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Medication review between community pharmacists and general practitioners for elderly patients with multimorbidity

Submission date
03/08/2025

Recruitment status
Recruiting

Registration date
26/08/2025

Overall study status
Ongoing

Last Edited
04/08/2025

Condition category
Other

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
As people age, they often take many different medications, which can sometimes lead to problems. Some medicines may no longer be useful, may interact badly with others, or may not be prescribed when needed. This is called inappropriate prescribing. Older people who take many medications are at greater risk of side effects, hospital visits, or taking medicine that no longer helps them.

The aim of this study is to test whether a structured medication review — led by a general practitioner (GP) and a community pharmacist working together — can help improve how medications are prescribed for older people. The study wants to see if this partnership can help stop medicines that are unnecessary or potentially harmful, and make sure important medicines aren't being missed.

Who can participate?
The study will involve GPs and community pharmacists who already work together in the same local healthcare area, called a Primary Care Team Network (CPTS) in France. The patients they care for must be aged 75 or older and take five or more medications (known as polypharmacy).

Only GPs who work in general practice (either private or salaried), and do not use alternative medicine (such as homeopathy or acupuncture), can take part. Pharmacists must work in local community pharmacies. All professionals must give their consent to participate.

What does the study involve?
GPs and pharmacists will meet to review the medication list of patients aged 75 and over who are on multiple drugs. This process is called medication reconciliation. Together, they will check for:
- Medicines that may no longer be useful (overuse),
- Medicines that may cause harm (misuse),
- Missing medicines that should be prescribed (underuse).
The main aim is to see whether these medication reviews reduce inappropriate prescriptions.

Researchers will also measure how easy the process is to carry out, how satisfied the GPs and pharmacists are, and what helps or makes it difficult for them to work together.

What are the possible benefits and risks of participating?
For health professionals, the study may help improve how medications are prescribed for older patients, reduce medication-related problems, and strengthen teamwork between doctors and pharmacists.
There are no direct physical risks to the professionals involved. Patients will not be enrolled in the study directly, so there are no risks or procedures for them. The main challenge may be the time needed for GPs and pharmacists to meet and carry out the reviews.

Where is the study run from?
The study is coordinated by the Société Française de Médecine Générale (SFMG), France.

When is the study starting and how long is it expected to run for?
April 2023 to December 2026

Who is funding the study?
The study is funded by the French Ministry of Health, through the Direction Générale de l'Offre de Soins (DGOS), as part of a grant awarded via the RESPIR (Regional Support for Research in Primary Care) for proposals managed by the GIRCI Île-de-France (Interregional Clinical Research and Innovation Group).

Who is the main contact?
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Contact information

Type(s)
Public, Scientific, Principal Investigator

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Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
RESPIR-22-022

Study information

Scientific Title
Medication review between community pharmacists and general practitioners for elderly patients with multimorbidity

Acronym
MULTIMAGES

Study objectives
Main Objective:
To develop and evaluate the impact of a community-based medication reconciliation intervention between general practitioners and community pharmacists for patients aged 75 and over who are on multiple medications, with the aim of preventing medication-related iatrogenesis

Secondary Objectives:
1. To identify barriers and facilitators to interprofessional collaboration between general practitioners and community pharmacists in ambulatory medication reconciliation for polymedicated patients aged 75 and over
2. To assess the feasibility and acceptability of the intervention by general practitioners and pharmacists
3. To evaluate the satisfaction of general practitioners and pharmacists with the intervention
4. To identify the characteristics of healthcare professionals involved in the intervention

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 18/03/2025, Comité Ethique du CNGE (155 rue de Charonne, Paris, 75011, France; +33 1 75 62 22 90; comite-ethique@cnge.Fr), ref: 741

Study design
Feasibility study using mixed methods

Primary study design
Observational

Secondary study design

Feasibility study using mixed methods

Study setting(s)
GP practice, Pharmacy

Study type(s)
Other

Participant information sheet
No participant information sheet available

Health condition(s) or problem(s) studied
Multimorbidity, polypharmacy and frailty

Interventions
Participants in this study are general practitioners (GPs) and community pharmacists working in pairs within the same Primary Care Network (CPTS) in France. After providing informed consent, each GP–pharmacist pair will carry out a structured medication reconciliation session for patients aged 75 and older who are on five or more medications.
During the session, the pair jointly reviews the patient's medication list to identify:
· Overuse (medications with insufficient clinical benefit)
· Misuse (medications with a high risk of harm)
· Underuse (missing medications that should be prescribed)
Each pair will participate in several sessions.
The observation period per participant pair will last around 3 to 6 months, and follow-up ends once all reconciliation sessions and final evaluations are completed. There is no long-term follow-up.

