Development of a tailored tool for Medication Reviews - the AMBER algorithm

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Background Medication Reviews by community pharmacies are rarely conducted at standard care for nursing homes. Barriers for implementation are limited resources, accessibility and feasibility of protocols.

Purpose We aimed to develop an algorithm and tool, which supports pharmacists in performing Medication Reviews for residents of nursing homes in an appropriate timeframe, focusing on the special conditions and requirements of a vulnerable patient group.

Method We chose various approaches to include practice experience, best available evidence and expert opinions. At phase I, interviews on frequent and relevant problems in the medication process in nursing homes were conducted. Physicians, pharmacists, nurses and patients were consulted. At phase II, a systematic review was performed, utilizing a three-stepped design and analyzing former reviews, interventional trials and observational studies. Results of the interviews and the systematic review were considered for suitability in the algorithm and presented to an expert panel in the framework of a modified Delphi method.

Findings In total twenty-seven healthcare providers and patients took part on the interviews. Pain management, cognitive impairment, blood pressure, blood sugar control and polymedication were identified as most common and relevant aspects. Beside communication barriers, missing information and knowledge were mentioned in phase I as important. The results of the systematic review indicate that therapy should be checked for potential inappropriate medication, especially with regard to psychotropic drugs. Furthermore, polymedication, falls, infections and antibiotic prescribing was frequently studied. Practitioner mentioned communication barriers and conclusions of studies led to the suggestion of a multidisciplinary intervention design. Physicians, nurses and pharmacists should be part of the Medication Management. Patient involvement seems equally important. Consistently with the results of phase I, pain management, blood pressure and blood sugar control appeared as main issues of regarded studies. Concluded aspects were presented to international experts for valuation. Finally, a refined ten-stepped preliminary algorithm was designed.

Conclusion Different approaches and contemplation of various data led to a tailored tool for Medication Review in nursing homes. Feasibility and effectiveness must be tested in the upcoming phase to ensure smooth translation into standard care.