2020 Geriatric Pharmacy Specialty Recertification Literature Study: Module 1A-C (Cert # L209144)

Learning Objectives

Module 1A: Insomnia
0204-0000-20-941-H01-P

This module focuses on the pharmacological agents used for insomnia in the elderly population and the risks associated with them as well as the implications of long-term use.

Kawada K, Ohta T, Tanaka K, et al. Addition of suvorexant to ramelteon therapy for improved sleep quality with reduced delirium risk in acute stroke patients. *J Stroke Cerebrovasc Dis*. 2019; 28(1):142-8.

Learning Objectives:

- Discuss the rationale and methods used to treat sleep disturbances in the elderly after stroke.
- Evaluate the efficacy and safety of the therapies used in this study for sleep in the elderly after stroke.
- Analyze the difference between adding suvorexant and a GABAR agonist to ramelteon for incidence of delirium in the elderly after a stroke.
- Develop a quality measure to ensure appropriate therapy for insomnia in the elderly post-stroke.

Puustinen J, Lahteenmaki R, Nurminen J, et al. Long-term persistence of withdrawal of temazepam, zopiclone, and zolpidem in older adults: a 3-year follow-up study. *BMC Geriatr.* 2018; 18(1):142.

Learning Objectives:

- Discuss the long-term use of benzodiazepine agonists and withdrawal in the elderly.
- Compare melatonin and placebo effects in patients withdrawing from benzodiazepine agonists.
- Describe the factors associated with increased success rates for medication discontinuation in older adults with chronic benzodiazepine use.
- Recommend an appropriate therapy algorithm to treat benzodiazepine agonist withdrawal in the elderly.

Abad VC, Guilleminault C. Insomnia in elderly patients: recommendations for pharmacological management. *Drugs Aging*. 2018; 35(9):791-817. doi: 10.1007/s40266-01-0569-8.

Learning Objectives:

- Discuss insomnia in the elderly including the risks associated with available therapies.
- Describe comorbidities and consequences of insomnia in the elderly.
- Compare and contrast the risks versus benefits of the treatments for insomnia in the elderly.
- Explain the benefits of the three safest agents for insomnia in the elderly.
- Develop a process of ensuring that the safest and most beneficial agents are used to treat insomnia in the elderly.

Patel D, Steinberg J, Patel P. Insomnia in the elderly: a review. *J Clin Sleep Med*. 2018; 14(6):1017-1024 doi: 10.5664/jcsm.7172.

Learning Objectives:

- Describe the factors that can cause insomnia in the elderly.
- Compare nonpharmacological and pharmacological insomnia treatments in the elderly.
- Identify insomnia treatments that are most effective in the elderly.
- Develop a quality measure to ensure appropriate therapy for insomnia in
- the elderly.

Gerlach LB, Weichers IR, Maust DT. Prescription benzodiazepine use among older adults: a critical review. *Harv Rev Psychiatry*. 2018; 26(5):264-73. doi: 10.1097/HRP.0000000000000190.

Learning Objectives:

- Describe the methods used to study the use of benzodiazepines in the elderly.
- Explain the use of benzodiazepines in treating specific diagnoses in the elderly.
- Suggest alternatives to using benzodiazepines in the elderly to avoid adverse effects.
- Develop a treatment algorithm to ensure appropriate use of benzodiazepines in the elderly.

Module 1B – Primary Prevention
0204-0000-20-942-H01-P

This module focuses on the safety and efficacy of aspirin and statins for the primary prevention of cardiovascular disease in the elderly population.

Singh S, Zieman S, Go A, et al. Statins for primary prevention in older adults --- moving toward evidence-based decision-making. *J Am Geriatr Soc*. 2018; 66:2188-96.

Learning Objectives:

- Discuss cardiovascular events in the elderly using statins.
- Explain the challenges associated with ASCVD in the elderly using statins.
- Describe the potential harm of statin use in the elderly.
- Develop a treatment algorithm to ensure the appropriate use of statins in the elderly.

Mortensen MB, Falk E. Primary prevention with statins in the elderly. *J Am Coll Cardiol*. 2018; 71(1):85-94.

Learning Objectives:

- Discuss the benefits of statin therapy in the elderly when considering the associated health care costs of atherosclerotic cardiovascular disease (ASCVD).
- Compare the different guideline recommendations for the use of statins in primary prevention in the elderly population.
- Assess the age-bias on risk-based statin recommendations related to the use of statins in the elderly.
- Defend the evidence regarding the adverse effects of statin therapy in the elderly population.

