Update in Health Promotion, Prevention for the older adult

Greg W Mennie, PA-C, MSEd
Associate Professor MBKU PA Program
adapted from Teri Scott, ARNP

Objectives

1. Have working knowledge of various up to date health and screening recommendations for primary care providers.
2. Understand Sensitivity and Specificity.
3. Identify the common adult health screening exams.
4. Understand the pharmacological treatment regimens associated with abnormal screening exam outcomes.
5. List the current up to date recommendations for women’s preventative health.
6. List the current up to date recommendations for the current common adult screening requirements.
7. Develop a strategy for targeting and counseling patients on when to discontinue health screening evaluations.
8. Compare and contrast the current screening recommendations to your current practice habits.
9. Incorporate common anticipatory guidance issues into your current practice profile.
What makes a good screening test

- Find undetected disease in an asymptomatic individual
  - at a stage when treatment can be more effective than it would be after the patient develops signs and symptoms
  - identification of risk factors that increase the likelihood of developing the disease
- The disease in question should
  - be a common condition with significant morbidity and mortality
  - have available treatment with a potential for cure that increases with early detection
- The test for the disease must
  - be capable of detecting a high proportion of disease in its preclinical state
  - be safe to administer
  - be reasonable in cost
  - lead to demonstrated improved health outcomes
  - be widely available

Where do guidelines come from?

- Colleges-
  - ACOG ........
- Specialty Orgs
  - AAFP ........
- Govt.
  - CDC, USPSTF ........
Am I old?

- Arbitrary
  - Not adaptable (Africa)
  - Financial drive for definition
    - associated with pension benefits start
- WHO
  - 65 y.o. = ‘elderly’ or older person
- UN
  - 60+ years
- Friendly Societies Act (Britain)
  - > 50
- Survey Says
  - 60, 59, 74, 80. 90 is the new 25………..

Growing Old in America: Expectations vs. Reality. Pew research Center June 29, 2009

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Recommendations for Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>B</td>
<td>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.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>C</td>
<td>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.</td>
<td>Offer or provide this service for selected patients depending on individual circumstances.</td>
</tr>
<tr>
<td>D</td>
<td>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.</td>
<td>Discourage the use of this service.</td>
</tr>
<tr>
<td>I</td>
<td>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.</td>
<td>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.</td>
</tr>
</tbody>
</table>

CANCER SCREENING
Breast Ca Risk Factors

- Age > 55 years of age
- Obesity – BMI >30
- Dense breast tissue – up to 2xs risk
- Menarche/Menopause – Menarche < age 12
  – Menopause > age 55
- Parity – No children
  – 1st child after age of 30
- History / genetics – Personal history of breast cancer
  – + BRCA1 or BRCA2
- Ethnicity
- Smoking

Breast Cancer Screening

- Breast Self Exam
- Clinical breast exam
- Mammography
- Genetic Testing

Bottom Line

- Mammography
  – Grade B
  – Start Age 50 biennial screening through age 74.
  – Insufficient evidence to recommend for or against screening for women 75 or older.
  – Discuss patient’s preference

- Breast Self Exam
  – Grade D
  – Recommends against teaching breast self-examination (BSE).

- Clinical Breast Exam
  – Grade I
  – Insufficient evidence to assess the additional benefits and harms of clinical breast examination (CBE) >40 y.o.
BRCA

- Tumor suppressors
  - Help maintain cell DNA stability
- No standard criteria for recommending or referring
- Most informative to first test a family member who has breast or ovarian cancer
- 2% of women have the following family hx pattern:
  - Not of Ashkenazi Jewish descent:
    - Two first-degree relatives (mother, daughter, or sister) + breast cancer, one of whom was diagnosed at age 50 or younger.
    - One first-degree relative + ovarian cancer, regardless of age at diagnosis.
    - Combination of first- and second-degree relatives + breast cancer and ovarian cancer (one cancer type per person).
    - First-degree relative with breast cancer in both breasts.
    - Combination of two or more first- or second-degree relatives diagnosed with breast cancer regardless of age at diagnosis.
    - First-degree relative diagnosed with breast cancer and ovarian cancer regardless of age at diagnosis.
  - Ashkenazi Jewish descent:
    - First-degree relative diagnosed with breast or ovarian cancer.
    - Two second-degree relatives on the same side of the family diagnosed with breast or ovarian cancer.


