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# International Conference on Deprescribing

## BOOK of ABSTRACTS



Pôle Santé  
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# Oral communications

**Oral Communications #1 Impact of  
Deprescribing Initiatives, Guidelines and  
Policies from Around the World**

## Updates from A Network to Catalyze Deprescribing Research

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The US Deprescribing Research Network (USDeN) aims to catalyze interdisciplinary research on deprescribing in older adults in the US and in partnership with colleague networks throughout the world. The network is organized around a series of key activities:

Investigator development includes a highly-attended annual meeting. USDeN's Junior Investigator Intensive program enrolls early-career investigators in a program of learning designed to enhance knowledge, skills, and collaborations. A webinar series and communication strategy are designed to advance educational and community-building goals.

USDeN funds pilot studies related to deprescribing through a competitive selection process focusing on scientific merit and quality of stakeholder engagement. Core leaders play an active supporting role through check-ins and connections with stakeholders. Supplementary funding has supported 4 large dementia-focused pilots as well as 4 large pilots using complementary and integrative health methods to support deprescribing of sedative-hypnotic medications.

A series of working groups are addressing key questions in deprescribing science, including identifying high-value targets for deprescribing, identifying key measures for deprescribing studies, a multi-site collaborative to develop best practices for measuring deprescribing using electronic health record data, and developing a framework for research on deprescribing communication. The network has compiled resources including institutional review board and data safety monitoring plan guidance and a literature search strategy for deprescribing.

A Stakeholder Engagement Council provides guidance on a range of network activities, including contributing to review of pilot award applications, and stakeholder perspectives are featured in educational programming.

Network-supported investigators have published over 700 papers and received over 100 grants relevant to deprescribing. Yet more needs to be done. To support the next phase, network leaders have applied for an additional 5 years of funding from the National Institute on Aging, building on past successes and branching the network into new directions.

**Keywords:** infrastructure, network, research

## **Addressing Health Equity for Indigenous Peoples in Canada: Initiatives from the Canadian Medication Appropriateness and Deprescribing Network**

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**Population and Context:** In Canada Indigenous communities have an increased use of potentially inappropriate medication and a higher medication burden. Resources and advocacy for deprescribing has not integrated an Indigenous lens in order to address health disparities for this population.

**Clinical Question:** What is an approach that the Canadian Medication Appropriateness and Deprescribing Network (CADeN) can adopt to improve appropriate medication use and safety in Indigenous communities in Canada?

**Approach:** Members of First Nation communities were invited to the CADeN national meeting in 2023. Following this, a dedicated working group was established to craft a comprehensive report addressing CADeN's historical context, identifying gaps specifically in Indigenous community engagement, articulating goals and vision, and outlining a 5-year action plan. Emphasizing humility, learning, and relationship building, the plan seeks to foster a culturally safe approach to partnering with Indigenous communities in research and actions that reflect their priorities around medication appropriateness, and prioritizing Indigenous ways of knowing and healing. Challenges in the process include determining focal points for outreach among the diverse Indigenous communities, and balancing the need to develop a pan-Indigenous approach while still honouring unique Indigenous community needs and priorities related to medication appropriateness. A meeting grant was prepared to bring together representatives from multiple Indigenous communities to begin building relationships and inform the working group. A body of Indigenous-owned testimonials will be compiled through active listening and engagement, followed by an organizational commitment to respond by developing focused resources for deprescribing and medication appropriateness in Indigenous communities.

**Lessons Learned:** A relational approach to decolonization and Indigenization is necessary to address long-standing inequities in health of First Nation communities in Canada. Development of resources and an approach to optimizing medications requires clinicians, researchers, and policy makers to invest in the process of meaningful engagement, coupled with reciprocity and intentional action.

**Keywords:** Indigenous, health equity, cultural safety, medication appropriateness



## **Enforced deprescribing: impact of a reimbursement restriction policy on lidocaine plaster discontinuation and initiation of analgesic alternatives**

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**Background:** Various approaches can reduce low-value prescribing. In Ireland, lidocaine plaster prescribing was targeted by restricting reimbursement on public health cover unless individual patient approval was granted. However, stringent measures such as this may have unintended consequences.

**Objectives:** To evaluate the impact of the introduction of a policy in Ireland to restrict reimbursement on lidocaine plaster deprescribing rates, and initiation of alternative analgesic treatments.

**Methods:** This cohort study included all individuals eligible for public health cover in Ireland (approximately 33% of the population). It used monthly dispensing data from the Primary Care Reimbursement Service, recording medicines dispensed in primary care. The policy was implemented in two phases, restriction for new users from September 2017, and for all users from December 2017. Deprescribing (i.e. discontinuation) was defined as a > 90-day gap following the latest lidocaine plaster dispensing, and initiation as a medication dispensing following no dispensing in the previous 90 days. We summarised deprescribing rates pre/post-policy introduction, and compared initiation rates for alternative analgesics in the month following lidocaine plaster deprescribing to users of other analgesics.

**Results:** Among 1.646m individuals, up to 1.4% were dispensed lidocaine monthly. Deprescribing rates ranged from 0.25-0.31% in the 4 months before the policy introduction (representing 20.0-22.9% of lidocaine plaster users), and increased to 0.40% (29.4% of users) in September 2017 and further to 0.54% (88.1% of users) in December 2017. The monthly opioid initiation rates following lidocaine plaster deprescribing ranged from 10.7-16.1% (vs 7.8-8.3% among individuals prescribed other analgesics), for systemic non-steroidal anti-inflammatory drugs (NSAIDs) was 7.8-12.7% (vs 9.4-10.0%) and for topical NSAIDs was 7.0-11.7% (vs 4.9-5.5%).

**Conclusions:** This policy increased deprescribing rates of lidocaine plasters four-fold, and increased rates of opioid and topical NSAID initiation. Although stringent measures can effectively reduce low-value prescribing, unintended consequences, e.g. switching to alternatives, can impact on patient care.

**Keywords:** analgesics, policy, drug utilization, deprescribing

## **Storylines within the Structured Medication Review: an interpretive policy analysis of deprescribing policy in primary care in England.**

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**Background:** Problematic polypharmacy (10+ medications) is growing worldwide. The risks of polypharmacy to individual patients and wider society are well documented. In England, health policy hinges on the potential of Structured Medication Reviews (SMRs) delivered in primary care to alleviate harmful polypharmacy. Medication reviews as a deprescribing intervention have limited evidence of effectiveness. Clinically, they are challenging to implement. Objectives: To analyse policies of medicine management - identifying the contexts and discourses within which the contractual requirement for the delivery SMRs has emerged.

**Methods:** This study is underpinned by Interpretive Policy Analysis (IPA) which explores how a policy is understood, interpreted, and enacted. Policy documents (England, 2013-2023, n=15) were analysed using discourse and metaphor analysis. We conducted in-depth interviews with 15 stakeholders responsible for the production, writing and implementation of deprescribing and SMR policy to identify storylines, narratives and 'emblematic issues'. Respondents were drawn from the Department of Health, professional bodies, academia, and primary care networks. Analysis situated the policy of SMR within its recent historical context, identified key policy drivers, and elicited storylines.

**Results:** This is work-in-progress. Storylines as a type of narrative allow actors to identify the issues that give meaning to complex social problems and inform action. In the case of medication review and deprescribing policy, storylines focused on: increasing medicines safety by reducing the number of people who are overprescribed medication; promoting prescribing decisions that are patient-centred; introducing a new profession to the primary care workforce; reducing financial costs of prescribing to the National Health Service (NHS); and helping the NHS meet its carbon reduction commitments.

**Conclusions:** The wide-ranging and complex storylines inherent within medicines management policy place high expectations on the delivery and outcomes of SMRs. This analysis provides context to the second research phase investigating implementation of SMRs in practice using video-reflexive ethnography.

**Keywords:** deprescribing policy, policy analysis, medication review, stakeholder interviews

## Exploring the Impact of Intersectionality on Prescribing and Deprescribing Practices: A Rapid Literature Review

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**Background:** Despite widespread advocacy for integrating intersectionality in medical education and practice, its application to pharmacotherapy remains sparse. The growing awareness of inequities in pharmacotherapy underscores the need for an intersectional exploration of how social identities within connected systems and structures of power shape medication management, including both prescribing and deprescribing practices.

**Objectives:** Firstly, to explore how research, education, and healthcare institutions within broader social, economic, and political systems shape pharmacotherapy knowledge-its production, dissemination, and application. Secondly, to assess the impact on individuals with intersecting identities, exploring the contexts of why, when, where, as well as by whom and for whom prescriptions are made.

**Methods:** We conducted a rapid literature review of published and grey literature, using intersectionality and its key tenets as our guiding theoretical framework.

