



DO FOURTH-YEAR (M4) MEDICAL STUDENTS RECOGNIZE POTENTIALLY DANGEROUS MEDICATIONS FOR OLDER ADULTS?

Jared Davis, MS3 and John Agens, MD

THE FLORIDA STATE UNIVERSITY COLLEGE OF MEDICINE

Email Dr. Agens at john.agens@med.fsu.edu or Jared Davis at jwd12b@med.fsu.edu for more information on this study or poster.

BACKGROUND AND GOALS

As the population of 65+ grows, medical training must be able to provide physicians who are capable of caring for geriatric patients.

According to the American Geriatrics Society’s (AGS) Choosing Wisely recommendations, physicians should not prescribe medications until conducting a medication review (MR). MRs identify high-risk medications, reduce polypharmacy, and maintain appropriate prescribing in the older adult population.

The FSU College of Medicine has a required fourth-year geriatrics clerkship. One of the core competencies is performing a MR that includes a patient-centered analysis of general efficacy, specific risk/benefit analysis, calculation of remaining life expectancy and comparison with time to benefit for each medication, reasoning out a person-centered therapeutic plan.

Study Purpose

To identify whether fourth-year (M4) medical students can identify potentially harmful medications according to the AGS Beers Criteria and show clinical reasoning for discontinuation.

METHODS

Twenty-two graduates of the geriatrics clerkship consented to a systematic evaluation of their MR assignments.

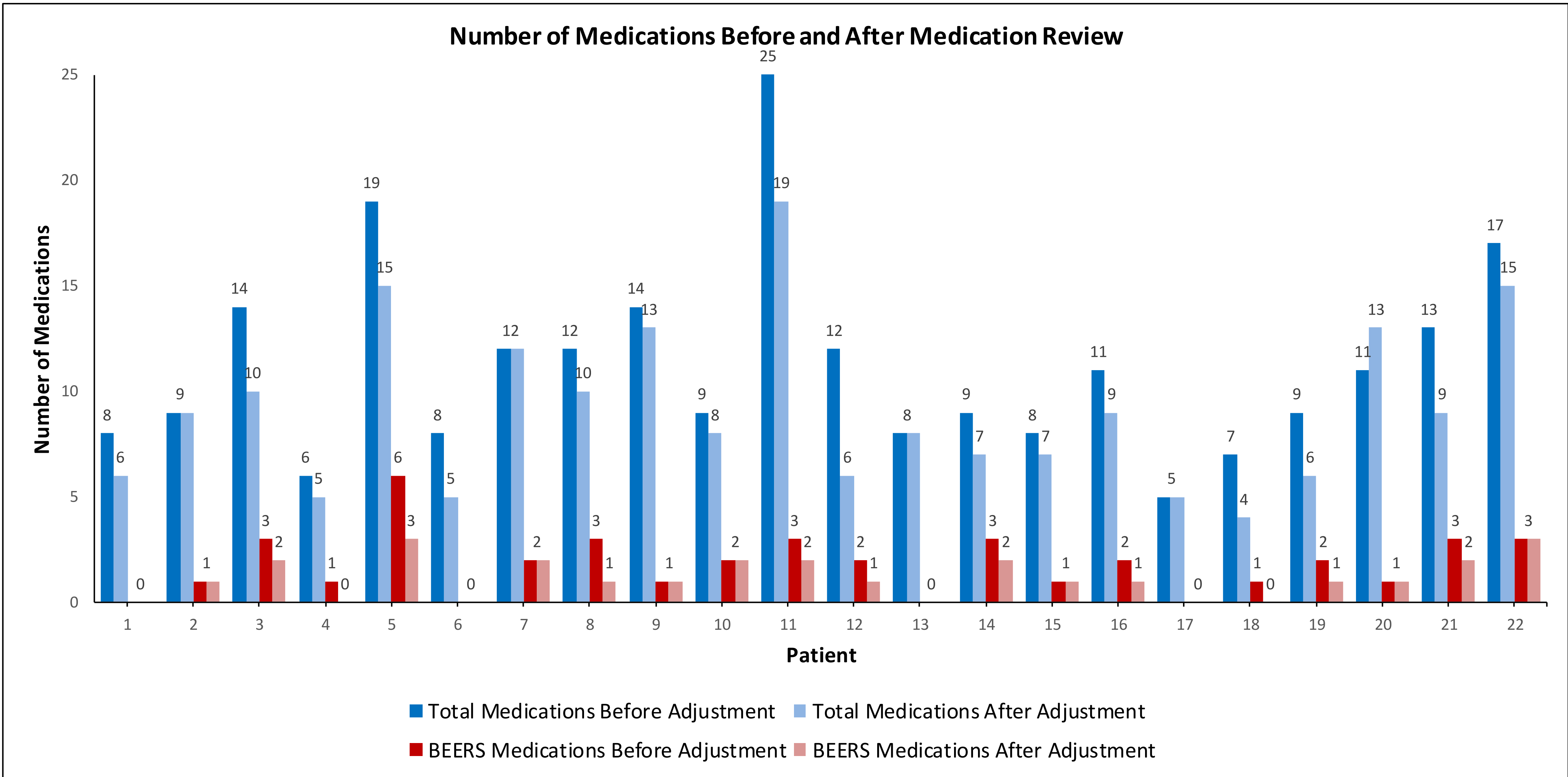
- We compared the number of medications the patients were initially prescribed to the number of medications the patient had after the MR.
- We compared the number of medications listed in the Beers Criteria before and after the MR.
- We also examined the justification given by the students of their choice to continue, discontinue, or adjust a Beers medication.

