

Interprofessional Geriatrics Training Program

Geriatric Health Promotion and Disease Prevention



Acknowledgements

Author: Ashish Ansal, MD

Editors: Valerie Gruss, PhD, APN, CNP-BC

 Memoona Hasnain, MD, MHPE, PhD

Expert Interviewee: Ron Chacko, MD

Screening and Prevention

- Screening
- Counseling
- Immunizations



Learning Objectives

Upon completion of this module, learners will be able to:

1. Describe which screening services are suggested for older adults
2. Define strategies for counseling older adults about nutrition, exercise, and smoking cessation
3. Identify which immunizations are recommended for older adults
4. Describe preventative services available to older adults

Screening

Older Adults Should Be Screened For:

- Substance abuse (tobacco, alcohol)
- Hypertension
- Hyperlipidemia
- Nutrition (obesity and malnutrition)
- Osteoporosis
- Vision and hearing impairment
- Cancer (breast, colorectal, cervical, prostate)
 - <http://www.uspreventiveservicestaskforce.org/BrowseRec/Search?s>

Interview with Expert: Ron Chacko, MD

Expert Interviewee: Ron Chacko, MD

Pillars of Geriatric Care

Listen to Our Expert Discuss:

- The pillars of preventative geriatric care are:
 - Counseling on concepts that are easily forgotten or ignored
 - Screening for illnesses that affect the community as a whole, based on risk factors that may make the patient more prone to those diseases
 - Vaccinating to prevent the patient from infections that exist in the community

Expert Interviewee: Ron Chacko, MD

Pillars of Geriatric Care

Listen to Our Expert Discuss (Continued):

- Diet:
 - Understand what access the patient has to food and any barriers the patient has to obtaining food
 - Learn if the patient is able to chew and swallow
 - Learn if the patient is able to prepare food

Expert Interviewee: Ron Chacko, MD

Pillars of Geriatric Care

Listen to Our Expert Discuss (Continued):

- Exercise:
 - Cardiovascular and strength training can help with the heart and balance, and can reduce the risk of falls and hip fractures
- Social connectivity:
 - Important in both the prevention of depression and in the maintenance of memory
 - Feeling connected also improves adherence and overall quality of life

Screening for Substance Abuse: Alcohol

- Screen at least once or whenever a drinking problem is suspected
- Use screening questionnaire CAGE, which has four items:
 - Have you ever felt you needed to **C**ut down on your drinking?
 - Have people **A**nnoyed you by criticizing your drinking?
 - Have you ever felt **G**uilty about drinking?
 - Have you ever felt you needed a drink first thing in the morning?
(**E**ye-opener)
- A yes response to two of the questions should prompt further questioning about drinking history

Screening for Substance Abuse: Alcohol

- Alternatively, use Short Michigan Alcoholism Screening Instrument - Geriatric Version (SMAST-G) to screen for alcohol abuse
 - 10 items:
 - <https://consultgeri.org/try-this/general-assessment/issue-17.pdf>

Screening for Substance Abuse: Tobacco

- Discuss options to stop smoking
- Counsel at every visit
- Lung cancer screening (low dose CT scan) recommended for adults above 55 to 80 years of age with 30 pack/year smoking history, who currently smoke, or have quit within the past 15 years
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lung-cancer-screening>

Hypertension and AAA Screening

- Check blood pressure at each visit
- Goals per JNC 8 guidelines:
 - 60 years and above with no CKD or diabetes < 150/90
 - 60 years and above with CKD or diabetes: < 140/90
- The Systolic Blood Pressure Intervention Trial, or SPRINT, study suggests a blood pressure level that is much lower than what is currently recommended can significantly cut the risk of heart failure and death; however, the study looked at a small high risk subset of hypertensive subjects [not in narration]

Hypertension and AAA Screening

- Check Abdominal Aortic Aneurysm (AAA):
 - Screening for men aged 65 to 75
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/abdominal-aortic-aneurysm-screening>