**Results:** The synthesis of 16 published and 5 grey literature led to the identification of three main themes: (1) medical research and clinical trials are influenced by historical biases, leading to the inclusion of certain populations while excluding others, thereby influencing the empirical basis of pharmacotherapy, (2) the transmission and pedagogy of this knowledge within health institutions are similarly skewed, privileging certain epistemes and excluding others, thereby influencing both the distributors and recipients of pharmacotherapeutic education and, (3) this selective knowledge then informs prescribing and deprescribing practices, leading to explicit and implicit forms of bias in pharmacotherapy, perpetuating inequities along intersecting axes of social identities, such as gender, age, race and class.

**Conclusions:** We concluded with a discussion of the possibilities of, and potential for, intersectionality in identifying pharmacotherapy-related inequities and informing equitable recommendations for prescribing and deprescribing practices. In summary, intersectionality offers one way of methodologically considering the systemic biases that are deeply embedded in our pharmacotherapeutic care.

**Keywords:** Intersectionality, Pharmacotherapy, Equity, Inequity, Prescribing, Deprescribing

## **Discontinuation Versus Continuation of Statins: A Systematic Review**

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**Background:** Clinicians and patients often face a decision to continue or discontinue statins. We examined the impact of discontinuation of statins compared with continuation on clinical outcomes (all-cause mortality, cardiovascular (CV) mortality, CV events, and quality of life).

**Methods:** We conducted a systematic review. Randomized controlled trials (RCTs), cohort studies, case-control studies, and quasi-randomized studies among people  $\geq 18$  years were eligible. We searched MEDLINE, Embase, and Cochrane Central Registry (inception to August 2023). Two independent reviewers performed screening and extracted data. Quality assessment (RoB 2.0 and ROBINS-I) was performed by one author and verified by another. We summarized results narratively and used GRADE to assess certainty of evidence. We summarized findings in a subgroup of persons aged  $\geq 75$  years.

**Results:** We retrieved 8,369 titles/abstracts; 37 reports from 36 studies were eligible. This comprised 35 non-randomized studies (n=1,708,684) and 1 RCT (n=381). The 1 RCT was conducted among persons with life expectancy  $< 1$  year and showed there is probably no difference in 60-day mortality (risk difference = 3.5%, 90% CI -3.5 to 10.5) for statin discontinuation compared with continuation. Non-randomized studies varied in terms of population and setting, but consistently suggested that statin discontinuation might be associated with a relative increased risk of mortality (22/23 studies measuring this outcome), CV mortality (9/9 reports), and CV events (12/12 reports). There was a high degree of uncertainty in non-randomized studies due to methodological limitations. Findings in people  $\geq 75$  years also suggested an increased risk of adverse outcomes associated with statin discontinuation.

**Conclusions:** Statin discontinuation does not appear to affect short-term mortality near end-of-life based on 1 RCT. Outside of this population, findings from non-randomized studies consistently suggested statin discontinuation may be associated with worse outcomes, though this is uncertain. Further non-randomized studies are unlikely to resolve uncertainty.

**Keywords:** statins, cardiovascular disease, systematic review

**Oral Communications #2 Central Nervous  
System Active Medications: Opportunities  
for Deprescribing**

## Care trajectories for deprescribing benzodiazepine and sedative-hypnotics in adults over 65 years old: a multicentre qualitative study

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**Background:** Long-term prescription of benzodiazepines and sedative-hypnotics (BSH) for insomnia in older adults is considered a low-value care practice. Analysing patterns of care for BSH deprescribing by defining care trajectories may help develop and implement deprescribing interventions.

**Objectives:** To describe care trajectories relevant to BSH deprescribing initiated at the hospital setting in six European countries, from the perspective of healthcare professionals (HCPs), patients and informal caregivers.

**Methods:** A qualitative study was conducted in hospitals and primary care settings. Two theoretical frameworks were used to guide data collection and analyses: 1) The "6 W" multidimensional model of care trajectories, which includes patients' attributes ("who") and illnesses ("why"), involved care providers ("which"), care settings ("where"), treatments ("what") and time ("when"); 2) The patient-centred deprescribing process, which encompasses five steps: obtaining a medication history, identifying potentially inappropriate medications, determining whether the medication can be ceased, planning withdrawal and providing support. Data was collected online through self-administered questionnaires, semi-structured interviews and group validation meetings. Interviews and meetings were recorded and transcribed verbatim. A thematic analysis was performed.

**Results:** We conducted 47 semi-structured interviews (36 HCPs, 11 patients and caregivers); and 7 validation meetings (29 HCPs, 4 patients and caregivers). We described 10 care trajectories across the six countries. Care trajectories initiated at hospital involved several HCPs from hospital and

community care settings. Profiles of HCPs and ways of communication among HCPs were specific to each country. We found that steps of the deprescribing process were not always sequentially implemented and may include backward loops. HCPs and patients considered patient involvement in shared-decision making (SDM) to be crucial in deprescribing. Interprofessional and inter-organisational collaboration was essential to provide follow-up support and patient-centred care.

**Conclusions:** Deprescribing interventions should include context-sensitive strategies to promote patient involvement in SDM and interprofessional and inter-organisational collaboration within the care trajectory.

**Keywords:** Healthcare delivery, care trajectory, deprescribing, aged, inappropriate prescriptions, shared decision making, quality of health care.

## **Deprescribing Benzodiazepines and Sedative Hypnotics in Older Adults with Sleep Problems: patient-related barriers.**

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**Background:** In older adults with sleep problems, deprescribing benzodiazepines and sedative-hypnotics (BSH) is recommended, but implementation in clinical practice remains limited. Tackling patient barriers is essential for practice change.

**Objectives:** 1) To identify patients' barriers to reducing and stopping BSH; 2) to evaluate the association between behavioural constructs and patients' intention to reduce and stop BSH intake.

**Methods:** We surveyed participants aged 65 and above who take BSH to deal with sleep problems across six sites in six European countries. The survey questionnaire was developed based on two published questionnaires from Péteïn et al. (2023) and Lynch et al. (2023). It comprised 38 questions: 13 about sociodemographic data and BZRA use, and 25 tailored to the Theoretical Domains Framework (TDF). Descriptive statistics were done to identify major and moderate barriers. Multivariable ordinal logistic regressions were performed to assess the association between TDF domains and patients' intention to reduce and stop BSH intake.

**Results:** The questionnaire was completed by 183 patients. The majority of participants were female (67.8%), aged between 65 and 74 (42.6%); 57.9% had previously attempted to discontinue BSH. Major barriers to reducing and stopping BSH referred to the following TDF domains: knowledge; skills; memory, attention, decision processing; beliefs about capabilities; and beliefs about consequences. More participants reported being willing to reduce the dose than to stop BSH intake (60% and 48%, respectively). The TDF domains of goals, emotions, and social influence were significantly associated with the intention to reduce the dosage. The TDF domains of goals, beliefs about capabilities, reinforcement, intention to reduce, and environmental context and resources



were significantly associated with the intention to stop BSH.

**Conclusion:** Tackling patient barriers to BSH discontinuation will require a combination of strategies to enhance patient capacity and motivation but also to offer more opportunities to support them in this process.

**Keywords:** deprescription, older adults, benzodiazepine, sleep problems, implementation

## **Effects of a Targeted Intervention on Deprescribing Antidepressants in Older Persons with Dementia: A Cluster-Randomized Trial in Nursing Homes**

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**Background:** Older nursing home residents with dementia are commonly prescribed antidepressants despite limited evidence for a clinical effect and a high risk of side effects. Deprescribing can be challenging and is not often attempted.

**Objective:** To investigate the effect of a multifaceted intervention targeting nursing home general practitioners (GP) and their collaboration with the nursing home staff on the reduction of antidepressant medication for older nursing home residents with dementia.

**Method:** A cluster-randomized, open-label, controlled trial with nursing home physicians (GP) conducted in Denmark. Eligible participants were nursing home residents with dementia (diagnosed or suspected),  $\geq 72$  years old and receiving antidepressants. A three part intervention including educational material, a structuring tool and a communication tool was tested. Randomization and intervention occurred at the GP level. GPs and participants in the control group received enhanced care as usual. The primary outcome was a reduction of the total defined daily dose (DDD) of antidepressants from pre- to post-intervention in the intervention, compared to the control group. Secondary outcomes included mortality, change in other psychotropic medication, hospitalization, and changes in symptoms.

**Results:** We recruited 21 GPs with 128 eligible participants (62/66 in intervention and control). 4 GPs withdrew during the trial. The majority of participants were women, and the median age was 85. They received an average of 9 different drugs, and the most commonly prescribed antidepressants were Sertraline and Mirtazapine. The OR for reduction of antidepressants in the intervention group versus the control group was 2.3 (95% CI=0.84-6.2)). Mortality was not different between groups.

**Conclusions:** A complex intervention targeting nursing home GPs and their collaboration with the nursing home staff did not significantly reduce antidepressant medication for older persons with dementia living in nursing homes. Further testing in a more sufficiently powered study is needed.