Bottom Line

- BRCA
  - Grade D
    - 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 BRCA1 or BRCA2 genes.
    - Must have risk factors to screen - Grade B

Ovarian Ca Risk Factors

- Age
  - ≥ 60 years of age or older.
- Obesity
- Fertility drugs
  - + Talcum
- Androgens
- Estrogen therapy
- Smoking
- Increased risk for the mucinous type.

www.cancer.org
Ovarian cancer

- Transvaginal Ultrasound
- CA – 125
- Bi Manual
  - Does not equate to a cytology test
  - Discuss the need for pelvic exams
  - No randomized trial has assessed the role of bimanual for cancer screening
  - NCI PLCO Trial
    - discontinued as a screening strategy

Bottom Line

- Ovarian cancer Screening
  - Grade D
  - Recommends against routine screening.

Cervical Ca Risk Factors

- Virus
  - > HPV
  - HIV
- Contraception
  - Use > 5 years
- Smoking
- Multiparity
  - > 3 deliveries
- Multiple Sex partners
  - ? if used after menopause
Cervical Cancer Screening

- Pap
- HPV testing

Bottom Line

- Cervical cancer Screening
  - Grade A
    - Pap/Cytology/HPV
      - Age 21 to 65 years with cytology (Pap smear) every 3 years
      - Age 21 to 65 years with a combination of cytology and human papillomavirus (HPV) testing every 5 years
  - Grade D
    - No screening
      - > age 65 years
      - Negative prior screening
      - 3 negatives or 2 consecutive negative HPV tests
      - No history of CIN 3 or higher

- 2018 guidelines in the works

Prostate Cancer Risks

- Age
  - > 65 yo
- History
  - 2x more likely one or more affected first-degree relative
- Ethnicity
  - African American
- Meds
  - Omega 3 = >risk High grade CA
- Obesity
  - >BMI


Prostate Cancer Screening

- PSA
- DRE

Bottom Line

- Prostate cancer Screening
  - Grade D
  - PSA
    - recommends against prostate-specific antigen (PSA)-based screening for prostate cancer.
  - DRE
    - Not recommended as a screening for prostate cancer.
  - 2017 guidelines in the works

Colon Cancer Risks

- Age
  - > 50 yo
- History
  - Family
  - IBD
  - Polyps
- Smoking
- Diet
  - Red meats/processed
- Obesity
  - >BMI
Colon Cancer Screening

- **FOBT**
  - annual
- **Colonoscopy**
  - 10 yrs
- **Flex-Sigmoidoscopy**
  - 5 yrs

- **FOBT**
  - HemoccultSENSA
    - Sp98%-90% Se90%
  - Rehydrated Hemoccult
    - Sp90% Se90+%

- **FIT**
  - Heme Select variants
    - Sp95% Se70%-82%
    - antibodies specific for human globin and are specific for colorectal bleeding
    - not affected by diet or medications
    - Accuracy close to colonoscopy

**FOBT v FIT**

- **FOBT**
  - HemoccultSENSA
    - Sp98%-90% Se90%
  - Rehydrated Hemoccult
    - Sp90% Se90+%

- **FIT**
  - Heme Select variants
    - Sp95% Se70%-82%
    - antibodies specific for human globin and are specific for colorectal bleeding
    - not affected by diet or medications
    - Accuracy close to colonoscopy

**Colonoscopy vs Flex Sig**

- **Colonoscopy**
  - Cancers have a Proximal Shift
    - Cancers have a Proximal Shift
  - >age 65
  - Women
  - 1.8x’s perforation risk vs flex-sig

References:

- Young GP. Fecal Immunochemical Tests (FIT) vs. Office-Based Guaiac Fecal Occult Blood Test (FOBT). Practical Gastroenterology. 2004
Bottom Line

- AGE 50-75
  - Grade A
    • Recommends screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults.