Hyperlipidemia

- Consider screening patients 65-75 years old if they have additional risk factors
 - E.g., hypertension, diabetes, smoking
- New cholesterol guidelines:
 - Four groups would benefit from statin therapy:
 1. Those with a clinical history of cardiovascular disease
 2. Those with LDL > 190 mg/dL
 3. Diabetics aged 40-75 with LDL 70-189

Hyperlipidemia

- Four groups would benefit from statin therapy (continued):
 4. Those aged 40-75 with LDL of 70-189 and with estimated 10-yr CVD risk of > 7.5%
 - <http://www.uptodate.com/contents/high-cholesterol-and-lipids-hyperlipidemia-beyond-the-basics>

Screening for Obesity and Malnutrition

Obesity

- US Preventive Services Task Force (USPSTF) recommends screening all adults for obesity; refer patients with BMI of 30 or higher to intensive, multicomponent behavioral interventions
- Measure weight and height at every visit
- Calculate BMI: kg/m^2

Screening for Obesity and Malnutrition

Obesity

- Obesity defined as:
 - Class 1: BMI: 30-34.9
 - Class 2: BMI: 35-39.9
 - Morbid: BMI: > 40
 - <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/obesity-in-adults-screening-and-management>

Screening for Nutrition and Malnutrition

Malnutrition

- Malnutrition defined as > 10 lb. weight loss within six months
- The Malnutrition Universal Screening Tool (MUST)
 - Developed by the Malnutrition Advisory Group, a standing committee of BAPEN (Copyright)
 - MUST: <http://www.bapen.org.uk/pdfs/must/must-full.pdf>

Screening for Nutrition and Malnutrition

Malnutrition

- Nutrition Screening Initiative
 - **SCALES: Sadness, Cholesterol levels, Albumin, Loss of weight, Eating problems, Shopping problems**
 - <http://www.mna-elderly.com/publications/598.pdf> (Omran & Morley, 2000)
- Mini Nutritional Assessment (MNA): MNA app is available for the iPhone
 - http://www.mna-elderly.com/user_guide.html (Nestle Nutrition Institute, 2017)

Screening for Vision and Hearing

Vision Screening

- Use Snellen chart annually
- Glaucoma, cataracts, macular degeneration are the most common causes of vision impairments in older adults
- Dilated eye exam annually for patients with diabetes or hypertension
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/impaired-visual-acuity-in-older-adults-screening>

Screening for Vision and Hearing

Hearing Screening

- Routinely ask screening questions:
 - Do other people have to raise their voice when talking to you?
 - Do others tell you that you have to turn the TV volume up where others think it is too loud?
 - Do you frequently ask others to repeat what they are saying?
 - <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/hearing-loss-in-older-adults-screening?ds=1&s=hearing%20screening>

Screening for Osteoporosis

- Most common reason for a broken bone among the elderly
- USPSTF recommends screening for all women 65 years of age or older and all men 70 years or older
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/osteoporosis-screening> (U.S. Preventive Services Task Force, 2015)
- Dual-energy X-ray absorptiometry (DXA) is the gold standard

Screening for Osteoporosis

- T-scores (MedlinePlus, 2015)
 - Normal -1.0 or above
 - Osteopenia between -1 and -2.5
 - Osteoporosis ≤ -2.5 and below
 - Severe osteoporosis ≤ -2.5 with fragility fracture

Assessment Question 1

Malnutrition is defined as a weight loss of:

- a) > 10 lbs. within six months
- b) > 8 lbs. within two years
- c) > 5 lbs. within one year
- d) > 3 lbs. within one year

Assessment Question 1: Answer

Malnutrition is defined as a weight loss of:

- a) > 10 lbs. within six months (Correct Answer)**
- b) > 8 lbs. within two years
- c) > 5 lbs. within one year
- d) > 3 lbs. within one year