**Keywords:** Dementia, deprescribing, nursing home, antidepressants, complex intervention

## **Feasibility of the adapted D-PRESCRIBE intervention to favour benzodiazepines deprescribing in older adults living in the Belgian community setting: a pilot randomized controlled trial (END-IT CS study)**

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**Background:** Older adults frequently take benzodiazepine receptor agonists (BZRA) despite their potential adverse effects. In Canada, the pharmacist-led D-PRESCRIBE intervention was shown to be effective on BZRA deprescribing. It comprised a patient educational brochure and a pharmacist-prescriber communication tool. We adapted these tools to the Belgian community setting using the ADAPT guidance.

**Objectives:** 1) To assess the feasibility of the adapted D-PRESCRIBE intervention in Belgium, 2) to evaluate the study conduction plan needed for a full (cost-)effectiveness trial, and 3) to perform a preliminary assessment of the economic impact of the intervention.

**Methods:** An pilot cluster randomized controlled trial aiming to recruit 56 to 80 patients ( $\geq 65$  years) from 8 to 10 community pharmacies (clusters) is ongoing. The adapted D-PRESCRIBE intervention is delivered by intervention pharmacies. Control pharmacies provide usual care. Patients are blinded to group allocation. Quantitative data are collected at baseline, three months, and six months through patient and pharmacist questionnaires. Implementation outcomes, mechanisms of impact, and contextual factors are measured and analyzed using descriptive statistics. To gain a deeper understanding, interviews will be conducted with intervention patients and pharmacists after the 6-month data collection. The feasibility of the study conduction is assessed through participation rate, completeness of the data, and a satisfaction survey. If data permits, an exploratory cost-effectiveness analysis will be performed.

**Results:** Sixty patients were recruited through seven pharmacies. Three pharmacies were allocated to the control group (25 patients) and four to the intervention group (32 patients). The 6-month data collection will be completed in March 2024, and results for the two first objectives will be presented at ICOD2.

**Conclusions:** The results will allow us to decide if the intervention and study design need to be refined, how they can be improved, and whether conducting a full implementation trial is worth considering.

**Keywords:** Benzodiazepine receptor agonists, Older adults, Deprescribing intervention, Feasibility study

## **Interventions targeting the reduction or discontinuation of long-term use of benzodiazepine receptor agonists: an overview of systematic reviews**

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**Background:** Benzodiazepine receptor agonists (BZRAs) are commonly prescribed to treat anxiety and insomnia, with guidelines recommending short-term use

**Objective:** This overview of systematic reviews will identify and narratively synthesise systematic reviews that assess the effectiveness of interventions targeting the reduction or discontinuation of long-term BZRA use.

**Methods:** Five electronic databases (MEDLINE, Embase, Web of Science, PsycINFO, CINAHL) were searched for systematic reviews focusing on randomised controlled trials that examine any interventions (e.g. psychosocial, pharmacological) targeting the reduction or discontinuation of long-term BZRA use in adults in any healthcare setting. The primary outcomes of interest to this review is intervention effectiveness, with secondary outcomes including patient-reported outcome measures (anxiety, insomnia, quality of life), adverse events, healthcare usage, and costeffectiveness. Two independent reviewers are conducting article screening and data extraction, with methodological quality assessed using AMSTAR-2 and evidence certainty assessed using the GRADE approach. Findings will be narratively synthesised.

**Results:** After removing duplicates, 3,648 studies were screened, leading to 16 reviews being included. Preliminary analysis revealed a broad range of interventions, from brief interventions to more complex psychosocial interventions and pharmacological interventions, with varying effectiveness. Further comprehensive assessment using AMSTAR-2 and GRADE is underway to ensure methodological rigor.

**Conclusions:** The findings of this overview of reviews will provide a comprehensive summary of the existing evidence for interventions targeting the reduction or discontinuation of long-term BZRA use. The findings will guide future research and inform policy decisions on managing long-term BZRA use.

**Keywords:** benzodiazepine receptor agonists, deprescribing, overview of reviews

## **People's needs and wishes regarding information and support during antidepressant discontinuation and support by pharmacists: an interview study**

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**Background:** Globally, the prevalence of antidepressant use has increased over the past decade. According to treatment guidelines for depression and anxiety antidepressant discontinuation should be considered 6 and 12 months, respectively, after remission. Antidepressant use should be discontinued gradually to avoid withdrawal symptoms. Limited consideration has been given to how users deal with antidepressant discontinuation and the role of pharmaceutical care.

**Objective:** This study aimed to obtain insight into the experiences and perspectives of patients regarding antidepressant discontinuation and support.

**Methods:** A qualitative explorative study comprising semi-structured face-to-face interviews (n=15) among users of antidepressants using a thematic analysis approach.

**Results:** Four themes were identified: experiences with antidepressant use, information and support, views and expectations regarding antidepressants and needs during discontinuing antidepressant use. Unsuccessful discontinuation attempts, the fear for antidepressant withdrawal symptoms and the occurrence of a relapse were identified as barriers to discontinue antidepressant use. The experience of side effects appeared a clear enabler. Participants expressed a strong need for information and support regarding antidepressant discontinuation.

**Conclusion:** Tailored support should include the provision of adequate information, taking the initiative to discontinuing, regular contact moments and establishing a therapeutic relationship. The role of pharmacists, as accessible and knowledgeable healthcare providers, in supporting discontinuing antidepressant could be expanded.

**Keywords:** Antidepressant Discontinuation, Patient Perspective, Qualitative Study, Information and Support

**Oral Communications #3 Deprescribing in  
the Real World: Learnings from  
Pharmacoepidemiology, Implementation  
Science, and Framework Development**

## Associations between gender, race/ethnicity and age and the discontinuation of chronic high-risk medication use in US older adults

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**Background:** High-risk medication use is associated with an increased risk of adverse events in older adults, which provides the rationale for discontinuing such medications after careful consideration by older adults and their healthcare providers to reduce medication-related harm. Little is known about the association between sociodemographic characteristics and the discontinuation of high-risk medications.

**Objective:** The aim was to study the association between age, gender, and race/ethnicity and the discontinuation of high-risk medications in new chronic users of high-risk medications.

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**Methods:** In this retrospective cohort study, we identified adults aged  $\geq 65$  years enrolled in a national health insurer between 2017-2022 who were new chronic users of 16 high-risk medication classes ( $\geq 90$  days' supply &  $\geq 2$  fills in 180 days prior to the index date). We measured age, gender, and race/ethnicity from enrollment files. The outcome was the discontinuation of high-risk medication use (no fill after grace period of 90 days). Older adults were followed until outcome occurrence, death, disenrollment, or end of data. We used Cox regression to estimate the association between the sociodemographic characteristics and discontinuation. The analyses were adjusted for clinical patient characteristics measured during the 365-day baseline period. We added three-way interaction terms for race/ethnicity, gender, and age to the model (race/ethnicity # age category # gender) to explore whether the relationship between these variables and the outcome varies across different subgroups of race/ethnicity, age, and gender.

**Findings:** Across 572,093 older adults (mean age: 73 years (SD:7), 74% White, 59% female), 17% discontinued their high-risk medication (mean follow-up: 655 days). Non-White older adults had a higher likelihood of discontinuing high-risk medications (Asian: Hazard Ratio (HR) = 1.29, 95% CI 1.22 to 1.37, Black: HR = 1.23, 95% CI 1.20 to 1.27, Hispanic: HR = 1.33, 95% CI 1.29 to 1.37). Men had a lower likelihood of discontinuing high-risk medications (HR = 0.89, 95% CI 0.87-0.91). And individuals aged  $\geq 75$  years had a lower likelihood of discontinuing high-risk medications (HR = 0.88, 95% CI 0.86 to 0.90). The joint presence of White or Hispanic race/ethnicity, male gender, and age  $\geq 75$  years increased the likelihood of discontinuation.

**Conclusion:** Despite being unable to consider the reasons for medication discontinuation, these findings that demonstrate differences across sociodemographic groups suggest the importance of exploring the individualization of medication optimization approaches in older adults.

**Keywords:** medication discontinuation, sociodemographic characteristics, retrospective cohort study, older adults

## **Discontinuation of chronically used medication in routine clinical practice among Swedish older adults: A nationwide cohort study**

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**Background:** Despite the growing interest in drug deprescribing among older adults, evidence on drug discontinuation rates for chronically used drugs in this population is scarce. Furthermore, drug discontinuation rates of the general population of older adults have not been previously compared to those of those with more regular drug dispensing patterns and better drug adherence.

**Aim:** This study aimed to describe the incidence of discontinuation for some chronically used drugs identified as targets for deprescribing among older adults.

**Objectives:** This was a nationwide cohort study including Swedish older adults ( $\geq 75$  years) linked from the Total Population Register to several nationwide registers. At baseline (January 1st, 2021) we established different drug cohorts of chronic users for benzodiazepines, proton pump inhibitors (PPI), statins, cholinesterase, antidepressants, bisphosphonates, and antipsychotics. Chronic use was defined as a medication possession ratio of  $\geq 80\%$  in the 24 months before the index dispensing. We defined discontinuation as having no new dispensing during follow-up after the end of the previous treatment episode (defined as coverage of the dispensing plus a 180-day grace period). The 1-year discontinuation per 1000 person-years was estimated for each drug cohort. In a secondary analysis, patient cohorts were restricted to patients with regular dispensing patterns (multidose drug dispensing).

