



<b>Body System:</b> Patient-Based Care		
<b>Session Topic:</b> Polypharmacy in the Elderly		
<b>Educational Format</b>		<b>Faculty Expertise Required</b>
<b>REQUIRED</b>	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
<b>OPTIONAL</b>	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>
<b>Professional Practice Gap</b>	<b>Learning Objective(s) that will close the gap and meet the need</b>	<b>Outcome Being Measured</b>
<ul style="list-style-type: none"> <li>Family physicians have gaps in knowledge and performance in evaluating for potentially adverse drug events, among elderly patients receiving multiple medications.</li> <li>Family physicians have gaps in knowledge and performance in developing systematic approach to managing elderly patients with multiple chronic conditions that focuses on the quality-of-life outcomes most valued by the patient, and includes applicable REMS.</li> <li>Family physicians have knowledge and performance gaps in developing collaborative care plans to address the needs of patients who have poor health literacy or reduced cognitive function, or those patients who have language barriers, in order to foster appropriate self-administration of</li> </ul>	<ol style="list-style-type: none"> <li>Use evidence-based criteria (e.g. BEERS, STOPP, START) to evaluate for potentially adverse drug events, among elderly patients receiving multiple medications.</li> <li>Develop a systematic approach, including applicable REMS, to managing elderly patients with multiple chronic conditions that focus on the quality-of-life outcomes most valued by the patient.</li> <li>Develop collaborative care plans to address the needs of patients who have poor health literacy or reduced cognitive function, or those patients who have language barriers, in order to foster appropriate self-administration of medications.</li> <li>Counsel elderly patients and caregivers about tools, resources, and strategies to aid in the self-administration of medications.</li> </ol>	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.



<p>medications.</p> <ul style="list-style-type: none"> <li>Family physicians have knowledge and performance gaps in educating elderly patients and caregivers about tools, resources, and strategies to aid in the self-administration of medications.</li> </ul>		
---	--	--

**ACGME Core Competencies Addressed** (select all that apply)

Medical Knowledge	Patient Care
Interpersonal and Communication Skills	Practice-Based Learning and Improvement
Professionalism	Systems-Based Practice

**Faculty Instructional Goals**

Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
  - Visit <http://www.aafp.org/journals> for additional resources
  - Visit <http://familydoctor.org> for patient education and resources
- Provide specific examples utilizing BEERS/STOPP/START criteria to evaluate for potentially adverse drug events, including examples of when physicians should not rely on such criteria alone
- Provide specific examples and strategies for systematically managing elderly patients with chronic conditions, including applicable REMS, with an emphasis on reducing adverse drug events
- Provide specific strategies, tools, and resources to address the needs of patients who have poor health literacy or reduced cognitive function, or those patients who have language barriers, in order to foster appropriate self-administration of medications
- Provide specific strategies and resources to assist physicians in providing consultation to elderly patients and caregivers about tools, resources, and strategies to aid in the self-administration of medications

**Needs Assessment:**



Among older Americans, aged 60 and over, more than 76% used two or more prescription drugs and 37% used five or more.<sup>1</sup> The risk of adverse drug events is considerable in older patients, leading to one in six hospital admissions because of an adverse drug event.<sup>2</sup> In fact, polypharmacy has been shown to increase a patient's risk for falls and postoperative hip fracture, precipitate confusion, and incontinence.<sup>3-5</sup> Polypharmacy associated with multi-morbidity is burdensome for patients, likely leads to a reduction of overall drug benefit, and is an additive effect of harms and side effects.<sup>6</sup> Older adults are often negatively impacted by polypharmacy and are at greater risk for adverse drug events due to metabolic changes, drug-drug interactions, prescribing cascades, and are at greater risk for hip fractures.<sup>2,7</sup> Unintentional weight loss in older adults may also be due to medication use as polypharmacy can interfere with taste or cause nausea.<sup>8</sup>

The American Academy of Family Physicians (AAFP) CME Needs Assessment Survey indicates that family physicians have statistically significant and meaningful knowledge gaps to provide optimal manage of polypharmacy and medication interactions.<sup>9</sup> More specifically, CME outcomes data from 2014 AAFP Assembly: *Polypharmacy in the Elderly: I Rattle When I Walk* sessions suggest that physicians have knowledge and practice gaps with regard to using medication reconciliation tools; BEERS, START and STOP medication lists; and reviewing medication lists with patients, and provide counseling regarding side effects and stopping unnecessary medications.<sup>10</sup>

Physicians are often challenged with the need to manage multiple chronic conditions in their older patients because clinical practice guidelines, applied without consideration of other chronic conditions and medications, can lead to adverse drug events.<sup>11</sup> Instead, physicians must be able to develop a systematic approach that identifies the quality-of-life outcomes most valued by the patient that should take precedence over the routine implementation of practice guidelines that recommend medications for generic clinical scenarios.<sup>2,12</sup> A recent Cochrane review indicated that Warfarin (Coumadin), insulin, and digoxin accounted for one in three of ER visits, by older patients, because of an adverse drug event, whereas drugs on the Beers list accounted for less than 9 percent. Interventions to improve appropriate polypharmacy have been shown to reduce inappropriate prescribing and medication-related problems, although it is unclear if these intervention improve appropriate polypharmacy, such as pharmaceutical care.<sup>13</sup> The rate of adverse drug events may be reduced by using validated risk calculators for bleeding in patients taking warfarin, setting less stringent goals for A1C levels in older patients with comorbidities, and avoiding high doses of digoxin or use of the drug without proper indications.<sup>14</sup>