Cancer Screening

Screening for Breast Cancer

- Two-thirds of deaths from breast cancer occur in women 65 years and older
 - <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-030975.pdf> (American Cancer Society, 2011)
- Mammography screening:
 - USPSTF recommends mammography every one to two years
 - <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/breast-cancer-screening1> (U.S. Preventive Services Task Force, 2016)
 - Starting at age 40 for women with a life expectancy of five years or more, up to the age of 74

Screening for Breast Cancer

- Breast self-examinations
 - No compelling evidence that breast self-examinations decrease breast cancer morbidity or mortality, they should not be the only screening measure
 - <http://www.cancer.gov/types/breast/mammograms-fact-sheet>
(National Cancer Institute, 2014)

Screening for Colon Cancer

- The incidence of colorectal cancer doubles every seven years beginning at 50 years of age (CDC, 2015)
- The USPSTF recommends screening for men and women 50 years and older at a frequency dependent upon the modality used:
 - Colonoscopy every 10 years
 - Flexible sigmoidoscopy every 5 years
 - Guaiac-based fecal occult blood every 1 year
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/colorectal-cancer-screening2?ds=1&s=colon%20screening> (U.S. Preventive Services Task Force, 2016)

Screening for Prostate Cancer

- USPSTF does not recommend for or against PSA testing or digital rectal examination for prostate cancer
- No clear benefit of treatment
- Patients should be counseled on risks and benefits of prostate cancer screening
- Pros and cons of testing should be discussed with the patient
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/prostate-cancer-screening?ds=1&s=prostate%20screening>

Screening for Cervical Cancer

- Screen women aged 21-65 years with Pap smear every three years with cytology
- Screening can be lengthened to every five years if combination of cytology and HPV testing are negative
- USPSTF recommends against screening for cervical cancer in women > 65 years of age who have had adequate prior screening tests which were found to be negative

Screening for Cervical Cancer

- No screening in women who have had a hysterectomy with removal of cervix and no history of high-grade precancerous lesions (CIN 2 or 3) or cervical cancer
- <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/cervical-cancer-screening>

Assessment Question 2

The USPSTF recommends mammograms every one or two years for women beginning at age 40, and up to age:

- a) 45
- b) 65
- c) 74
- d) 90

Assessment Question 2: Answer

The USPSTF recommends mammograms every one or two years for women beginning at age 40, and up to age:

- a) 45
- b) 65
- c) 74 (Correct Answer)**
- d) 90

Veterans

Background on Veterans

2015 Updated Numbers Recently Released [Film lists 2011 numbers only]

Number of Veterans	2015 (ACS, 2015)	2010 (ACS, 2010)
Living United States veterans	18.8 million; 1.6 million are women	21.3 million
Vietnam War veterans	6.8 million	7 million
Korean War veterans	1.8 million	2 million
WW II veterans	930,000	1.1 million
Gulf Wars (1990-present) veterans	5.6 million	n/a

Screening for Veterans: Questions

- When screening veteran clients, consider beginning with asking permission to inquire about their service experience by asking the following question:
 - Would it be ok if I talked with you about your military experience?
- If they agree, consider inquiring about the following:
 - When and where do you/did you serve?
 - What do you/did you do while in the service?
 - How has military service affected you?

Screening for Veterans: Questions

- The following questions can also help inform future care, but can be sensitive for the patient:
 - Did you see combat, enemy fire, or casualties?
 - Were you or a buddy wounded, injured, or hospitalized?
 - Did you have a head injury with loss of consciousness, loss of memory, “seeing stars,” or being temporarily disoriented?

Screening for Veterans: Questions

- The following questions can also help inform future care, but can be sensitive for the patient (continued):
 - Did you ever become ill while you were in the service?
 - Were you a prisoner of war?
- If the patient answers yes to any of the above questions, ask, “Can you tell me more about that?”

Screening for Veterans: Possible Exposures

- Ask all military service members and veterans questions about possible exposures during service
- Begin by asking, “Would it be ok if I asked about some things you may have been exposed to during your service?”

