Effect of medication recommendations generated with a decision support system on appropriate prescribing in older people in the pre-operative setting

M.N. Boersma¹, C.J.A. Huibers², A.C. Drenth-van Maanen², I.Wilting³, W. Knol²
¹Dept. of Internal Medicine, ²Dept. of Geriatrics, ³ Dept. of Pharmacy. UMC Utrecht, The Netherlands

Background. The Systematic Tool to Reduce Inappropriate Prescribing’ (STRIP) is incorporated into a clinical decision support system: STRIP Assistant (STRIPA). Aim: evaluate recommendations for optimizing polypharmacy generated using STRIPA on appropriate prescribing and mortality in pre-operative setting.

Method. A cluster randomized controlled trial in a pre-operative geriatric outpatient clinic (2014-2016). Intervention: pharmacotherapeutic recommendations generated by a research physician using STRIPA (STRIPA+) handed to the resident prior to Comprehensive Geriatric Assessment (CGA). Outcome 1: Number of effectuated ‘Potentially Prescribing Omissions’ (PPOs), ‘Potentially Inappropriate Medications’ (PIMs) and dosing adjustments by resident. Outcome 2: three months postoperative mortality.

Results. 34 clusters with 65 intervention and 59 control patients were included. The numbers of effectuated PPOs and PIMs by the resident were higher in the intervention group (PPOs 26.2% versus 3.4%; p<0.01, PIMs 46.2% versus 15.3%; p<0.01). The effectuated dosing adjustments and three months postoperative mortality did not differ.

Conclusion. Providing residents with recommendations to optimize polypharmacy using STRIPA in a pre-operative geriatric outpatient clinic improves appropriate prescribing, no difference in three months postoperative mortality was found.