# **EDUCATION IN GERIATRIC PHARMACOLOGY** FOR MEDICAL AND PHARMACY STUDENTS, PHYSICIANS AND PHARMACISTS: **A SYSTEMATIC REVIEW**



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## Introduction

Research shows that in older persons (>60 y) worldwide 9 to 13 percent of all hospital admissions is medication related. Of drug related admission 50-73% is preventable. We hypothesize that this is partly due to a lack in knowledge by insufficient geriatric pharmacology education. We investigated the worldwide education in geriatric pharmacology for medical and pharmacy students, physicians and pharmacists.

### Methods

The databases Pubmed, EMBASE and PsycINFO were searched, using synonyms for education and pharmacology. These terms were combined with those of medical students or pharmacy students or physicians or pharmacists. Articles describing pharmacy education were included. From all relevant articles the objective description of the (geriatric) pharmacology educational programs was extracted.

#### **Results**

Figure 1 shows the results of the search.

For medical students pharmacology courses are described from 22 to 345 hours. The courses for geriatric pharmacology varied from 1-3 hours, as described in 4 articles. One article described a course in 'prescribing for the elderly' of approximately 1 hour of a total of 168 hours of pharmacology education (0,5%). The remaining articles described different geriatric courses.

Figure 1: Search results

For pharmacy students pharmacy curricula varied from 144 to 1480 hours of education. From the 5 articles that mentioned geriatric pharmacy education, one described a 21/2 hour course. The remaining 4 articles mentioned mandatory geriatric pharmacy courses taught at 2-43% of the studied universities in the USA, none described the exact amount.

For *physicians*, we found pharmacology courses varying from 5h a year to weekly meetings. One article described a pharmacology continuing education mail-out with a geriatric case description.

For *pharmacists*, 2 out of 3 articles described geriatric pharmacology education. One of these described different courses varying from 40 hours to 18 credit hours.

### Conclusion

We found few articles describing geriatric pharmacology education for medical and pharmacy students, physicians and pharmacists. It remains unclear if this subject is not taught and may cause a lack of knowledge, or it is just not retrievable in literature.