**Results:** From 2,373,076 older adults identified at baseline, benzodiazepines (3.1%), PPI (1.9%), and statins (1.6%) were the most chronically used drugs. The highest incidence rate of drug discontinuation per 1000 person-years was observed for bisphosphonates (70.8), PPI (26.2), and benzodiazepines (18.6). When restricting the drug cohorts to individuals with multidose drug dispensing, attenuated rates of discontinuation were observed; bisphosphonates (16.5), PPI (5.2), and benzodiazepines (13.6).

**Conclusions:** Drug discontinuation among older adults in Sweden varied significantly across different drug classes. Discontinuation rates are higher in older adults not utilizing multidose drug dispensing (MDD), which suggests that patients with irregular dispensing patterns may contribute to apparent discontinuation.

**Keywords:** Drug Discontinuation, Older adults, Nationwide cohort



## Using multiple medications with similar adverse drug reactions can increase the likelihood of a prescribing cascade: results from a cohort study

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**Background:** Prescribing cascades occur when an initial (index) medication's adverse drug reaction (ADR) leads to prescribing an additional (marker) medication to address what may not been recognized as an ADR. Prescribing cascades are more likely in patients with polypharmacy but limited studies quantify the occurrence of prescribing cascades due to concurrent use of multiple index medication.

**Objectives:** This study investigated if using multiple medications that can cause the same ADR heightens the likelihood of a prescribing cascade.

**Methods:** Prescribing cascades identified and evaluated as problematic by an expert panel (n=66) were included in a cohort study, utilizing dispensing data from Dutch community pharmacies (January 2015-December 2020). Using prescription sequence symmetry analysis adjusted for temporal trends, cascades with an adjusted sequence ratio (aSR) over 1.0, indicating a prescribing cascade, were identified. Prescribing cascades with a significant positive association were grouped on similar ADR-marker medication. For each ADR-marker group, patients were classified into patients using only one index medication (single users) and patients concurrently using two or more index medications (multiple medication users).

**Results:** A significant positive aSR was found for 41 prescribing cascades, which included six ADR-marker groups with multiple medication users. The aSRs increased from 1.15 for single users to 1.61 for multiple users for the depression-antidepressants prescribing cascade, 1.98 to 4.02 for parkinsonism-dopaminergics, 1.44 to 1.74 for urinary incontinence-incontinence medication, 1.37 to 2.64 for urinary tract infections-antibacterials, 1.19 to 2.81 for erectile dysfunction-erectile medication. For the first four cascades the confidence intervals did not overlap between single and multiple medication users. No increase was found for oedema treated with diuretics.

**Conclusion:** The findings underscore that multiple medications for the same ADR can increase the risk of a prescribing cascade. This is of particular relevance for older people who often experience polypharmacy and can be eligible for deprescribing.

**Keywords:** prescribing cascades, adverse drug reactions

## **Optimising the language and format of deprescribing recommendations to support implementability: a qualitative study**

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**Background:** Deprescribing guidelines exist for only a limited number of medication classes and too many guidelines can contribute to guideline fatigue and underuse. Integration of deprescribing recommendations into clinical practice guidelines may enhance the reach and adoption of deprescribing recommendations.

**Objectives:** To elicit the perspectives of healthcare professionals on the preferred content, format and language of deprescribing recommendations for inclusion in clinical practice guidelines.

**Methods:** Australian medical doctors, pharmacists, registered nurses, and nurse practitioners were recruited from November 2023 to present. Semi-structured interviews and focus groups were conducted. Participant responses were audio-recorded and transcribed verbatim. A framework analysis was conducted, mapping findings to the domains of the Guideline Language and Format Instrument (GLAFI).

**Results:** To date, 17 participants have been recruited. Interim analysis reveals that participants recognise a need for greater deprescribing guidance through recommendations that address when, why and how to deprescribe. A tension was revealed between participants' desire for simple, succinct and uncomplicated language, and a want for detailed and comprehensive deprescribing instruction. Additionally, there was inconsistency in participants' opinions of where deprescribing recommendations should be placed, with some suggesting co-location with respective prescribing recommendations and others supporting a deprescribing-specific section in each guideline. Inclusion of information about the strength and certainty of evidence informing each recommendation was considered important but was viewed as a deterrent to implementation if a 'weak/conditional' recommendation was presented, or a recommendation was informed by low-certainty evidence. The use of direct and persuasive language, such as "We recommend...", rather than "You may consider..." was deemed more actionable, less ambiguous and preferred by end-users.

**Conclusions:** Healthcare professionals consider content, format and language of deprescribing recommendations intrinsic to successful implementation. Study findings will inform the development of a standardised template to support guideline developers in crafting clear, concise and actionable deprescribing recommendations.

**Keywords:** guidelines, deprescribing recommendations, implementability

## Understanding The Usability and Effectiveness of Deprescribing Criteria For Older Adults Through A Realist Evaluation Framework

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**Background:** Gaining insight to how clinicians use available tools to inform their prescribing decisions for older adults is important for exploring how they navigate unique individual complexities. Current literature highlights challenges in the usability and applicability of established deprescribing criteria, such as the Beers or STOPP/START criteria in the clinical care of older adults. This is often attributable to the nuanced and intricate nature of clinical judgments, specifically for older adults with multimorbidity and polypharmacy, where what might generally be considered inappropriate prescribing for some cases, could be deemed appropriate for others. Objectives: To meta-synthesise qualitative studies that explore clinicians' perceived barriers and enablers in using and applying existing deprescribing tools for older adults in different health care settings.

**Methods:** We conducted a meta-synthesis of published qualitative literature by searching PubMed, EMBASE, Scopus, PsycINFO, CINAHL. A realist evaluation framework was used for in-depth analysis. Data was extracted and coded according to the realist evaluation principles, identifying context-mechanism-outcome configurations (CMOs).

**Results:** Anticipated results from 72 included studies include the identification of specific CMO configurations that highlight how various contexts (health care environments) influence mechanisms (use of tools) leading to successful or unsuccessful deprescribing practices for older adults. This study expects to provide an understanding of clinicians perceived barriers and enablers affecting the use and applicability of current tools in guiding deprescribing practices, from organizational to individual levels.

**Conclusions:** This study will offer a nuanced understanding of the factors that influence deprescribing practices by leveraging the realist evaluation to uncover why, for whom, in what circumstances and how certain deprescribing tools achieve varying levels of effectiveness. By identifying context-specific strategies and interventions for managing polypharmacy and facilitating deprescribing, this research aims to contribute to the advancement of deprescribing practices through tool refinement and development.

**Keywords:** deprescribing, tools, criteria, realist analysis, older adults, meta, synthesis

## Deprescribing Communication: Critical Review and Framework Development

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**Background:** While communication is an implicit component of deprescribing interventions, little explicit attention has been paid to the ways in which communication is used.

**Objective:** 1) To develop an expert consensus framework of deprescribing communication. 2) To evaluate current use of deprescribing communication in published literature to inform future research.

**Methods:** A working group consisting of an international group of experts in geriatrics, pharmacy, and community outreach developed the framework based on group members' expertise, communication theory, and the results of two critical reviews. The framework characterizes the scope, nature, components, and forms of deprescribing communication. The critical reviews summarized: a) the use of communication strategies in randomized controlled trials (RCTs) of deprescribing; and b) observational studies examining deprescribing communication. The framework, in turn, was used to evaluate the results from the critical reviews.

**Results:** The framework highlights that the core of deprescribing communication consists of achieving shared decision making within direct clinician patient interactions. It also extends beyond these interactions. Communication occurs at the health system level and involves methods other than clinician-patient discussion, such as patient-specific feedback materials and academic detailing. Communication also occurs at the community level and involves entities such as pharmaceutical companies, the internet, community groups, and guidelines. Evaluation of the summary of RCTs against the framework demonstrates that intervention studies overwhelmingly focus on communication strategies in individual clinical and health system-based encounters. Evaluation of the summary of observational studies demonstrates that there has been little study of what constitutes effective communication.

**Conclusions:** Current communication strategies for deprescribing are largely focused on patient-clinician discussions in individual patient encounters. Potentially untapped opportunities exist to expand the use of different approaches to communication in deprescribing interventions, particularly in the community setting. More studies are required to elucidate the content and style of effective communication.

**Keywords:** Communication, intervention

**Oral Communications #4 Technology and  
medication review to support  
deprescribing**

## **General practitioners' and older adults' expectations regarding medication management and optimization using digital health technologies: a mixed-methods study in Swiss primary care settings**

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**Background:** Older adults are at a higher risk of avoidable medication-related harm. The use of digital health technologies holds great promise for improving medication management and optimization (including deprescribing) and thereby increasing medication safety in this age group. For a successful implementation in clinical practice, it is crucial to know the experiences, expectations, and needs of older adults and general practitioners (GPs) towards digital health technologies. In Switzerland, the digitalization of the healthcare system has been lagging. Due to important political initiatives (e.g., introduction of shared medication plans and electronic patient records accessible to patients and healthcare providers across healthcare systems), however, the Swiss healthcare system is catching up.

