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Educational intervention in primary care to reduce drug-drug interactions in elderly patients - a cluster randomised controlled trial

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Background & Aim: At least every tenth elderly primary care patient is treated with interacting drugs with potentially severe outcomes. This is problematic as drug-drug interactions (DDIs) may cause potentially severe side effects. The aim of this educational intervention was to reduce the number of DDIs among elderly patients.

Method: This was a cluster randomized controlled trial of an educational intervention performed in 68 general practices in Stockholm, Sweden. The tutors, two pharmacists, gave two lectures within 4 months to general practitioners and nurses. The lectures comprised theoretical knowledge on inappropriate drug use according to National guidelines and feedback on prescribing. One of several outcomes was the number of patients aged ≥ 65 with at least one DDI. Only 21 DDIs possibly leading to severe side effects potentially leading to the need of hospital care were considered. DDIs were assessed in an administrative database during a 4-month interval after the first educational lecture.

Results: The mean age in the total population ($n=118\ 210$ registered at 68 practices) was 74.5 (SD 7.7) years, and 55.7% were female. Every second patient had \geq two chronic diseases. Every third patient received 5 to 9 drugs, every tenth patient ≥ 10 drugs. The most common DDIs were those causing bleeding (8.2% of the total population). After the intervention, there was no significant difference between the percentage of elderly patients having at least one DDI in intervention (12.0%) and control practices (11.6%).

Conclusions: The content of the educational lectures may have been too unspecific regarding DDIs, as only feedback on prescribing at county but not practice level was available. Future educational interventions should include high-quality “feedback on prescribing” data at practice level.