Publication

Impact of a community pharmacist-led medication review on medicines use in patients on polypharmacy - a prospective randomised controlled trial

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In 2010 the 'Polymedication Check' (PMC), a pharmacist-led medication review, was newly introduced to be delivered independently from the prescriber and reimbursed by the Swiss health insurances. This study aimed at evaluating the impact of this new cognitive service focusing on medicines use and patients' adherence in everyday life.; This randomised controlled trial was conducted in 54 Swiss community pharmacies. Eligible patients used $\geq$4 prescribed medicines over >3ămonths. The intervention group received a PMC at study start (T-0) and after 28ăweeks (T-28) while the control group received only a PMC at T-28. Primary outcome measure was change in patients' objective adherence, calculated as Medication Possession Ratio (MPR) and Daily Polypharmacy Possession Ratio (DPPR), using refill data from the pharmacies and patient information of dosing. Subjective adherence was assessed as secondary outcome by self-report questionnaires (at T-0 and T-28) and telephone interviews (at T-2 and T-16), where participants estimated their overall adherence on a scale from 0-100ă%.; A total of 450 patients were randomly allocated to intervention (N = 218, 48.4ă%) and control group (N = 232, 51.6ă%). Dropout rate was fairly low and comparable for both groups (N Int = 37 (17.0ă%), NCont = 41 (17.7ă%), p = 0.845). Main addressed drug-related problem (DRP) during PMC at T-0 was insufficient adherence to at least one medicine (N = 69, 26.7ă%). At T-28, 1020 chronic therapies fulfilled inclusion criteria for MPR calculation, representing 293 of 372 patients (78.8ă%). Mean MPR and adherence to polypharmacy (DPPR) for both groups were equally high (MPRInt = 88.3, SD = 19.03; MPRCont = 87.5, SD = 20.75 (p = 0.811) and DPPRInt = 88.0, SD = 13.31; DPPRCont = 87.5, SD = 20.75 (p = 0.906), respectively). Mean absolute change of subjective adherence between T-0 and T-2 was +1.03ă% in the intervention and -0.41ă% in the control group (p = 0.058). The number of patients reporting a change of their adherence of more than ś5 points on a scale 0-100ă% between T-0 and T-2 was significantly higher in the intervention group (NImprovement = 30; NWorsening = 14) than in the control group (NImprovement = 20; NWorsening = 24; p = 0.028).; Through the PMC pharmacist were able to identify a significant

number of DRPs. Participants showed high baseline objective adherence of 87.5ă%, providing little potential for improvement. Hence, no significant increase of objective adherence was observed. However, regarding changes in subjective adherence of more than ś5ă% the PMC showed a positive effect.; Clinical trial registry database, NCT01739816 ; first entry on November 27, 2012.
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