

Effects of medication reduction in outpatients with polypharmacy following medication review by pharmacists

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Abstract

Rationale, aims and objectives: Polypharmacy is a risk factor for the health and safety of elderly patients. To determine whether pharmacists could reduce the number of medications administered to patients with polypharmacy in a clinical setting via counselling and medical review. **Method:** The assigned clinical pharmacists conducted a medication review of outpatients at the Showa University Hospital. When a medication-related risk was identified, the pharmacists counseled the patients. We retrospectively surveyed the medical records of 13 outpatients who received interventions (medication review and counseling) by clinical pharmacists between January 2017 and June 2017. Adverse events or changes in the physical conditions of patients were assessed for 6 months. The suitability of medications was assessed using the medication appropriateness index (MAI) by two pharmacists before the review and 6 months post-review. **Results:** The number of coadministered medications was 17 (9–30) [median (range)] before the intervention; it significantly reduced to 8 (8–29) just after the intervention and to 13 (8–27) 6 months post-intervention. The MAI score was sustained for up to 6 months after the intervention (before vs. just after and 6 months after the intervention: 9 [3–23] vs. 4 [0–22] and 2 [0–23], $p < 0.005$). No adverse events were observed for 6 months. **Conclusions:** Pharmaceutical counseling and medication review by clinical pharmacists reduced polypharmacy without any adverse events for at least 6 months despite limited number of assessments. Thus, interventions (medication review and counseling) by clinical pharmacists are a useful method to resolve polypharmacy in outpatients.

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