Intervention Type
Behavioural

Primary outcome measure
Reduction in inappropriate medication prescriptions following the physician–pharmacist medication review intervention.
Inappropriate prescriptions are defined as:
Overuse: Presence of a drug with insufficient clinical benefit (low or no added therapeutic value);
Misuse: Use of a drug associated with a high risk of serious adverse effects;
Underuse: Absence of an indicated medication that should have been prescribed.
The outcome will be assessed by comparing the appropriateness of prescriptions before and after the structured medication reconciliation session between the general practitioner and the pharmacist

Secondary outcome measures
1. Barriers and facilitators to interprofessional collaboration between general practitioners and pharmacists during the medication reconciliation session.
Areas of interest include:
- Professional organisation
- Interprofessional communication
- Collaboration and professional boundaries
- Patient pathologies and behaviours
- Social and societal factors

2. Feasibility and acceptability of the intervention, assessed by:
2.1. Participation rate of GPs and pharmacists: monitored throughout the inclusion period
2.2. Average time per medication review: reported by participants after each session via a brief log
2.3. Reasons for failure or non-completion: documented in structured logs
2.4. Perceived usefulness, strengths/weaknesses, and practicality: assessed via a post-intervention questionnaire
2.5. Optional semi-structured interviews may be conducted with some participants to explore their experience in more depth

3. Satisfaction level of the professionals involved (GPs and pharmacists) with the intervention, based on structured feedback

Overall study start date
21/04/2023

Completion date
31/12/2026

Eligibility

Key inclusion criteria
Physician–pharmacist pairs (general practitioners and community pharmacists)
1. Both professionals working within the same Primary Care Team Network (CPTS), with shared patient care
2. Managing patients aged 75 years and older with polypharmacy (defined as taking five or more medications)
3. General practitioners working either:
- In private practice (solo or group practices, or multi-professional health centers), or
- In salaried positions (e.g., municipal health centers)
4. Pharmacists working in community pharmacies (either solo or in group settings)
5. Both GPs and pharmacists must provide informed consent to participate
6. All participants must be located within one of the identified CPTS areas (see list of participating investigator centers)

Participant type(s)
Health professional

Age group
Adult

Lower age limit
25 Years

Upper age limit
75 Years

Sex
Both

Target number of participants
50

Key exclusion criteria
1. General practitioners and pharmacists not working together in daily practice (i.e., not jointly managing patients)
2. Professionals not involved in the care of patients aged 75 years or older with polypharmacy (defined as taking five or more medications)
3. General practitioners with specific alternative modes of practice, such as acupuncture, allergology, or homeopathy

Date of first enrolment
12/07/2025

Date of final enrolment
31/12/2026

Locations

Countries of recruitment
France

Study participating centre
CPTS La Courneuve
La Courneuve
France
93120

Study participating centre
CPTS de la bièvre
L'Hay les Roses
France
94240

Study participating centre
CPTS Sucy Noiseau
Sucy en brie
France
94370

Study participating centre
CPTS Saint-Maur Joinville
Saint-Maur

France
94100

Study participating centre
CPTS Sud 77
Fontainebleau
France
77920

Study participating centre
CPTS du Val d'Yerres
Epinay sous Senart
France
91860

Study participating centre
CPTS Coulommiers
Coulommiers
France
77120

Study participating centre
CPTS Val de Seine
Les Mureaux
France
78130

Study participating centre
CPTS 78 Nord
Mantes la Jolie
France
78200

Study participating centre
CPTS Saint-Quentin Yvelines
Montigny-le-Bretonneux
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78180

Sponsor information

Organisation
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Sponsor type
Research organisation

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Funder(s)

Funder type
Government

Funder Name
Direction Générale de l'offre de Soins

Alternative Name(s)
DGOS

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
France

Results and Publications

Publication and dissemination plan

1. Publications
Prepare and submit a main manuscript detailing the study methodology, results, and conclusions to a peer-reviewed journal, preferably open access.
Publish additional articles focused on specific aspects or secondary analyses, if applicable.
Always reference the ISRCTN registration number in publications for transparency.

2. Conferences
Present study findings as oral presentations or posters at relevant national and international conferences related to medical imaging and healthcare.
Participate in symposia and workshops targeting healthcare professionals involved in the field.

3. Training Institutions for Healthcare Professionals
Share results and insights through seminars, workshops, and continuing education sessions at healthcare training institutions.
Collaborate with medical schools and professional training centers to incorporate study findings into their curricula or professional development programs.

Intention to publish date
01/03/2027

Individual participant data (IPD) sharing plan
The datasets generated and/or analysed during the current study will be made available upon reasonable request from the coordinating institution.

Contact person:
Julien Le Breton, Study Coordinator
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Type of data that will be shared:
De-identified individual-level data relating to medication reconciliation sessions, including types of inappropriate prescriptions identified (overuse, misuse, underuse), professional characteristics of GP-pharmacist pairs, session duration, and qualitative data from satisfaction or feasibility questionnaires.

When the data will become available:
Within 6 months after publication of the main study results.

For how long the data will be available:
For a period of 2 years after publication.

Access criteria:
Data will be shared with qualified researchers affiliated with academic or healthcare institutions, upon submission and approval of a data access request outlining the proposed secondary analysis.

Mechanism for data access:
Requests should be submitted by email to the study contact. A data-sharing agreement (DSA) will be required to ensure data use complies with ethical, legal, and confidentiality obligations.

Consent and anonymisation:
No individual patient data is collected directly. The data concern healthcare professionals, and

all identifiable information will be fully anonymised before sharing. Participants have been informed of potential secondary data use during the consent process.

Ethical or legal restrictions:
Data sharing is subject to compliance with GDPR and French data protection laws. Any qualitative data will be reviewed to ensure full de-identification prior to release.

Additional comments:
The data will not be deposited in a public repository due to confidentiality considerations, but access can be granted on a case-by-case basis through controlled procedures.

IPD sharing plan summary

Available on request