**Objectives:** This study aims to explore medication management and optimization practices of GPs and older adults in Swiss primary care settings and to investigate the opportunities for using digital technologies to support medication management and optimization.

**Methods:** This explanatory mixed-method study, in which quantitative data is collected first followed by qualitative data, is conducted in Swiss primary care settings. For the quantitative cross-sectional part online questionnaires will be administered to older adults aged  $\geq 65$  years with  $\geq 2$  regular medications and GPs working in Swiss primary care settings. In January 2024, 322 older adults were invited to participate in the online survey via an online panel and GPs practicing in Switzerland were invited to participate via a newsletter of professional societies. In spring 2024, semi-structured interviews will be conducted with GPs and older adults (15-20 each). The preliminary findings from the online surveys will be considered in the interview guides. Quantitative data will be analyzed using descriptive statistics. Qualitative interviews will be analyzed by a thematic analysis.

*Preliminary findings:* 252 older adults completed the survey at the time of abstract submission (response rate: 78%). 126 (50%) of respondents were female, mean age was 73 (7 SD), and participants used an average of 4 medications (2 SD). 92% (230) are satisfied of the frequency of medication reviews by their GP. 34% (88) would like to have more information about the risks and benefits of their medications and 22% (56) feel like it would be easier for them to talk to their healthcare providers about medications if they had more information. 42% (106) reported not to have a medication plan. More than 80% of respondents reported to be regularly using digital tools (e.g., computer, smartphones, tablets). Only 5% (12) of respondents reported to already have access to an electronic patient record and 49% (124) respondents reported to be planning to sign up for an electronic patient record in the future.

**Conclusion:** The results of this mixed-methods study will inform the development of digital health technologies to support medication management and optimization based on the needs and experiences of older adults and GPs with digital technologies, as well as their priorities for medication management and optimization supported by digital technologies.

**Keywords:** medication optimizing, older adults, medication management, digital health technologies, mixed, methods study

## **Impact of Prescription Assistance Medical Devices on Reducing Inappropriate Medication Prescriptions in Hospitalized Elderly Patients**

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**Introduction:** Polypharmacy and iatrogenesis are major challenges in the elderly population. Synapse Medicine, a startup specializing in artificial intelligence applied to health, has developed medical devices to assist prescription, aiming to help physicians detect potential drug-drug interactions (PDIs) and STOPP/START criteria. However, the evaluation of prescription assistance devices, beyond theoretical performance, is lacking in practice. The objective of this study is to evaluate the impact of Synapse devices usage by physicians on the frequency of STOPP/START criteria and PDIs between admission and discharge prescriptions in patients aged 65 or older, hospitalized in geriatric medicine departments.

**Methods:** This multicenter, interventional, cluster randomized, cross-over trial evaluates prescriptions made over 6 months, with two 3-month periods: one with the devices and one without. The trial plans to include 200 patients, i.e., 100 patients per arm, in 7 departments distributed between CHU Bordeaux Hospital and Libourne Hospital. Patient prescriptions will be analyzed blindly by two independent experts (one pharmacist and one pharmacologist), based on reference recommendations. The protocol for this study was presented at ICOD-2022 (PING study: NCT04710615).

**Results:** So far, approximately 170 patients have been included in the study, with an expected inclusion finished by mid-April 2024. The results will be available for ICOD-2024.

**Discussion and conclusion:** This study aims to demonstrate the impact of Synapse devices in reducing inappropriate medication prescriptions in hospitalized elderly patients. The expected results include a decrease in the number of inappropriate prescriptions, a decrease in PDIs, and a decrease in the number of medications in discharge prescriptions during the Synapse period compared to the period without the tool. This study could pave the way for other larger-scale trials to evaluate the impact of Synapse devices on hard clinical criteria and provide elements to improve the routine use of these devices, and their adherence by physicians.

**Keywords:** polypharmacy, stopp criteria, drug interactions, medical devices, software, geriatry



## **How might dynamic Artificial Intelligence (AI) be used to support prescribing (DynAIRx project) to ensure efficient structured medication reviews, and what are the barriers to implementation?**

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**Background:** Structured medication reviews (SMRs) aim to enhance shared decision-making in medication optimisation and deprescribing, particularly for patients with multimorbidity and polypharmacy. The DynAIRx project seeks to address these gaps by developing artificial intelligence (AI) tools to support SMRs, focusing on high-risk individuals prone to medicine-related harm.

**Objectives:** This study aimed to explore how SMRs are currently being undertaken and how they might be augmented by AI.

**Methods:** Interviews and focus groups were conducted with healthcare professionals (HCPs) (n=26), and three patient focus groups with patients with multimorbidity (n=13). Transcripts were analysed using a thematic approach.

**Results:** Time was a major limiting factor due to the overwhelming density of information in electronic health records, especially for complex patients. Discussions around deprescribing between HCPs and patients were influenced by the specific type of medicine to be deprescribed, the patient's willingness to discontinue the medication, sociodemographic factors, availability of additional health services in the area, whether the medication was initially prescribed in primary or secondary care, and the existence of pre-established stopping criteria. Additionally, HCPs and patients acknowledged a degree of reluctance to engage in deprescribing due to perceived potential risks associated with the cessation of certain medications. HCPs welcomed user-friendly digital tools with an intuitive interface that could also be used to discuss clinical decisions with patients. A proposed solution to reduce time spent searching through records was a timeline linking diagnoses to medications based on indications.

**Conclusions:** The study underscores the complexity and time-intensive nature of SMRs, highlighting the necessity for a prescribing support system to streamline the process. The insights gained from this research will inform the development of the DynAIRx prototype, aiming to create a user-friendly digital tool to enhance medication reviews for multimorbid patients.

**Keywords:** AI, deprescribing, medicines optimisation

## **Pharmacists' and general practitioners' views on electronic alerts to aid detection, prevention, and management of potential prescribing cascades: a qualitative interview study**

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**Background:** Prescribing cascades are an under-recognised contributor to polypharmacy, and healthcare professionals need more innovative solutions to identify and manage them in practice.

**Objectives:** To explore the views of pharmacists and general practitioners (GPs) on the use of electronic alerts to minimise prescribing cascades and identify key behavioural influences on their use.

**Methods:** Semi-structured interviews were conducted in April-July 2023 with seven community pharmacists and seven GPs working in Cork, Ireland. Conventional content analysis and directed content analysis, through employment of the Theoretical Domains Framework (TDF), were utilised to identify themes and TDF domains influencing the use of electronic alerts for potential prescribing cascades.

**Results:** Five TDF domains were identified as predominant in influencing pharmacists' and GPs' use of electronic alerts for prescribing cascades:

- knowledge: alerts would help address insufficient knowledge about prescribing cascades, serve as an education resource, and aid in the standardisation of care.
- environmental context and resources: alerts are needed given the pressures in primary care and lack of time for reviewing medications. There were concerns regarding alert integration into current workflow.
- memory, attention, and decision-making: alerts must grab end-user's attention whilst minimising alert fatigue. They would minimise reliance on information recall and having suggested actions was viewed as useful.
- social/professional role and identity: interviewees perceived they were the right people to receive these alerts given their oversight on patients' medications, whilst also considering the responsibilities of others who see them (e.g. locum GPs, other pharmacy staff).
- beliefs about consequences: alerts would have an overall positive impact on practice, increasing prescribing cascade identification, and reducing patients' medication burden.

**Conclusions:** This study uniquely identified key behavioural influences on primary healthcare professionals' use of electronic alerts for prescribing cascades and should aid the future development of theoretically-informed software interventions to minimise prescribing cascades and patient harm.

**Keywords:** prescribing cascade, deprescribing, polypharmacy, qualitative, primary care

## **The development and design of a complex multidisciplinary structured medication review and deprescribing intervention in primary care for older people living with frailty**

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**Background:** There is evidence that a multidisciplinary team (MDT) approach and shared-decision making could facilitate deprescribing decisions, especially among patients living with frailty or complex needs. The aim of this study was to co-design a deprescribing intervention that involves the MDT members in primary care.

**Methods:** Intervention development involved: 1) a realist review of 28 articles that identified 35 context-mechanism-outcome configurations for successful MDT approach to deprescribing in primary care; and 2) a qualitative study (n=39) of primary care healthcare professional (HCPs) and older people with polypharmacy and their informal carers in the UK. Informed by the COM-B model of behaviour change and the normalisation process theory, the findings of these two studies were used to develop the intervention's guiding principles. Six co-design online workshops with HCPs and patients' representatives were held where the intervention guiding principles, functions and delivery were discussed, refined and agreed.

