspnea, or wheezing. It also does not apply to persons with a family history of α1-antitrypsin deficiency.

COPD Risk Assessment

- Epidemiological studies have found that 15% to 50% of smokers develop COPD. More than 70% of all COPD cases occur in current or former smokers. Occupational exposure to toxins, dusts, or industrial chemicals contributes an estimated 15% of all COPD cases.
- Environmental pollution, including wood smoke and traffic pollutants, is also associated with increased risk for COPD.
- Nonmodifiable risk factors for COPD include history of asthma or childhood respiratory tract infections and α1-antitrypsin deficiency.

Screening Tests

- Patients identified as high risk by a prescreening questionnaire or screening spirometry are referred for diagnostic spirometry testing.
- Diagnosis by spirometry requires persistent airway obstruction after administration of an inhaled bronchodilator, such as albuterol (ie, post-bronchodilator spirometry). Chronic obstructive pulmonary disease is diagnosed when the patient has a post-bronchodilator FEV1/FVC ratio of less than 0.70.
Lung Cancer - 2013
Adults Aged 55-80, with a History of Smoking

- Grade B
- The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years.
- Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.

Latent TB - September 2016
Tuberculosis screening: adults

- Grade B
- The USPSTF recommends screening for latent tuberculosis infection in populations at increased risk.

Assessment of Risk

- Populations at increased risk for LTBI based on increased prevalence of active disease and increased risk of exposure include persons who were born in, or are former residents of, countries with increased tuberculosis prevalence and persons who live in, or have lived in, high-risk congregate settings (e.g., homeless shelters and correctional facilities).
- Other populations at increased risk for LTBI or progression to active disease include persons who are immunosuppressed (e.g., persons living with human immunodeficiency virus [HIV], patients receiving immunosuppressive medications such as chemotherapy or tumor necrosis factor-alpha inhibitors, and patients who have received an organ transplant) and patients with silicosis. However, given that screening in these populations may be considered standard care as part of disease management or indicated prior to the use of certain medications, the USPSTF did not review evidence on screening in these populations.
LTBI in foreign-born persons

- In 2015, among persons of known national origin, 66.2% of all active tuberculosis cases in the United States were among foreign-born persons, and the case rate of active tuberculosis among foreign-born persons was approximately 13 times higher than among US-born persons (15.1 vs 1.2 cases per 100,000 persons).
- More than half of all foreign-born persons in the United States with active tuberculosis were from 5 countries: Mexico, the Philippines, Vietnam, India, and China. In addition, the CDC has identified foreign-born persons from Haiti and Guatemala as important contributors to active tuberculosis cases in the United States.

References

References con’t


