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University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Evaluating general practice pharmacist-led medicines reviews on prescribing appropriateness and patient-reported outcomes

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Background

The rates of polypharmacy and problematic polypharmacy are rising and are associated with medication-related harm and reduced quality of life. The iSIMPATHY project [1] provided an opportunity for pharmacists to join the general practice team to deliver comprehensive person-centred medicines reviews. While many studies measure prescribing appropriateness, there is limited evidence of such reviews' effects on patient-reported outcome measures (PROMs).

Aim

To investigate the impact of pharmacist-led person-centred medicines reviews in general practice on prescribing appropriateness, polypharmacy indicators (markers of high-risk prescribing) [2] and PROMs.

Methods

Following training, four pharmacists joined ten general practices between Jan 2021 and Dec 2022. Patients prescribed ≥10 regular medicines or at high risk of medication-related harm were offered medicines reviews incorporating shared decision making (fig 1), following Scottish Polypharmacy Guidance [3]. The pharmacist made recommendations to the general practitioner (GP) and followed up with the patient and others as needed. Pre- and post-review: i) polypharmacy indicators and, for a sample of patients, ii) Person-Centred modification of the Medication Appropriateness Index (PC-MAI) scores and/or iii) PROMs were collected.

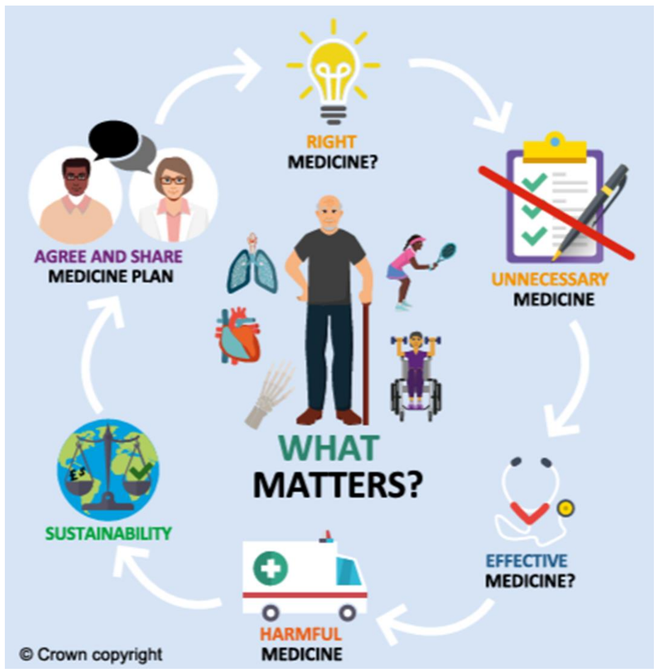


Fig 1: 7 Steps to Appropriate Polypharmacy

Results

Data is presented on 1,471 patients with a mean age of 76 years (standard deviation [SD] 9.5).
The number of medicines reduced from a mean of 13.8 (SD 4.7) pre-review to 12.3 (SD 4.3) post-review.
Polypharmacy indicators were identified 1,056 times in 47.1% of patients. The most common were bleeding- (29.5%), falls- (22.8%), and renal-related (13.2%). 70.7% were resolved following the review.
Pre- and post-review PC-MAI scores were calculated for 194 (13.2%) patients. The PC-MAI scores reduced (improved) from a mean of 27.1 (SD 14.8) pre-review to 9.8 (SD 9.9) post-review, a large improvement. 99.0% of patients experienced improved appropriateness.
Pre- and post-review PROMs were gathered for 179 patients, 93.9% of whom reported their review helped with one or more domain (fig 2). Examples of freetext comments are reported below. Significant differences between pre- and post-review were noted across all adverse effect categories, except headache (fig 3).