**Results:** A complex intervention was developed consisting of five phases: 1) Proactive identification of older patients aged 75 and over prescribed  $\geq 10$  medications, with moderate to severe frailty (electronic frailty index); 2) HCPs preparation using evidence-based deprescribing tip sheets and the IMPACT tool; 3) Educating patients and carers about the purpose of medication review and the reasons for potentially stopping or changing medications (patient leaflet sent prior to appointment); 4) Conducting a person-centred medication review tailored to patient and carer needs and preferences, involving other MDT members based on their expertise, documenting and sharing any agreed changes with patients and other staff members; and 5) Tailored written follow-up plans, and further contact if needed.

**Conclusions:** The use of multiple research methods and drawing on behaviour and implementation theories enabled identification of key mechanisms for successful MDT deprescribing intervention. A mixed-method study in primary care is currently underway to test the feasibility and acceptability of implementing the intervention.

**Keywords:** deprescribing, multidisciplinary, primary care, frailty, polypharmacy, intervention design

## **Towards sustainable implementation of proactive deprescribing cardiometabolic medication in Dutch primary care: tailored clinical medication reviews promoting patient-centered communication and shared decision making**

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Proactive deprescribing of cardiometabolic drugs in older (75+) and frail patients is not widely implemented in Dutch primary care, despite the introduction of multidisciplinary guidelines. These patients routinely receive clinical medication reviews (CMRs) conducted by local staff from cooperating community pharmacies and general practices. Patient consultations incorporated in CMRs thus provide opportunity to discuss deprescribing. Yet, healthcare providers experience barriers related to communicating possibilities and considerations for deprescribing, anticipate patients' and relatives' unwillingness, and lack time and resources to adequately support patients in the deprescribing process (Abou 2021).

**Clinical question:** How do we sustainably implement proactive deprescribing of cardiometabolic medication during CMRs in Dutch primary care?

**Intervention and outcomes:** We extended a previously evaluated training program for primary care healthcare providers that increased deprescribing and was well-received by trainees and their patients receiving a tailored CMR (Baas 2023). Trainees reported improved local collaboration but expressed the need to improve consultation skills. Now, the intervention consists of a blended training program aiming to increase knowledge and skills to effectively discuss considerations for deprescribing

cardiometabolic medication, and tools to assist in the different steps constituting CMRs (e.g. effectively selecting patients likely to benefit, preparing patients for considering deprescribing and discussing benefit-risk trade-offs). The intervention encompasses patient-centered communication and shared-decision making, and aligns with how CMRs are routinely performed, to foster implementation in daily practice.

**Implications:** We believe our intervention can enable primary care healthcare providers to effectively discuss considerations for deprescribing cardiometabolic medication on older adults during CMRs by increasing their knowledge and consultation skills. By providing useful tools for the different steps of CMRs, we expect to mitigate the perceived lack of time and resources needed for the implementation of deprescribing cardiometabolic medication during CMRs in Dutch primary care. The implications of the intervention are comprehensively examined during the CO-DEPRESCRIBE study.

**Keywords:** cardiometabolic medication, primary care, implementation, patient, centered communication, shared decision making, proactive deprescribing

**Oral Communications #5 Updates in  
Measurement Relevant to Deprescribing  
Evaluations**

## **Development and validation of the Patient Evaluation of the Deprescribing process Questionnaire (PED-Q)**

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**Background:** The proactive deprescribing process involves 18 activities e.g. ‘establishing the medications a patient is taking’, organised into four steps: 1) Identifying a patient for potential stop of a medicine; 2) Evaluating a patient for potential stop of a medicine; 3) Stopping a medicine; 4) After a medicine has been stopped. Successful proactive deprescribing requires healthcare professionals to support patients/caregivers to progress through each deprescribing process activity. The majority of patient/caregivers indicate a willingness to have a medicine or when responding to questionnaires; however, trials of deprescribing interventions demonstrate that most decline a deprescribing proposition in practice. There is a need to identify the deprescribing process activities that are sub-optimally undertaken in order to improve deprescribing uptake by patient/caregivers.

**Objective:** To develop and validate the Patient Evaluation of the Deprescribing process Questionnaire (PED-Q)

**Methods:** We will develop three prototype version PED-Q items for each proactive deprescribing process activity. We will use discriminant content validity (DCV) to determine the extent to which prototype items discriminately measure a patient’s evaluation of each activity. We will recruit three groups of judges (n=10/group): 1) Patients and caregivers; 2) Deprescribing researchers, and 3) Healthcare consultation researchers. For each prototype item, judges will indicate which activity(ies) the item does and does not measure, along with their confidence rating between 0 and 100%. Single-sample t-test or Willcoxon will test whether prototype item versions were classified to measure the intended deprescribing activity. The best performing items for each proactive deprescribing activity will be retained.

**Conclusions:** The retained questionnaire items will form the final PED-Q. The novel questionnaire will have research utility for the evaluation of deprescribing interventions in addition to clinical utility for the evaluation of deprescribing care delivered. Data collection for this study will conclude in Spring 2024.

**Keywords:** questionnaire, proactive deprescribing, patient evaluation, validation, discriminant content validity, discriminant construct validity, patient involvement

## **Differential item functioning in the French revised Patients' Attitudes Toward Deprescribing questionnaire: a case analysis from the DeprescriPP trial**

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**Background:** Patient-reported outcome measures (PROMs) are commonly used in deprescribing studies. Assuming measurement invariance, patients with different characteristics should perceive and interpret the items in the same way. However, differential item functioning (DIF) may occur when patients from two different subgroups perceive or interpret an item differently in PROMs. These patients with a same "true" level have differential probabilities of endorsing an item. If DIF occurs, the estimation of the difference when comparing two subgroups may be biased.

**Objective:** This study aims to detect DIF in the revised Patients' Attitudes Toward Deprescribing questionnaire (rPATD).

**Methods:** Data from a proton pump inhibitors (PPI) deprescribing trial in France were used. The French rPATD was sent by post to a 10% sample of patients who received PPI for more than one year, before the start of the trial in November 2020. Firstly, we will verify that our data fits a partial credit model, i.e. unidimensionality and local independence. Secondly, we will assess the DIF across three covariables: gender, age, and medication management. The DIF detection will be performed at the item-level using the ROSALI algorithm, previously described and developed on STATA.

**Results:** A total of 1862 patients responded to the rPATD. The analyses are currently performed.

**Conclusions:** At the conference, we will be able to i) assess the occurrence of DIF in our dataset and ii) illustrate how to detect DIF in PROMs to avoid measurement bias.

**Keywords:** Patient reported outcome, survey, psychometric properties, rPATD

## **Self-Perceived Knowledge, Skills, and Attitudes of Healthcare Professional Trainees in Deprescribing: a national survey.**

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**Background:** Educating future healthcare professionals has been suggested as a key approach to decrease barriers toward deprescribing in clinical practice. Nevertheless, how well current programs perform remains largely unknown, most attention so far has been directed at trainees in medicine (in contrast to nursing and pharmacy), outside of Europe.

**Objective:** To identify self-perceived knowledge, skills, and attitudes of undergraduate and postgraduate students in medicine, pharmacy, and nursing in the field of deprescribing in Belgium.

**Methods:** A questionnaire for each of the three target groups was developed and included five sections: sociodemographic data; self-perceived competencies; self-perceived knowledge and skills; attitudes toward deprescribing; and curricular preparedness. The items on self-perceived competencies, knowledge and skills were derived from the curricular framework for an interprofessional approach to deprescribing published by Farrell et al. in 2023. The items on attitudes were selected from a Theoretical Domains Framework (TDF)-based questionnaire used in an EU survey. The questionnaires were administered through LimeSurvey between April and June 2024. We invited all universities and a sample of university colleges in Belgium to participate. Data analysis will consist of descriptive statistics and results will be interpreted against discipline-specific expectations.

**Results:** A total of 21 institutions, representing 45 programs accepted to participate (undergraduate programs in medicine/pharmacy/nursing: 6, 8 and 12 respectively; postgraduate programs in medicine/pharmacy/nursing: 5, 4 and 10 respectively). As of May 29th, 1502 participants fully completed the survey (442 in medicine, 670 in pharmacy, and 390 in nursing). Data analysis will occur during the summer and the results will be shared at ICOD2.

**Conclusions:** The results of the present survey, complemented with interviews with Faculty members, will inform us on how well current education in Belgium prepares future healthcare professionals to deprescribing. This will then serve to revise existing curricula and improve competencies.

**Keywords:** deprescribing, health professional education, interprofessional roles, medicine, pharmacy, nursing



## Understanding older patients' attitudes towards deprescribing in primary care: a cross-sectional study in 14 countries

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**Background:** Inappropriate polypharmacy is often associated with health-related problems, especially in older adults. Deprescribing is a key intervention in the management of polypharmacy and in the reduction of medication-related harms. Patient values and preferences can influence both the suitability of deprescribing, and their willingness to deprescribe, and this may vary by medication class. Therefore, when designing deprescribing interventions, it is important to understand patients' attitudes towards deprescribing considering specific medication types.

