

[Potentially inappropriate medications in geriatrics: Which tools to detect them?]

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Abstract

Background: Potentially inappropriate prescriptions include over-prescription, which refers to prescription of more drugs than clinically needed, mis-prescription which refers to incorrect prescription of a drug that is needed (as per drug, dose, drug interactions, duration of therapy, duplication, follow-up, etc.) and under-prescription which stands for failure to prescribe drugs that are needed. They are associated with adverse drug events, increased use of health-care services, morbimortality and health-care costs, and poorer quality of life. Due to polymorbidity and polypharmacy, potentially inappropriate prescription is common among the elderly. In the last 2 decades, explicit indicators to detect inappropriate prescriptions were developed in geriatrics.

Objective: The aim of this review is to summarize, compare and critically review existing explicit criteria.

Documentary sources and study selection: We conducted a systematic literature search in PubMed, Embase, Cochrane Library and Google Scholar, from January 1991 to November 2015. The following keywords were used: "(inappropriate prescribing" [MeSH Terms] OR "medication errors" [MeSH Terms] AND "potentially inappropriate medications" [MeSH Terms] AND "elderly" [MeSH All field] AND "explicit criteria" [MeSH Terms]). Articles describing the development of new list of explicit indicators dedicated to geriatrics, in English and in French, were included in this review. Their characteristics, organization, content, and assessments of their validity and of the optimal tool for geriatrics are presented.

Results: Fourteen lists of explicit indicators were included in the review. An organization based on physiological systems and pathologies, as observed in ACOVE, 5th version of Beers criteria and STOPP/START enables quick application in general practice. A low overlap among criteria was observed between tools. This may be due to a lack of completeness for some tools. Mimica, ACOVE, PIEA, and STOPP/START are the most exhaustive ones, only the last three addressing the under-prescription issue. Finally, the ability to detect and reduce inappropriate prescriptions has only been evaluated for few tools; STOPP/START is the only one, which has demonstrated its ability to reduce them in a prospective study.

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