



# Medical prescriptions of active substances according to the PRISCUS-list – relevance and regional variations

Riens B • Mangiapane S

## Abstract

**Background:** Medical care for elderly people is coming more and more into the focus of science and care planning in view of demographic change. The multi-morbidity, that means the simultaneous occurrence of multiple chronic and acute diseases, rises with increasing age. Due to a modified pharmacokinetic with often occurrence of polypharmacy the danger of harmful side effects is very high for elderly. The PRISCUS-list comprises 83 active substances which are potentially inappropriate for older adults (PIM = potentially inappropriate medication). This list could be used as an instrument that optimizes pharmaceutical drug safety therapies. The present analysis wants to achieve a sophisticated view of PRISCUS treatment prevalence for patients 65 years and older who use drugs with particular attention to regional variations and to a stratification for indication groups. Especially patients with a high therapeutical intensity will be observed. In addition one point of interest is the question if there are different focusses by a regional comparison, which relevance could be checked locally.

**Method:** The basis of calculation are the nationwide data of medical prescriptions referred to §300 para. 2 SGB V in 2010. The study analyses active substances according to the PRISCUS-list except substances with dose limit for an inadequate treatment in old age. There is an age standardization for the PRISCUS treatment prevalence for patients who receive drugs. The standard population comprises of inhabitants in Germany who are 65 years and older in 2009.

**Results:** With 2.4% the proportion of PRISCUS defined daily doses (DDD) is relative small. 20.8% of all patients 65 years and older who receive medicine obtain at least one PRISCUS prescription. Each patient with only one PRISCUS prescription is related. Special attention should be concentrated on those patients treated with PRISCUS medication for a longer period. 7.6% of the medical patients (36% of the PRISCUS patients) receive only one PIM prescription per year. On the other hand 7.1% of the medical patients receive 4 and more PIM prescriptions and 5.2% obtain a PRISCUS duration therapy. With 44 Mio. DDD the guideline substance Amitriptylin is on second of the PRISCUS DDD. The regional observations show for patients with PRISCUS duration therapy different treatment focuses and in the case of the standardized PRISCUS treatment prevalence a small gradient between East and West. The largest values show Rhineland-Palatinate (24.7%), Westfalia Lippe (24.3%) and the Saarland (24.3%). The smallest treatment prevalences are observed in Thuringia (17.3%), Berlin (18.9%) and Saxony-Anhalt (19.0%).

**Conclusion:** The analysis shows a relative high percentage of the patients 65 years and older with PRISCUS drugs therapy, but the prescribing volume of the overall DDD market is very small. Special attention has to be focused on the medical patients who obtain 4 and more PIM prescriptions, respectively on those who obtain a PIM duration therapy. The fact that PRISCUS drugs are prescribed to those patients who obtain already many medicines is problematical and should be discussed in the context of the

Corresponding Author: Dr. Burgi Riens  
Central Research Institute of Ambulatory Health Care in Germany  
Herbert-Lewin-Platz 3 - 10623 Berlin - Tel. +49-30-4005-2449 - E-Mail: briens@zi.de



pharmacotherapy education of the SHI-authorized physicians. The antidepressant Amitriptylin, which determines the prescription events representatively, should on the one hand prescribe preferentially as guideline substance; on the other hand a retentive application is demanded. This contradiction has to be reversed.