The impact of medication review by Belgian community pharmacists on adherence, a pilot study

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Background Medication review (MR) is a widely accepted approach known to have potential impact on adherence. However, this pharmaceutical care service is not yet available and reimbursed in Belgium.
Purpose During the SIMENON study, pharmacist conducted an intermediate MR in primary care. Adherence was considered a secondary outcome. In order to attain the most realistic adherence estimation by means of refill data, different calculation methods and assumptions were tested on a subpopulation.
Method Between December 2016 and May 2017, 56 community pharmacies across Belgium participated in a pilot project and performed a MR for aged polymedicated patients. The intervention study implies a six-step approach: patient inclusion, preparation by the pharmacist (by reviewing dispensing data), patient anamnesis, analysis by the pharmacist, patient counselling and follow-up. A before-after design was used to measure the impact on adherence 9 months before and after the intervention. In a first test, we calculated the average Proportion of Days Covered (PDCavg)/patient using refill data.
Findings In the SIMENON study, 453 patients received a MR (avg 8 patients/pharmacy). The average patient was 79.4 years old and used 8.8 chronic medicines. 19891 refill lines of the first 154 patients were cleaned using following criteria: only countable unidoses (tablets, capsules) of chronic medication with a known individual dosage for the patient were taken in to account. Moreover, there had to be at least one delivery before and after MR. The resulting dataset of 4616 refill data of 149 patients (avg 30 refill data/patient) was used to test a methodology with a double carry over of stockpiled medication before baseline period and before intervention period. This allows to preserve all refill data in a relatively short observation period. The average PDC/patient significantly augmented from 0.80 to 0.89. 37/149 patients had a deteriorated PDCavg and 112/149 had a better PDCavg during the 9 months after MR.
Conclusion This preliminary analysis provides insights in the potential added value of a MR in the community pharmacy. Based on these findings, we are testing this method against the more often used method to discard the last refill of each observation period and against the Daily Patient Possession Ratio (DPPR) as an outcome measure. The most appropriate method will be used on the final dataset. We would like to discuss the different options with the participants of the PCNE workshop.