**Objective:** To investigate older adults' attitudes towards deprescribing in 14 countries and which medications they were most willing to have deprescribed.

**Methods:** This cross-sectional study was conducted in primary care settings across 17 sites in 14 countries. From May 2022 to December 2023, 10 GPs per country recruited 10 patients ( $\geq 65$  years old with  $\geq 5$  regular medications) each. Patients filled out a survey on attitudes towards deprescribing. We assessed patients' overall willingness to deprescribe using the revised Patients Attitudes Towards Deprescribing (rPATD) global questions and asking which specific medications patients would be willing to have deprescribed, and the reasons why they agreed/disagreed with deprescribing.

**Results:** Of 1340 patients included (average 96/country), 82% (n=1089) were satisfied with their medications, 81% (n=1088) were willing to deprescribe according to the rPATD question "If my doctor said it was possible I would be willing to stop  $\geq 1$  of my regular medications", and 44% (n=589) according to the question "Thinking about your current medications, are there any you would like to stop or reduce the dose of?" The three most mentioned drug classes for deprescribing were diuretics (n=111), lipid modifying agents (n=109), and agents acting on the renin-angiotensin system (n=83). Main reason participants agreed with deprescribing was due to medication side effects (n=271); main reason participants disagreed was perceived medication benefits (n=420).

**Conclusions:** This research will support future deprescribing interventions that focus on patients' preferences.

**Keywords:** Primary care, medication optimization, polypharmacy, older adults, deprescribing

## **Investigating the Effects of Harm Information and Medication Status on Older Adults' Deprescribing Preferences: A Vignette-based Experiment**

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**Background:** Older adults frequently take proton pump inhibitors (PPIs), however, long-term PPI use is often inappropriate.

**Objectives:** To explore the influence of harm information when a medication is started and regulatory status (prescription or over-the-counter (OTC)) on older adults' desire to deprescribe omeprazole.

**Methods:** We conducted a vignette-based online experiment in which participants aged  $\geq 65$  years from the US were asked to imagine starting and subsequently stopping omeprazole for heartburn symptoms. Recruitment via Qualtrics Research Panels. Participants were randomized to one of four vignettes about starting omeprazole (OTC vs. prescription; potential long-term harms or no harm information). Subsequently, participants were asked to imagine that it was a year later, and their primary care provider suggested stopping omeprazole given potential long-term harm. Participants decided to: "Continue the omeprazole (1)" to "Stop the omeprazole and schedule an appointment in a month (6)" on a 6-point Likert scale. We calculated descriptive statistics and logistic regression to compare participants with a high (scores 5-6) vs. low (scores 1-4) desire to stop omeprazole using R statistical software (v. 4.2.2).

**Results:** Participants (n=1,245) were female (n=625, 50%), had a mean age of 70 years. Over one-third of participants had experience with PPIs. After adjusting for demographic characteristics, older adults who received harm information when starting the medication were more likely to want to stop omeprazole (OR 1.25, 95% C.I. 1.09, 1.44). Additional predictors of wanting to stop omeprazole included being female (OR 1.37, 95% C.I. 1.03, 1.84), having higher health literacy (OR 1.35, 95% C.I. 1.16, 1.57), and previous (OR 4.95, 95% C.I. 3.20, 7.64) or no (OR 5.57, 95% C.I. 4.01, 7.74) experience taking a PPI. The regulatory status did not influence perceptions of stopping.

**Conclusions:** These findings suggest that harm information when starting a medication subsequently influences preferences for deprescribing.

**Keywords:** Patient preferences, communication, harm information, over, the, counter, experimental study

## **The evidence and impact of deprescribing on sarcopenia and sarcopenia parameters: a systematic review**

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**Background:** Polypharmacy, the concomitant prescription of five or more medications, affects a third of older people, for which, recent evidence suggests an association with sarcopenia (i.e., loss of skeletal muscle mass, muscle strength, and/or physical performance). Managing polypharmacy through deprescribing interventions has been recommended but not yet included in the routine management of sarcopenia. This systematic review aimed to understand the effects of deprescribing on sarcopenia parameters in older people to inform guidelines for managing this condition.

**Methods:** The literature was searched using Medline, Embase, CINAHL, Web of Science, and the Cochrane Library up to July 2023. Studies irrespective of design or setting were included if they reported effects of deprescribing interventions on sarcopenia parameters (primary outcomes) or nutritional intake (secondary outcomes) among people aged 65 years and over. Narrative synthesis was used to summarise findings and study quality was assessed using Joanna Briggs Institute checklists.

**Results:** A total of 4860 articles were identified and five were included (mean age range 74- 87years). Studies were heterogeneous in their designs, settings, follow-up periods, and outcomes. Studies reported no effect of deprescribing on handgrip strength (n=2), skeletal muscle mass index (n=2), or timed up and go (n=1). Effect on gait speed was contradictory in two studies, in which preservation and deterioration were both reported. One study reported a statistically significant increase in short physical performance battery balance and total scores between baseline and one year follow-up with deprescribing. Two studies reported improvements in nutritional outcomes in the deprescribing groups at hospital discharge.

**Conclusion:** There is a paucity of research about the impact of deprescribing on sarcopenia parameters. This systematic review showed no significant changes in muscle mass, strength, and function with deprescribing, however, some improvements in physical performance and nutritional status were observed in single studies. More high-quality research is needed to understand the evidence of deprescribing among people with sarcopenia.

**Keywords:** sarcopenia, deprescribing, polypharmacy, review

**Oral Communications #6 Evaluations of  
Deprescribing Interventions Around the  
Globe**

## **Combined Patient/Provider Driven Deprescribing intervention effect on Medication usage in Primary Care.**

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**Background:** High risk of medication harm increases with age. Interventions focused on both patient and provider-driven deprescribing (DeRx) have emerged. We combined these interventions to examine outcomes on medication use.

**Objective:** To quantify polypharmacy and potentially inappropriate medication (PIM) use pre-/post application of a combined patient/provider driven intervention.

### **Methods:**

*Study Design and Analysis:* A pilot Pre/Post intervention analysis of medication usage.

*Population Studied:* Patients  $\geq 65$  years old at two suburban primary care clinics (n=944 and 2352) with corresponding Health Information Exchange (HIE) practice level medication data in Western NY, USA.

*Intervention:* Patients were mailed and emailed a link to view an animated educational video on medication harm and invited to take a survey about DeRx attitudes. Providers viewed and were oriented to the video and surveyed on their DeRx attitudes.

*Outcome Measures:* (1) Overall medication use; (2) PIM use (as defined by the American Geriatric Society Beers Criteria) including the proportion of the population on any PIM, 2 PIMs or  $\geq 3$  PIMs. Medication and PIM use will be compared over time. McNemar's test was used to compare the means of prescribed med load and PIMs pre/post intervention.

**Results:** Mean medication load decreased in both practices and overall (Practice 1: 9.68 to 9.07,  $p < 0.001$ , Practice 2: 9.31 to 9.09,  $p < 0.001$ , combined: 9.57 to 9.08,  $p < 0.001$ ). PIM load decreased in Practice 2 and combined (Practice 2: 1.006 to 0.965,  $p < 0.001$ , combined 1.065 to 0.964,  $p < 0.001$ ). Hyperpolypharmacy (10+ meds) and polypharmacy (5-9 meds) decreased (39.9% to 37.8% and 29.4% to 24.3%, respectively) in the combined cohort, while patients on 3+ PIMs (12.8% to 11.8%), 2 PIMs (13.7% to 12.9%) and 1 PIM (26.5% to 22.5%) decreased as well.

**Conclusions:** Combined patient/provider DeRx interventions may have reduced overall medication and PIM use in primary care. Further investigation is needed to exclude other contributing factors.

**Keywords:** Polypharmacy, deprescribing, potentially inappropriate medications, patient education, provider education

## **Effect of antihypertensive deprescribing on serious adverse events, mortality, and cardiovascular disease: Long-term follow-up of the OPTiMISE randomised controlled trial**

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**Background:** Deprescribing of antihypertensive medications is recommended for some older patients with polypharmacy and frailty. The OPTIMISE trial showed that this can be achieved with no differences in blood pressure control at 3-month follow-up.

**Objectives:** Examine the effects of antihypertensive deprescribing on hospitalisation, mortality and cardiovascular disease (CVD).

**Method:** Participants aged  $\geq 80$  years, with systolic blood pressure

**Results:** A total of 564/569 (99.1%) randomised participants (intervention=282; control=287), with a mean age 84.8 years (including 276 (48.5%) women) were followed-up for a median of 4.0 years. Medication reduction was sustained in 109 participants (51.2% of those alive in the intervention group) at 3 years. Participants in the intervention group had a larger reduction in antihypertensives than the control group (adjusted mean difference -0.35 drugs, 95%CI -0.52 to -0.18). Overall, 202 (72.1%) patients in the intervention group and 218 (76.8%) patients in the control group experienced hospitalisation or mortality during follow-up (adjusted HR 0.93, 95%CI 0.76-1.12). There was no evidence of a difference in all-cause mortality (aHR 0.80, 95%CI 0.57-1.12), stroke (aHR 0.91, 95%CI 0.40-2.06), myocardial infarction (aHR 0.86, 95%CI 0.42-1.77) or CVD events (aHR 1.00, 95%CI 0.68-1.46).