We compared each patients medication list to the AGS Beers Criteria in order to identify potentially dangerous medications.

A search was performed for the any version of the word “Beers” to identify the students who acknowledged the AGS Beers Criteria in their MR assignment.

RESULTS

- Patients’ ages in the assignments ranged from 55-97. The average age was 81 years.
- Of the 22 students who completed the assignment, 15 (68%) acknowledged Beers Criteria in their assignment. Of the 15, 11 (73%) students adjusted the patient’s Beers medications.
- Of the 22 patients, 18 (82%) were initially prescribed Beers medications, with an average of 2.2 medications per patient.
- After the MR, 16 (73%) patients were taking Beers medications, with an average of 1.6 medications per patient.



Status of Beers Medications by Drug Category after Student Medication Review

Categories of BEERS Medications	Continued	Discontinued	Dose Adjusted
Allergy Relief		1 (2.5%)	
Anticoagulant	4 (10%)	1 (2.5%)	
Anxiolytic	3 (7.5%)	1 (2.5%)	1 (2.5%)
Cardiovascular	5 (12.5%)	1 (2.5%)	
Endocrine		1 (2.5%)	
Gastrointestinal	1 (2.5%)		
Genitourinary		1 (2.5%)	
Neurologic		1 (2.5%)	
Pain Relief	3 (7.5%)	1 (2.5%)	
Psychiatric	5 (12.5%)	6 (15%)	1 (2.5%)
Pulmonary	2 (5%)		1 (2.5%)
Total	20	14	3

CONCLUSION

Based on the results, our study suggests that:

- The fourth-year medical students who completed the clerkship assignment are capable of identifying potentially harmful medications and weighing risks and benefits. They are also capable of adjusting and discontinuing their geriatric patients’ medications when given clear objectives on a written MR assignment.

For example, this is the justification one student wrote for discontinuing their patient’s cardiovascular medication.

"Not only is this drug on the Beer’s list, one of the potential side effects is CHF [chronic heart failure]. I mention this because she was recently hospitalized for pulmonary edema associated with CHF exacerbation."

This study has limitations due to a small sample size and the reliance on self-reported data from the Geriatric Clerkship MR assignment.

DISCUSSION

Performing a MR is one of the core competencies required during the geriatrics clerkship. As a next step, other clerkship competencies that require written assignments, such as the functional assessment and end-of-life care assignments, could be analyzed.

This study suggests that our students gain essential training in the care of geriatric patients through the Geriatric Clerkship.

REFERENCES

1. American Geriatrics Society updated Beers Criteria for potentially inappropriate medication use in older adults. *J Am Geriatr Soc.* 2012;60(4):616-631.
2. American Geriatrics Society identifies another five things that healthcare providers and patients should question. *J Am Geriatr Soc.* 2014;62(5):950-960.