

Journal Club Handout Template

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BACKGROUND AND OVERVIEW	
Article Title/Citation	Lampela P, Hartkiainen S, Sulkava R, Huupponen R. Adverse drug effects in elderly people-a disparity between clinical examination and adverse effects self-reported by the patient. <i>Eur J Clin Pharmacol.</i> 2007;63:509-515.
Study objectives/purpose (and research hypothesis, if applicable)	The study objective was to compare drugs used to international medical recommendations and compare drug-related adverse events reported by the patient with those recognized by the physician.
Brief background (why issue is important, summary of previous literature)	Elderly people, as a group, use the most medications, with a high percentage falling into the category of polypharmacy. This trend, along with changes in body physiology and mental status changes, puts the elderly person at a higher risk for adverse effects of the drugs they are taking. Several current studies have been published to look at this increasing trend, but none have looked at the adverse effects reported by patients as compared to the side effects noted by physicians.
Funding sources	Unknown
METHODS	
Study design and methodology (type of trial, randomization, blinding, controls, study groups, length of study, etc.)	Population-based health intervention study (interview and examination) 1000 patients randomly selected 500 randomly selected from that group were given a clinical examination and counseling by a physician and other healthcare providers. 500 in the "control group" were not subjected to an intervention; results from this group were not reported here.
Patient selection & enrollment (inclusion/ exclusion criteria, sample size, etc.)	Inclusion: 75+ years old, living in Kuopio, Finland within the study area Sample size: 404 patients (out of original 500)
Interventions (if applicable)	Clinical examination and counseling by a physician and other healthcare providers. Functional capacity, strength and balance were tested. Physicians were not restricted in their ability to make changes to patients' medication profiles; changes were made as needed.
Outcome measures/ endpoints	Examination findings, interview answers, review of patient chart if applicable
Statistical analyses	Average number of medications, number of medications included into Anatomical Therapeutic Chemical (ATC) classification, number of medications used on a regular vs prn basis, adverse effects reported by type.
RESULTS	
Enrollment & baseline characteristics	404 subjects 81.5 +/- 4.9 years old 71.3% female 89.1% home-dwelling
Summary of primary and secondary outcomes including subgroup analysis, etc. Be sure to include both efficacy and safety parameters, if appropriate	98.8% were using at least one drug; 96.5% were using at least one drug on a scheduled basis Mean number of scheduled drugs: 5.2 Mean number of prn drugs: 1.4 Total mean number of drugs: 6.5 53.2% of patients did not have an adverse event (self-reported or discovered by physician) This group of patients were using mean 5.4 drugs 11.4% of patients (47 people) self-reported an adverse event This group of patients were using mean 7.3 drugs 24% of patients (97 people) had an adverse event according to a physician This group of patients were using mean 9.0 drugs 2% of patients (8 people) did not answer the question about adverse events Only 7 patients reported adverse effects (1.7%) that were also reported by a physician. Of those 7, only 4 had the same reaction as identified by the physician. The most common adverse effects reported by a physician were: hypotonia, dry mouth, dizziness, sedation, EPS, constipation, urinary retention. Patients most commonly reported: dizziness, sedation, anxiety, GI problems, allergy, and eczema. Also see Table 4 on p 513.

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AUTHORS' DISCUSSION & CONCLUSIONS	
Brief summary of authors' main discussion points	The main finding of the study was the difference in reported side effects by patients as compared to those discovered by a physician. The authors conclude that physicians must be on the lookout for adverse events and not to rely only on a patient's report. Some of the possible reasons for this occurrence are that the elderly do not realize they are experience an adverse event and may think it is a normal part of aging or part of their disease. The researchers discuss the wording of their survey question saying patients may report adverse events that occurred in the past but physicians are looking for current problems, therefore the number of events reported by the patients may be higher than was actually occurring at the time of the survey. Also discussed was the possible difference in what patients versus physicians think is an adverse event.
Author's conclusions	The authors concluded that physicians must be vigilant in checking for adverse events in the elderly and that continued education is necessary on this subject.
STUDENT'S DISCUSSION & CONCLUSIONS	
Study strengths	The study was of sufficient size; however the researchers never mentioned a goal number. The discussion seemed to hit every possible reason for the disparity found in the results. The results were detailed enough to give a good picture of what they found.
Study limitations, weakness, potentials for bias, etc.	The study did not even mention other health care providers' role in watching for adverse events in the elderly. The original survey questions were not reported in the methods. The researchers to mention that one of their questions may have been misleading to the patients, but there may have been others that could have been confusing to the elderly. The study mentions that the physician either discontinued the drug or lowered its dose, but we do not know whether a drug was changed to something else (maybe that has fewer side effects).
Applicability and impact on pharmacists/ healthcare providers	Pharmacists are aware of the problem of polypharmacy, but may not be aware of this disparity that occurs between patients and physicians. Pharmacists are in a prime position to help physicians decrease adverse events caused by drugs or drug interactions. Pharmacists can also help educate the population on what an adverse event is and what to do if a patient experiences one.
Additional thoughts or comments	
Student conclusions and recommendations	I agree with the researchers conclusions but would add that other healthcare professionals can also help combat this problem. I would recommend that pharmacists be more proactive in screening for adverse events in patients.