Family physicians should be knowledge about factors that influence pharmacokinetics in older adults; be aware of sources of adverse drug events; medications to avoid when possible in older adults; have a systematic approach for detecting adverse drug events; be aware of practical considerations to reduce the risk of adverse drug events; and know how to effectively use BEERS, STOPP, and START criteria.<sup>2,7</sup> Family physicians should also be familiar with applicable REMS for medications they are prescribing to their elderly patients.<sup>15</sup>

Elderly patients also have difficulty with self-administration of medication. Some studies suggest that as many as half of the elderly population lacks the adequate literacy skills to self-administer medications, particularly for multiple chronic conditions.<sup>16,17</sup> Physicians should consider the



following evidence based recommendations to address concerns of health literacy among elderly patients:<sup>18</sup>

- Use universal health literacy precautions with all patients, regardless of their literacy or education levels.
- Prioritize and limit information to three key points for each visit.
- Use the teach-back method to assess patient comprehension of information.
- Simplify forms and offer assistance with form completion.

However, non-adherence is not simply a knowledge discrepancy, but it can also involve feelings, reactions to the physician, cost, availability, and competing medical belief systems.<sup>7</sup> Physicians should have strategies in place, including group counseling and collaborative care plans, to address the needs of patients who have poor health literacy, or those patients who have language barriers, in order to foster appropriate self-administration of medications.<sup>19-24</sup> Elderly patients who do not live in some level of managed care facility will often receive assistance from a family caregiver. In fact, in 2009, nearly 66 million Americans provided some level of care for an elderly family member.<sup>25</sup> However, a majority of caregivers (81%) feel inadequately trained, having never received any formal education in caregiving.<sup>25</sup> Family physicians should be prepared to counsel both elderly patients and caregivers about tools that can help manage self-administration of medications, such as home telemedicine, telehealth, disease-state monitoring systems, automatic medication dispenser, and vibrating alarm watches.<sup>25</sup>

Family physicians should receive continuing education, based on evidence-based recommendations and guidelines, to improve their management of polypharmacy in elderly patients.

#### Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Reducing the risk of adverse drug events in older adults<sup>2</sup>
- Using medications appropriately in older adults<sup>5</sup>
- American Geriatric Society: Care of Older Adults with Multi-morbidity<sup>6</sup>
- American Geriatric Society: updated BEERS criteria<sup>26</sup>
- Minimizing adverse drug events in older patients<sup>7</sup>
- Appropriate use of polypharmacy for older patients<sup>14</sup>
- Unintentional Weight Loss in Older Adults<sup>8</sup>
- Health literacy: the gap between physicians and patients<sup>21</sup>
- Health Literacy in Primary Care Practice<sup>18</sup>
- The role of health literacy in patient-physician communication<sup>22</sup>
- Help your patient "get" what you just said: a health literacy guide<sup>23</sup>
- Engaging Patients in Collaborative Care Plans<sup>24</sup>
- Medication adherence: we didn't ask and they didn't tell<sup>27</sup>
- FamilyDoctor.org - Seniors: Managing Your Medications (patient resource)<sup>28</sup>
- Caregiver Resource – FCA: Caregivers' Guide to Medications and Aging<sup>29</sup>
- FamilyDoctor.org. Caregiving: Caring for an Elderly Relative - Managing Medicines (patient resource)<sup>30</sup>
- FamilyDoctor.org. Falls: How to Lower Your Risk (patient resource)<sup>31</sup>