- Age 76-85
  - 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.
  - Adults in this age group who have never been screened for colorectal cancer are more likely to benefit.
  - Screening would be most appropriate among adults who 1) are healthy enough to undergo treatment if colorectal cancer is detected and 2) do not have comorbid conditions that would significantly limit their life expectancy.

- AGE >85
  - Grade D
    • Recommends against screening for colorectal cancer

Lung Cancer Risks

- Smoking
- Toxins
  - Asbestos
- Smoking
- Smoking
- Smoking
- Smoking

Low Dose CT Screening

- Radiation
  - LDCT 1.5
    • Chest x ray (PA film) = 1 airline flight
      • 0.02 millisieverts msv = 2.4 days of living on Earth
    • CT Chest
      • 5 msv = 250 CXR = 1.7 years
    • CT abdomen
      • 8 msv = 400 CXR = 2.7 years

Bottom Line

- Low Dose CT
  - Grade B
  - Age 55-80
    - Annual screening 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.

CARDIOVASCULAR SCREENING

USPSTF

and ATP guidelines

Hypertension

- Bottom Line
  - Grade A
    - Annual screening for high blood pressure in adults aged 18 years or older.
    - Obtain measurements outside of the clinical setting for diagnostic confirmation before starting treatment.
ATP guidelines

- Statin Benefit Groups
  1. Individuals with clinical ASCVD
  2. Individuals 40-75 yo with diabetes with LDL-C ≥190 mg/dL
  3. Individuals 40-75 yo with diabetes with LDL-C 70-189 mg/dL and ≥7.5% 10-year ASCVD risk

- New Perspective on LDL–C and/or Non-HDL–C Treatment Goals
  • No RCT evidence to support titration to specific numeric target
  • Non-Statin therapies offer no significant risk reduction or safety profile to statins

- Global Risk Assessment for Primary Prevention
  • Pooled cohort data to more adequately assess higher-risk individuals for statin therapy
  • Assess therapy on those most likely to benefit
  • May consider no statin use in higher-risk groups found not to benefit (CHF, Hemodialysis)

- Safety Recommendations
  • Adjusted risk for non-statin benefit groups
    • CRP, CAC, ABI

- Role of Biomarkers and Noninvasive Tests
  • Adjunctive help for non-statin benefit groups
    • CRP, CAC, ABI

ATP guidelines

- High to moderate statin therapy
  • Adults <75 w ASCVD or LDL >190 (unless for statin complication)
    - > reduction in ASCVD events
  • Adults >75 years (or patients <75)
    - high versus moderate
      - No clear evidence of ASCVD events
  • Adults w DM 40-75 years no ASCVD
    - moderate
      - 7 ASCVD risk ≥7.5%
      - + additional risk factors

Cholesterol

- Bottom Line (USPSTF)
  - Grade A/B/C
    - Every 5 years, but in those over age 65, lipid levels do not rise dramatically.
    - IF known CAD, screen and treat to age 80.
    - Treat numbers and risk factors - ATP IV
AAA

- One time screening
  - Ultrasound
    - 95% sens. 100% spec.

- +/- Higher risk concerns
  - Atherosclerotic disease
  - Caucasian
  - Obesity
  - Fem/Pop aneurysm

- Women
  - Less likely to have issue until age 80


AAA Screening

- Bottom Line
  - Grade B
    - Male smokers Ages 65-75 one-time screening for abdominal aortic aneurysm (AAA) with ultrasoundography who have ever smoked.
  - Grade C
    - Male Non-smokers age 65-75 selectively offer screening
  - Grade I
    - Women smokers ages 65-75 insufficient to assess the balance of benefits and harms of screening for AAA
  - Grade D
    - Women Non-smokers age 65-75 recommends against screening

