



ACADEMIA EUROPAEA

The Academy of Europe

FROM KNOWLEDGE TO ACTION APPLICATION

Title: Hidden Risks: Anticholinergic Burden and Inappropriate Medication Use in the Elderly

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Category: From Science to Society

Problem (max. 50 words):

The use of polypharmacy and potentially inappropriate medications (PIMs) among elderly patients is a serious concern. Despite anticholinergic medicines being expected to have long-term effects on the cognitive performance of elderly patients, they are still used in this population.

Unmet Need (max. 50 words):

As current medication regimens often include potentially inappropriate drugs with anticholinergic effects, there is a need for improved prescribing practices in elderly care. This project addresses the lack of cross-national data on anticholinergic burden and its cognitive impact, aiming to enhance medication safety and outcomes for older adults.

Project Description (max. 200 words):

Despite the significant additive risk posed by anticholinergic drugs to the elderly, these medications are still widely used in Europe. This study aims to evaluate the prescribing patterns of medications for older adults residing in nursing homes, with a specific focus on potentially inappropriate medications (PIMs) and their associated anticholinergic burden. The anticholinergic load will be assessed using established evaluation tools such as Anticholinergic Drug Burden Scales. To identify PIMs, we will reference recognized lists including the PRISCUS list, FORTA classification, and the EU(7)-PIM list. Our research will compare data from several European countries to determine the prevalence and types of PIM-listed medications prescribed to elderly patients, and to evaluate the overall anticholinergic burden within these populations. Beyond medication reviews, we will also investigate the clinical effects of anticholinergic use by incorporating cognitive testing in selected patient groups. This dual approach—combining pharmacological analysis with cognitive assessment—will allow us to explore possible correlations between anticholinergic burden and cognitive decline in the elderly. The findings from this study may help identify patterns of inappropriate prescribing and inform safer medication practices in geriatric care across different healthcare systems in Europe.

Hypothesis (25 words):

The use of PIMs with anticholinergic properties could be reduced further, and better pharmacotherapy practices could mitigate the extent of cognitive decline in older people.

Implication for Practice (50 words):

These results could form the basis of interventions aimed at improving the safety of therapy. The findings may influence clinical guidelines to help reduce the use of potentially inappropriate medications, and improve health outcomes for elderly patients across European healthcare systems.

Implication for Research (50 words):



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We will identify drugs and drug combinations that commonly cause clinically significant anticholinergic burden. Our approach can be used to evaluate the use of other PIMs and identify patterns of pharmacotherapy that result in the use of potentially inappropriate medications.