References

1. Centers for Disease Control and Prevention. NCHS Data Brief: Prescription Drug Use Continues to Increase: U.S. Prescription Drug Data for 2007-2008. 2010; <http://www.cdc.gov/nchs/data/databriefs/db42.htm>. Accessed July, 2013.
2. Pretorius RW, Gataric G, Swedlund SK, Miller JR. Reducing the risk of adverse drug events in older adults. *American family physician*. Mar 1 2013;87(5):331-336.
3. Ziere G, Dieleman JP, Hofman A, Pols HA, van der Cammen TJ, Stricker BH. Polypharmacy and falls in the middle age and elderly population. *British journal of clinical pharmacology*. Feb 2006;61(2):218-223.
4. Lai SW, Liao KF, Liao CC, Muo CH, Liu CS, Sung FC. Polypharmacy correlates with increased risk for hip fracture in the elderly: a population-based study. *Medicine*. Sep 2010;89(5):295-299.
5. Willlams CM. Using medications appropriately in older adults. *American family physician*. Nov 15 2002;66(10):1917-1924.
6. American Geriatrics Society, Expert Panel on the Care of Older Adults with Multimorbidity. Guiding principles for the care of older adults with multimorbidity: an approach for clinicians. 2012; <http://www.guideline.gov/content.aspx?id=39322&search=polypharmacy>. Accessed 7/17/2013.
7. Pham CB, Dickman RL. Minimizing adverse drug events in older patients. *American family physician*. Dec 15 2007;76(12):1837-1844.
8. Gaddey HL, Holder K. Unintentional weight loss in older adults. *American family physician*. May 1 2014;89(9):718-722.
9. AAFP. 2012 CME Needs Assessment: Clinical Topics. American Academy of Family Physicians; 2012.
10. American Academy of Family Physicians (AAFP). AAFP Assembly CME Outcomes Report. Leawood KS: AAFP; 2014.
11. Boyd CM, Darer J, Boult C, Fried LP, Boult L, Wu AW. Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: implications for pay for performance. *JAMA : the journal of the American Medical Association*. Aug 10 2005;294(6):716-724.
12. Steinman MA, Hanlon JT. Managing medications in clinically complex elders: "There's got to be a happy medium". *JAMA : the journal of the American Medical Association*. Oct 13 2010;304(14):1592-1601.
13. Patterson SM, Hughes C, Kerse N, Cardwell CR, Bradley MC. Interventions to improve the appropriate use of polypharmacy for older people. *Cochrane Database Syst Rev*. 2012;5:CD008165.
14. Hitzeman N, Belsky K. Appropriate use of polypharmacy for older patients. *American family physician*. Apr 1 2013;87(7):483-484.
15. U.S. Food and Drug Administration (FDA). Approved Risk Evaluation and Mitigation Strategies (REMS). 2013; <http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm111350.htm>. Accessed May, 2013.



16. Marvanova M, Roumie CL, Eden SK, Cawthon C, Schnipper JL, Kripalani S. Health literacy and medication understanding among hospitalized adults. *Journal of hospital medicine : an official publication of the Society of Hospital Medicine*. Nov 2011;6(9):488-493.
17. Kripalani S, Henderson LE, Chiu EY, Robertson R, Kolm P, Jacobson TA. Predictors of medication self-management skill in a low-literacy population. *Journal of general internal medicine*. Aug 2006;21(8):852-856.
18. Hersh L, Salzman B, Snyderman D. Health Literacy in Primary Care Practice. *American family physician*. Jul 15 2015;92(2):118-124.
19. Anderson KM, Siems LV, Holloway SC, Sultana N, Braund WE, Harris LM. Group counselling improves quality for patients with limited health literacy. *Quality in primary care*. 2012;20(1):5-13.
20. Edison K, Jeanetta S, Staiculescu I. Practice gaps--providing appropriate patient education materials for non-English-speaking patients. *Archives of dermatology*. Feb 2011;147(2):244.
21. Safer RS, Keenan J. Health literacy: the gap between physicians and patients. *American family physician*. Aug 1 2005;72(3):463-468.
22. Williams MV, Davis T, Parker RM, Weiss BD. The role of health literacy in patient-physician communication. *Family medicine*. May 2002;34(5):383-389.
23. Roett MA, Wessel L. Help your patient "get" what you just said: a health literacy guide. *The Journal of family practice*. Apr 2012;61(4):190-196.
24. Mauksch L, Safford B. Engaging Patients in Collaborative Care Plans. *Family practice management*. 2013;20(3):35-39.
25. Collins LG, Swartz K. Caregiver care. *American family physician*. Jun 1 2011;83(11):1309-1317.
26. American Geriatrics Society, Beers Criteria Update Expert Panel. American Geriatrics Society updated Beers Criteria for potentially inappropriate medication use in older adults. 2012; <http://www.guideline.gov/content.aspx?id=37706&search=polypharmacy>. Accessed 7/17/2013.
27. Brown M, Sinsky CA. Medication adherence: we didn't ask and they didn't tell. *Family practice management*. Mar-Apr 2013;20(2):25-30.
28. FamilyDoctor.org. Seniors: Managing Your Medications. 2013; <http://familydoctor.org/familydoctor/en/seniors.html>. Accessed July, 2013.
29. Family Caregiver Alliance. Caregivers' Guide to Medications and Aging. 2013; [http://www.caregiver.org/caregiver/jsp/content\\_node.jsp?nodeid=1104](http://www.caregiver.org/caregiver/jsp/content_node.jsp?nodeid=1104). Accessed July, 2013.
30. FamilyDoctor.org. Caregiving: Caring for an Elderly Relative - Managing Medicines. 2012; <http://familydoctor.org/familydoctor/en/seniors/caring-for-an-elderly-relative/managing-medicines.html>. Accessed August, 2013.
31. FamilyDoctor.org. Falls: How to Lower Your Risk. 2000; <http://familydoctor.org/familydoctor/en/prevention-wellness/staying-healthy/first-aid/falls-how-to-lower-your-risk.html>. Accessed August, 2013.