Screening for Veterans: Possible Exposures

- Include exposure questions about chemical, biological, and physical agents, including:
 - Pollution
 - Solvents
 - Infectious diseases
 - Blasts and explosions
 - Excessive noises or vibrations
 - Vehicular crashes

Screening for Veterans: Possible Exposures

- Include exposure questions about chemical, biological, and physical agents, such as (continued):
 - Bullet wounds
 - Radiation exposure
 - Heat
 - Shell fragments
 - Any other injuries from exposures

Common Military Environmental Exposures

- Burn pit smoke
- Sand, dust, smoke, and particulates
- Mustard gas and nerve agents
- Pesticides
- Cold injuries
- Contaminated water
- Benzene, trichloroethylene, and vinyl chloride
- Hexavalent chromium
- Endemic diseases
- Heat stroke/exhaustion
- Radiation
- Tetrachlorodibenzo-p-dioxin (TCDD) and other dioxins

Occupational Hazards

- Asbestos
- Industrial solvents
- Lead
- Radiation
- Fuels
- Polychlorinated biphenyls (PCBs)
- Noise/vibration
- Chemical agent resistant coating

Occupational Hazards

- Exposure also varies by era of combat
- Questions for the patient should be specific to that period
- Exposures specific to the Gulf War, Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn include:
 - Animal bites/rabies
 - Blunt trauma
 - Burn injuries (blast injuries)
 - Oil well fires

Occupational Hazards

- Exposures specific to the Gulf War, Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn include (continued):
 - Combined penetrating injuries
 - Dermatologic issues
 - Embedded fragments
 - Malaria prevention (Mefloquine)
 - Chemical munitions demolition
 - Multidrug-resistant Acinetobacter
 - Chemical or biological agents

Occupational Hazards

- Exposures specific to the Gulf War, Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn include (continued):
 - Spinal cord injury
 - Traumatic amputation
 - Traumatic brain injury
 - Reproductive health issues
 - Mental health issues
 - Vision loss

Immunizations

- Immunizations provided to this group of veterans should include:
 - Anthrax
 - Botulinum toxoid
 - Smallpox
 - Yellow fever
 - Typhoid
 - Cholera
 - Hepatitis B

Immunizations

- Immunizations provided to this group of veterans should include (continued):
 - Meningitis
 - Whooping cough
 - Polio
 - Tetanus

Infectious Diseases

- Infectious diseases veterans may have been exposed to that are common in those combat zones may include:
 - Malaria
 - Brucellosis
 - Campylobacter jejuni
 - Coxiella burnetii
 - Myobacterium tuberculosis
 - Nontyphoid salmonella

Infectious Diseases

- Infectious diseases veterans may have been exposed to that are common in those combat zones may include (continued):
 - Shigella
 - Visceral leishmaniasis
 - West Nile virus

Specific Environmental Exposures

- Veteran patients may have also been exposed to specific environmental factors, depending on when they served
- If the patient served in Vietnam, Korean DMZ, or Thailand, environmental exposures could have included:
 - Agent Orange exposure
 - Cold injuries
 - Hepatitis C

Specific Environmental Exposures

- During the Cold War, veterans may have been exposed to:
 - Chemical warfare agent experiments
 - Nuclear weapons testing or cleanup

Specific Environmental Exposures

- In WWII and the Korean War, veterans may have been exposed to:
 - Chemical warfare agent experiments
 - Nuclear weapons testing or cleanup
 - Cold injuries

Stress or Adjustment Problems

- Another aspect of service to discuss with your veteran patients is if they are experiencing any stress reaction or adjustment problems, including PTSD
- Ask patients if it would be acceptable to talk about stress, then include the following questions in the discussion:
 - In your life, have you ever had an experience so horrible, frightening, or upsetting that in the past month, you:
 - Have had nightmares about it or thought about it when you did not want to?

Stress or Adjustment Problems

- Ask patients if it would be acceptable to talk about stress, then include the following questions in the discussion (continued):
 - Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?
 - Were constantly on guard, watchful, or easily startled?
 - Felt numb or detached from others, activities, or your surroundings?