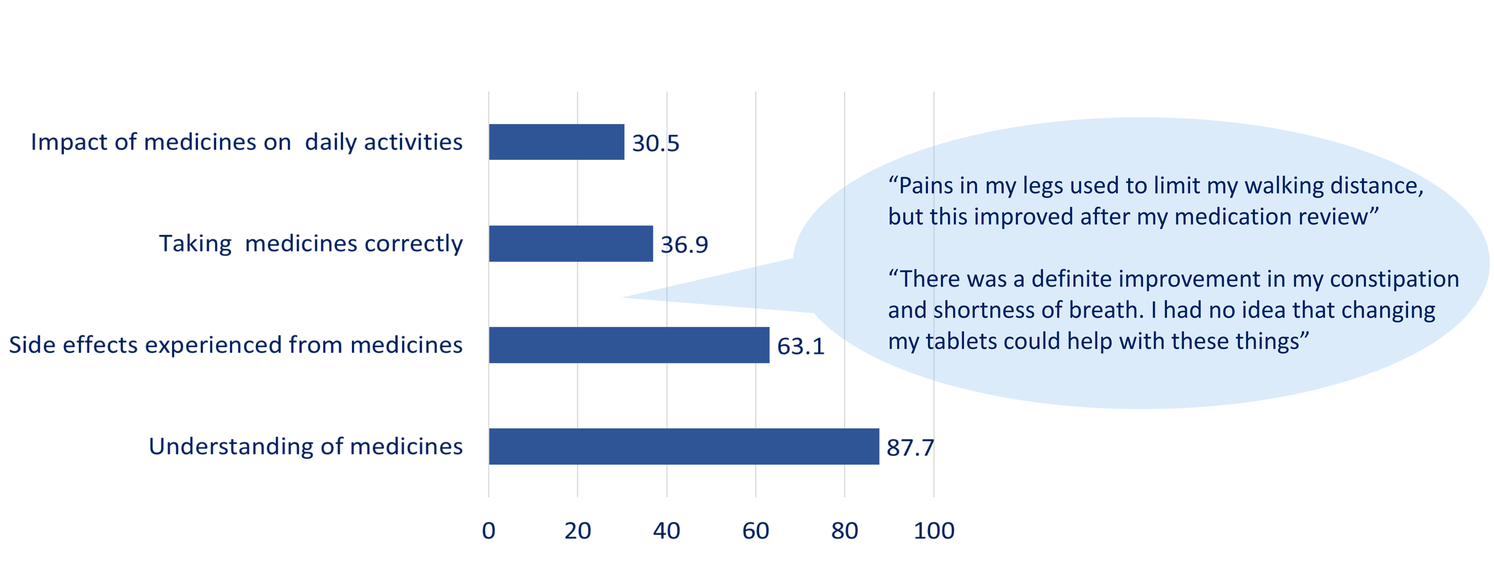


Fig 2: Percentage of patients reporting their medicines review helped with…

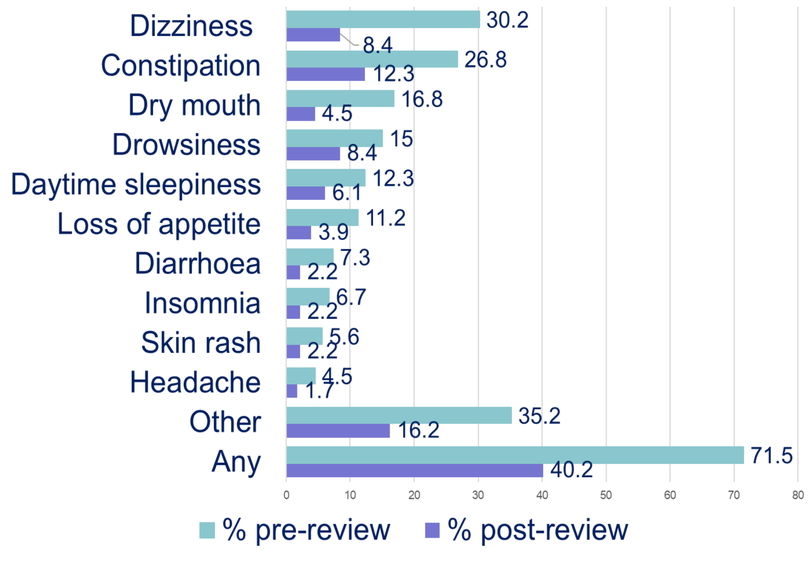


Fig 3: Percentage of patients reporting selected adverse effects pre- and post-review

Conclusion

General practice pharmacist-led person-centred medicines reviews for patients at high risk of medicines-related harm resulted in substantially improved prescribing appropriateness and patient-reported outcomes, including medicines understanding, adherence and reduced medication-related harm.
This study provides evidence to support the wider implementation of these comprehensive medicines reviews incorporating shared decision making in primary care.

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iSIMPATHY making medication personal

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