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Long-term results of a multidisciplinary medication optimization program for older adults including primary care and hospital team

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Abstract

Background

Therapeutic optimization and deprescribing in older adults face multiple barriers, whereas drug-related hospitalization increased from 3.6% to 8.5% between 2006 and 2018. The OPTIMEDOC program aims to optimize older adults' prescriptions through clinical medication review conducted by a multidisciplinary team including clinical pharmacist, geriatrician, and general practitioner (GP). This collaboration between primary care and hospital team aims to enable appropriate and sustainable prescriptions.

Purpose

This study aimed to assess the implementation of therapeutic optimizations at least 6 months after the intervention. The secondary objective was to document the most frequently deprescribed and newly introduced medications and their long-term implementation rate.

Methods


This observational study was conducted in a university hospital, including patients who benefited from the OPTIMEDOC program from April 2022 to April 2024. The primary outcome was the long-term implementation rate of recommendations. The secondary outcome was a description of the optimized drugs according to ATC2 classes.

Results

Among 1580 validated therapeutic recommendations for 143 patients included with an average age of 86.4 years old, 1473 were followed up (93.2%). Of these, 1017 were successfully implemented over 1 year (69.0%). Specifically, 81.8% of deprescriptions, 58.3% of introductions, and 70.5% of modifications were implemented. Although vaccine introductions were the most frequently recommended ($n = 222$), only 41% were implemented. Regarding deprescribing, psycholeptics, psychoanaleptics, and drugs for acid-related disorders had a long-term implementation rate of over 75%.

Conclusion

These results validate the OPTIMEDOC program as an effective strategy for sustainable therapeutic optimization, especially for deprescribing. Engaging community pharmacists could further enhance the implementation of therapeutic recommendations.

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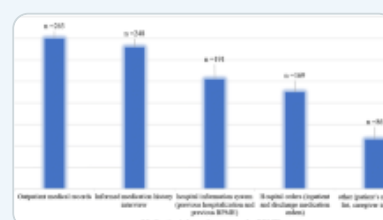
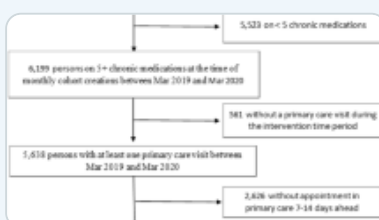
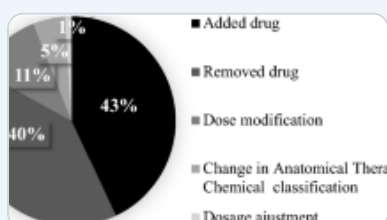
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Data availability

Data were obtained from an extraction of the BIMEDOC ® software utilized in the OPTIMEDOC program. Data will be shared by the authors on reasonable request.

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Contributions

C.G. actively participated in conducting medication reviews and pharmacotherapy analyses within the OPTIMEDOC program at the University Hospital of Caen, co-designed the study, collected, consolidated data, interpreted the results, created tables, and drafted the initial manuscript; R.L. co-designed the study, conducted data analysis and interpretation, designed figures, reviewed and revised the manuscript; A.M. actively participated in conducted medication reviews in the OPTIMEDOC program and supervised the hospital pharmacy team in the geriatric wards at the University Hospital of Caen, initiated the project by proposing the original idea, co-designed the study, supervised data analysis and interpretation, reviewed and revised the manuscript; A.C. allowed the deployment of the OPTIMEDOC program in the Normandy region, she reviewed and revised the manuscript; C.Vi. supervised data interpretation, reviewed and revised the manuscript; G.S.-L. and P.D. supported the project within their departments, reviewed and revised the manuscript; L.V., G.B., M.P., A.B., and B.G. actively contributed to medication reviews and performed geriatric assessments within the OPTIMEDOC program, they reviewed and revised the manuscript; C.B. and C.Va., hospital pharmacists in the University Hospital of Caen, also conducted medication reviews and pharmacotherapy analyses within the OPTIMEDOC program, they reviewed and revised the manuscript; I.T. provided English corrections and proofreading, reviewed and revised the manuscript. All authors critically commented on the paper, have approved the final manuscript, and agree to be accountable for the work.

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Ethics declarations

Ethics approval

The local research ethics committee approved this study.

Consent to participate

Due to the retrospective design of this study, consent was not necessary to include patients, in accordance with the current French law.

Consent for publication

All authors consented to the publication of this manuscript.

Conflict of interest

The authors have no competing interests to declare that are relevant to the content of this article.

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Impact statements

- It is feasible to involve GPs and an hospital team to optimize older patients' prescriptions for inpatients and outpatients.
- A multifaceted approach to optimizing prescriptions for older patients, through clinical medication reviews, allows for the implementation of long -term optimizations implementation, especially in deprescribing.

- The study identifies the need for focused strategies to address lower adherence to some prescriptions, such as vaccines.

Supplementary Information

Below is the link to the electronic supplementary material.

[ESM1](#)

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