Resources Available for Veterans

- Veterans Crisis Line: 1-800-273-8255
- Benefits are available for veterans, and clinicians can help their patients connect to a service to help them gain access
- Ask patients:
 - Do you have a service-connected condition?
 - Would you like assistance filing for compensation for injuries/illnesses related to your service?
- The National Resource Directory (NRD): www.nrd.gov

Resources Available for Veterans

- If so, connect them to the Compensation and Benefits office of the VBA
 - 1-800-827-1000
- Other available resources include the Office of Public Health, the War-Related Illness & Injury Study Center, and Information for Veterans:
 - Compensation & Pension Benefits
 - Explore benefits: <http://explore.va.gov/>

Counseling

Counseling

All Older Adults Should be Counseled at Least Annually About:

- Nutrition
- Exercise
- Tobacco smoking cessation



Nutrition Counseling

- Reduce trans-fatty acids
- Increase healthy fats (e.g., Mediterranean diet)
- Moderate alcohol consumption
 - No more than two alcoholic drinks per day for men
 - No more than one alcoholic drink per day for women
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/healthy-diet-and-physical-activity-counseling-adults-with-high-risk-of-cvd?ds=1&s=exercise>

Exercise Counseling

Exercise

- Reduces the rate of all-cause mortality and helps prevent osteoporosis and obesity
- Currently, USPSTF has no recommendations
 - <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/healthy-diet-and-physical-activity-counseling-adults-with-high-risk-of-cvd?ds=1&s=exercise> (U.S. Preventive Services Task Force, 2016)

Exercise Counseling

Exercise

- The U.S. Surgeon General recommends:
 - Aerobic exercise 30 minutes daily 3 times a week
 - Strength training at least twice a week
 - <http://www.surgeongeneral.gov/library/calls/walking-and-walkable-communities/exec-summary.html> (U.S. Surgeon General, 2017)

Tobacco Use Cessation Counseling

- Smoking cessation at 65 years of age leads to an increase in life expectancy of 1.5 to 2.0 years for men and 2.7 to 3.7 years for women
- Counsel at every visit
- Tobacco cessation information hotline: 1-800-QUIT NOW
- Nicotine Replacement Therapy (NRT)
 - No prescription needed for patches, gum, and lozenges
- Prescription required for: bupropion, varenicline
 - <http://www.surgeongeneral.gov/priorities/tobacco/index.html>

Expert Interview: Ron Chacko, MD

Smoking Cessation Counseling

Listen to Our Expert Discuss:

- How do you approach conversations about smoking cessation with your older adult patients?
 - Smoking is not only a chemical addiction, it is also a matter of habit and a matter of dealing with various stresses in a patient's life
 - Often use themes of motivational interviewing to determine how ready a patient is to quit smoking, and to slowly move the patient closer to the ultimate goal of smoking cessation
 - Praise the patient's strengths and progress, no matter how small

Expert Interview: Ron Chacko, MD Smoking Cessation Counseling

Listen to Our Expert Discuss (Continued):

- How do you approach conversations about smoking cessation with your older adult patients? (continued):
 - Ask for permission to share the benefits of smoking cessation, since many patients are already aware
 - Ultimately catering the information available to the individual patient's situation
 - It is a process, “one of the beauties of caring for older individuals, is the ability to walk alongside, an individual in that process”

Assessment Question 3

The U.S. Surgeon General recommends exercise for older adults:

- a) Aerobic exercise one hour daily 7 days/week
- b) Aerobic exercise 30 minutes daily 3 times/week
- c) Strength training daily
- d) Aerobic exercise one hour daily 1 day/week

Assessment Question 3: Answer

The U.S. Surgeon General recommends exercise for older adults:

- a) Aerobic exercise one hour daily 7 days/week
- b) Aerobic exercise 30 minutes daily 3 times/week (Correct Answer)**
- c) Strength training daily
- d) Aerobic exercise one hour daily 1 day/week