ENDOCRINE SCREENING
Osteoporosis Screening

- The FRAX algorithms
  - 10-year probability of fracture
- Dual-energy X-ray absorptiometry (DXA/DEXA)
  - T - Score
    - standard deviations
    - same sex and ethnicity average 30-year-old
    - -2.5 and lower = osteoporosis
    - -1 to -2.5 = osteopenia
    - -1 = normal
  - Z - Score (pre-men/younger)
    - same age, sex and ethnicity
    - -2.0 = low
    - above -2.0 = Normal

Osteoporosis screening

- Bottom Line
  - Grade I
    - Men – No rec.
  - Grade B
    - recommends screening for osteoporosis in women aged 65 years and older and in younger women whose fracture risk is equal to or greater than that of a 65-year-old white woman who has no additional risk factors.
    - Screening ≈ every two years (consider 1, 3, 5)

Thyroid Disease Screening

- Bottom Line
  - Grade I
    - current evidence is insufficient to assess the balance of benefits and harms of screening for thyroid dysfunction in nonpregnant, asymptomatic adults.
Diabetes Screening

- Bottom Line
  - Grade B

  - Overweight-Obese Adults 40-70
    - recommends screening every 3 years for abnormal blood glucose as part of cardiovascular risk assessment.
      - fasting plasma glucose, 2-hour post load plasma glucose, or hemoglobin A1c
    - Clinicians should offer or refer patients with abnormal blood glucose to intensive behavioral counseling interventions to promote a healthful diet and physical activity.

INFECTIOUS DISEASE SCREENING

USPSTF

and CDC guidelines

Hepatitis C

CDC 2012

- Baby Boomers 1945-65
  - 70% of all cases

- Routinely screen high-risk adult
  - IVDA
  - +partner
  - exposure to clotting factor concentrates made before 1987.
  - Blood transfusions or solid organ transplants before 1992
  - Chronic hemodialysis patients
  - Known exposure to HCV
  - Health care workers after needle sticks involving HCV-positive blood
  - Persons with HIV infection
  - Children born to HCV-positive mothers


Hepatitis C Screening

- **Bottom Line**
  - Grade B
  - recommends screening for hepatitis C virus (HCV) infection in persons at high risk for infection.
  - recommends offering 1-time screening for HCV infection to adults born between 1945 and 1965.

Lifestyle Screening

- **Bottom Line**
  - **Diet/Exercise**
    - Grade B
    - recommends offering or referring adults who are overweight or obese and have additional cardiovascular disease (CVD) risk factors to intensive behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention
  - **Alcohol**
    - Grade B
    - recommends counseling for high risk patients
    - 1 drink nightly is considered low risk
  - **Tobacco**
    - Grade A
    - clinicians ask all adults about tobacco use, either them to stop using tobacco, and provide behavioral interventions and U.S. Food and Drug Administration (FDA)-approved pharmacotherapy for cessation to adults who are smokers
  - **Drug**
    - Grade I
    - current evidence is insufficient to assess the balance of benefits and harms of screening adolescents, adults, and pregnant women for illicit drug use
  - **STIs**
    - Grade B
    - recommends intensive behavioral counseling for all sexually active adolescents and for adults who are at increased risk for sexually transmitted infections (STIs)

Other potential screenings

- **Immunizations**
  - Influenza – annual
  - Pneumococcal once after 65 if before 65 then one booster every 5 years
  - Tetanus booster every 10 years
  - Zoster once after age 60
- **Advanced Directives**
  - Counsel patient on preparing end-of-life procedures and documents
- **Sensory**
  - Hearing / Vision
    - increased safety issues and function if hearing or vision impaired
- **ADL's**
  - Address issues related to personal care or independence
- **Support Network**
  - Fiduciary
    - increased safety issues and function if hearing or vision impaired
- **Safety**
  - Falls
  - Driving
  - Vulnerability
    - Psychologic
    - Abuse
Summary

• Individualize your approach
  – Multiple guidelines can be contradictory
  – Many of the guidelines use vague language at best
    – Might, May, Consider…

• Choose your expert
  – It’s ok to have different experts
  – Just more confusing when not the same recommendations

• Remember patient autonomy
  – The patient gets to ultimately decide

• Benefit should outweigh risk
  – Do no harm
  – Duty to protect the patient

• The best treatment is prevention