McNeil JJ, Wolfe R, Woods RL, et al. Effect of aspirin on cardiovascular events and bleeding in the healthy elderly. *N Engl J Med*. 2018; 379:1509-18.

Learning Objective:

- Discuss the uses of aspirin in the elderly with cardiovascular events and bleeding risk.
- Explain how the results of the ASPREE trial may change current thinking in regards to primary prevention of cardiovascular disease in the elderly.
- Compare and contrast the data from the ASPREE trial with other aspirin studies in the elderly.
- Explain how to integrate the knowledge learned from McNeil, et al. into advancing primary prevention of cardiovascular disease in the elderly.

ASCEND Study Collaborative Group. Effects of aspirin for primary prevention in persons with diabetes mellitus. *N Engl J Med*. 2018; 379:1529-39.

Learning Objectives:

- Describe the rationale used to assess aspirin use for primary prevention in patients with diabetes mellitus.
- Explain the limitations of using aspirin in patients with diabetes mellitus.
- Explain how the results of the ASCEND study may change aspirin therapy for primary prevention in patients with diabetes mellitus.
- Interpret the effects on outcomes associated with aspirin use in patients with diabetes mellitus for primary prevention.

2019 ACC/AHA Guideline on the primary prevention of cardiovascular disease (going to be published in 2019).

Learning Objectives:

- Summarize the ACC/AHA guideline recommendations for ASCVD prevention efforts.
- Discuss lifestyle factors that can increase or decrease cardiovascular risk.
- Develop a plan for reducing cardiovascular risk in patients with diabetes mellitus.
- Explain the ACC/AHA guideline recommendation on aspirin use for primary prevention of cardiovascular disease.
- Develop a treatment algorithm based on the ACC/AHA guideline to provide primary prevention coverage for elderly patients with cardiovascular disease or at risk for cardiovascular disease.
- Summarize how the ACC/AHA guideline applies to the elderly population.

Module 1C – PPIs
0204-0000-20-943-H01-P

Freedberg DE, Kim LS, Yang Y. The risks and benefits of long-term use of proton pump inhibitors: expert review and best practice advice from the American Gastroenterological Association. *Gastroenterology*. 2017; 152(4):706-15.

Learning Objectives:

- Describe the risks associated with long-term use of proton pump inhibitors (PPIs) in the elderly.
- Explain the rationale for using PPIs in the elderly despite the risks.
- Summarize the best practice recommendations for PPI use in the elderly.
- Discuss treatment monitoring of peptic ulcer disease including challenges to monitoring.

Lanas A, Chan FKL. Peptic ulcer disease. *Lancet*. 2017; 390(10094):613-24.

Learning Objectives:

- Describe the clinical presentation and diagnosis of peptic ulcer disease.
- Explain the therapeutic challenges associated with the use of non-steroidal anti-inflammatory drugs in peptic ulcer disease.
- Summarize current therapeutic management of peptic ulcer disease in the elderly population.
- Develop a quality measure to assess the need for PPI prophylaxis in patients at risk for peptic ulcer disease.

Lazarus BB, Chen Y, Wilson FP, et al. Proton pump inhibitor use and the risk of chronic kidney disease. *JAMA Intern Med*. 2016; 176(2):238-46.

Learning Objectives:

- Discuss the methods used to quantify the association between PPI use and chronic kidney disease (CKD) based on the Lazarus, et al. study.
- Explain the results of the Lazarus, et al. study as it relates to how PPIs are used in patients with CKD.
- Suggest an alternative therapeutic approach to PPIs when patients are known to have or are at risk for CKD.
- Describe how to extrapolate the results of this study to the elderly population.

Xie Y, Bowe B, Yan Y, et al. Estimates of all cause mortality and cause specific mortality associated with proton pump inhibitors among US veterans: cohort study. *BMJ*. 2019; 365:1580.

Learning Objectives:

- Discuss the methods used to estimate mortality among patients taking PPIs.
- Identify the type of patients that were most at risk for negative outcomes.
- Develop a plan to prevent adverse events with PPI use.
- Develop a treatment plan to ensure appropriate PPI use.

Zirk-Sadowski J, Masoli J, Delgado J, et al. Proton-pump inhibitors and long-term risk of community-acquired pneumonia in older adults. *J Am Geriatr Soc*. 2018; 66(7): 1332-8.

Learning Objectives:

- Discuss the association of long-term use of PPIs and pneumonia incidence in the elderly.
- Compare and contrast the data from Zirk-Sadowski, et al. study with previous literature.
- Develop a treatment and monitoring plan for elderly patients at risk for pneumonia who need to be placed on PPIs.