Immunizations

Immunizations

- Influenza
- Pneumonia
- Tetanus
- Zoster

Immunizations: Pneumonia

Pneumococcal Vaccines

- PCV 13: Protects against 13 serotypes of pneumonia
- PPSV23: Protects against 23 serotypes of pneumonia

Immunizations: Pneumonia

- **Immunize:**
 - **In adults 65 years of age or older, give PCV13 followed by PPSV23 1 year later**
 - **Adults 65 years of age or older who have not previously received PCV13 and who have previously received one or more doses of PPSV23 should receive a dose of PCV13**
 - **The dose of PCV13 should be given at least 1 year after receipt of the most recent PPSV23 dose**

Immunizations: Tetanus

- Primary series: 3 doses (for unvaccinated adults)
- Doses at: 0 months, then 2 months of age, then one dose 6-12 months later, and a booster every 10 years for vaccinated adults
 - Everyone needs 1 dose of tetanus-diphtheria-acellular pertussis (Tdap); substitute Tdap for Td once (recommended because of pertussis outbreaks)
 - Side effects: local swelling and pain
- Contraindications: previous hypersensitivity neurologic reactions

Interview with Expert: Ron Chacko, MD

Tetanus Immunization

Listen to Our Expert Discuss:

- If at all possible, gather records from previous health providers to prevent unnecessary vaccinations and unnecessary cost
- If unable to find evidence of vaccination, vaccinations are safe if given again
 - The better option is to provide the vaccinations, document appropriately, and encourage patients to keep a copy for themselves so they can show future providers that they have received the vaccines needed

Immunizations: Influenza

- Annual immunization from September-December; however, those not immunized at that time should still receive the vaccine during winter to prevent influenza
- Vaccine protects against Influenza A and B
- *Fluzone High-Dose* now recommended for > 65 years of age
 - The CDC and its Advisory Committee on Immunization Practices have not expressed a preference for any flu vaccine indicated for people ages 65+ over the standard flu vaccine
 - Generic: Influenza Virus Vaccine

Immunizations: Influenza

- A higher dose of antigen in the vaccine is intended to give older people a better immune response, and thus better protection against flu
- Side effects: Fever, chills, myalgia, malaise
- Contraindicated: Anaphylactic egg hypersensitivity and allergy to egg protein

Immunizations: Zoster Vaccine

- Who should get the Zoster vaccine?
 - Anyone over the age of 60
- Given as one dose
- The Zoster vaccine should be offered to patients 60 years and above
 - Regardless of whether or not they have had chicken pox
 - Regardless of whether or not they have had a case of shingles
- The shingles vaccine helps prevent future outbreaks

Immunizations: Zoster Vaccine

Who Should Not Get the Zoster Vaccine

- A person who has ever had a life-threatening or severe allergic reaction to gelatin, the antibiotic neomycin, or any other component of the shingles vaccine
- A person who has a weakened immune system because of HIV/AIDS or another disease that affects the immune system
- A person receiving treatment with drugs that affect the immune system, like steroids, or cancer treatment such as radiation or chemotherapy

Immunizations: Zoster Vaccine

Who Should Not Get the Zoster Vaccine

- A person with cancer affecting the bone marrow or lymphatic system, such as leukemia or lymphoma
- Women who are or might be pregnant
 - Women should not become pregnant until at least four weeks after getting the shingles vaccine

Assessment Question 4

The Zoster vaccine should be offered to patients 60 years and above:

- a) Only if they have had chicken pox
- b) Only if they have never had a case of shingles
- c) Regardless of whether or not they have had chicken pox
- d) Only if they have had both chicken pox and shingles

Assessment Question 4

The Zoster vaccine should be offered to patients 60 years and above:

- a) Only if they have had chicken pox
- b) Only if they have never had a case of shingles
- c) Regardless of whether or not they have had chicken pox
(Correct Answer)**
- d) Only if they have had both chicken pox and shingles

Resources

<http://www.bapen.org.uk/pdfs/must/must-full.pdf> Accessed March 10, 2017

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