**Conclusion:** Medication reduction was sustained in half of those attempting it, with no evidence of harm from an increase hospitalisation, mortality or CVD. These findings suggest that a deprescribing intervention for antihypertensive medication may be safe for people aged  $\geq 80$  with controlled blood pressure taking two or more BP lowering drugs.

**Keywords:** Randomised controlled trial, blood pressure, deprescribing, medication discontinuation, serious adverse events, primary care, aged, frailty, mortality, cardiovascular disease

## **Effectiveness of a multi-faceted intervention to deprescribe proton pump inhibitors in primary care: a population-based, pragmatic, cluster-randomized controlled trial**

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**Background:** Inappropriately using proton pump inhibitors (PPI) is associated with severe adverse drug reactions and may have major consequences on healthcare costs. Deprescribing should be considered when inappropriate PPI prescriptions are identified. Deprescribing interventions directed solely to prescribers have limited efficacy and are rarely targeted to patients. Objective: To assess the effectiveness of a multifaceted PPI deprescribing intervention to reduce inappropriate PPI prescribing in primary care.

**Methods:** We conducted a pragmatic, cluster-randomized, population-based, controlled trial in two regions of France. General practitioners (GPs) and their adult patients to whom over 300 defined daily doses (DDD) of PPIs have been dispensed in the year before baseline were included. The patients and their GPs were cluster-randomized by GPs practices. Three arms were compared: i) a multi-faceted intervention associating a) a patient education brochure about PPI deprescribing sent directly to patients and b) a personalized letter with a PPI deprescribing algorithm sent to their GPs, or ii) a single intervention where only the GPs received the letter and algorithm, or iii) no intervention. The primary outcome was PPI deprescribing, defined as the proportion of patients achieving at least a 50% decrease in the amount of PPI dispensed to them (DDD/year) at 12 months compared to baseline. Secondary outcomes included incremental cost-utility ratio (using EQ-5D-5L scale and National Health Insurance's database), acid rebound (using the Gastroesophageal reflux disease Impact Scale), and the patients' attitudes towards deprescribing (using the rPATD).

**Results:** A total of 1,166 GPs and 35,542 patients were included. The trial was launched in October 2020 and ended in October 2021. The access to the National Health Insurance database was authorized in February 2024. Data are currently analyzed.

**Conclusions:** Based on previous trials, we anticipate more than 10% "successful PPI deprescribing" in the multi-faceted intervention compared to the two other arms.

**Keywords:** deprescriptions, proton pump inhibitors, patient outcome assessment, primary care, cluster analysis, multi, faceted intervention



## **Can population wide interventions successfully reduce the use of sedatives and proton pump inhibitors? Outcomes from the SaferMedsNL initiative.**

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**Background:** Newfoundland and Labrador (NL) has among the highest rates of potentially inappropriate medications (PIMs), sedatives, and proton pump inhibitors (PPIs) in Canada.

**Objectives:** This study aimed to assess the effectiveness of two population-level interventions in reducing the prevalence of sedatives and PPIs: 1) a public awareness campaign, and 2) pharmacist-led deprescribing.

**Methods:** The SaferMedsNL initiative, conducted from January 2019 to December 2023, involved seven province-wide public awareness campaigns. Additionally, funding was provided for pharmacists to identify patients taking PIMs and engage them in multidisciplinary conversations to promote deprescribing. Prescription claims data for all adult residents of NL were analysed. An interrupted time series analysis used linear trend lines to assess the impact of the public awareness campaigns. Propensity score matching assessed changes in mean daily defined doses (DDD) for chronic sedative or PPI users where pharmacists billed for a deprescribing intervention compared to those with no billed intervention.

**Results:** Prevalence of sedatives and PPIs was rising before the SaferMedsNL initiative, and increased with increasing age categories. Following the public awareness campaigns, the linear models indicate a significant reduction in sedative and PPI use, with repeated campaigns mitigating challenges arising from COVID-19. Among adults aged  $\geq 70$ , pharmacist interventions led to reductions in mean daily defined doses (DDD) that were sustained over 15 months. Reductions in DDD varied across medication classes and age groups.

**Conclusions:** Government-led public awareness campaigns effectively decreased PIMs use, with multiple campaigns showing synergistic effects. Pharmacist-led deprescribing had sustained impacts in older adults for both medication classes. Variations in observed responses identify promising avenues for further research into optimal approaches across age groups and medication classes.

**Keywords:** population, level intervention, pharmacist, led, implementation

## **Reducing polypharmacy in hospitalized older Veterans through deprescribing: a randomized clinical trial**

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**Background:** Polypharmacy is associated with poor health outcomes and is prevalent in older U.S. Veterans. Deprescribing can mitigate polypharmacy and potentially improve health outcomes.

**Objectives:** To implement a hospital-based deprescribing intervention to reduce the total number of medications for older Veterans.

**Methods:** We conducted a randomized clinical trial of a patient-centered deprescribing intervention. Hospitalized Veterans aged  $\geq 50$  years, prescribed at least 5 medications prior to admission, and recommended for post-acute care (PAC) were eligible. Participants were randomized to receive the intervention (pharmacist or nurse practitioner-led medication review, patient-approved deprescribing recommendations, and changes to medication orders at hospital discharge) or usual care (control arm). The primary outcome was total number of medications at hospital discharge, PAC discharge, and 90 days after PAC discharge. Intervention effects were assessed using mixed effects regression models, adjusted for baseline medication number.

**Results:** A total of 260 Veterans, predominately male (91%) and White (77%) with a median age of 72 years, were randomized. The median number of preadmission medications was 17. There was a statistically significant decrease in total medications for the intervention group at hospital discharge, with a mean of 9% fewer medications (mean ratio 0.91, confidence interval 0.84-0.97,  $P=0.006$ ). There was no statistically significant decrease in total medications at PAC discharge or 90 days thereafter (mean ratio 0.93, CI 0.85-1.02,  $P=0.11$ ; mean ratio 0.92, CI 0.85-1.00,  $P=0.06$ , respectively), although total medications remained lower in the intervention group at each time point.

**Conclusions:** The patient-centered deprescribing intervention significantly reduced medications in hospitalized Veterans discharged to PAC. Although the intervention's effects were not statistically significant past hospital discharge, there was a trend for intervention participants to maintain fewer medications at these timepoints. Future studies will examine the effect of the intervention on geriatric syndromes and the incidence of adverse drug events associated with deprescribing.

**Keywords:** clinical trial, hospital, intervention, patient, centered, Veterans

## **Behaviour change intervention to support general practitioners and patients through the process of deprescribing PPIs**

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**Background:** Proton pump inhibitors (PPIs) are frequently prescribed for treating gastric acid-related conditions. Concerns are arising in Switzerland regarding the increasing inappropriate PPI use, particularly among general practitioners (GPs), who are looking for guidance on how to successfully reduce inappropriate prescribing of PPI.

**Objectives:** Using a co-design approach, we developed a behavior change intervention targeting GPs and patients to promote successful deprescribing of inappropriate PPIs in the primary care setting.

**Methods:** The intervention development process involved: (1) Reviewing literature to identify deprescribing barriers/enablers, (2) Developing a theory of change for deprescribing, (3) Coding barriers/enablers using theoretical domains framework, (4) Assigning behavior change techniques (BCTs) to address barriers/enablers, and (5) Developing the intervention iteratively around BCTs and derived elements drawing on existing research, team expertise, and feedback from stakeholders.

**Results:** The co-design process included a total of eight rounds of iterative feedback from the advisory board, the stakeholder group, patients taking PPIs, GPs, pharmacists, and gastroenterologists. After the first couple of feedback loops, we found that patients want to receive transparent information about their PPIs from GPs and for alternative strategies for symptom management to be offered. GPs have a need for evidence-based information about the process of deprescribing PPIs and supporting documents which are easy to use for guidance in a consultation. Based on this a suite of intervention tools have been developed that focus on the patient, the GP, and the patient-GP encounter. GPs tools include a digital training, a deprescribing algorithm and conversation guides. Patients' tools include an information brochure as well as a symptom diary, refined through additional feedback loops.

**Conclusions:** We developed a behavior change intervention to facilitate discontinuation of inappropriate PPIs using principles from health psychology. This intervention will be evaluated in a cluster-randomized controlled trial in the German-speaking part of Switzerland.

**Keywords:** deprescribing, inappropriate proton pump inhibitors, behavior change intervention, behavior change techniques, co, design, general practitioners, patients

# Posters

## **Predicting Frailty in People Living with HIV: A Gateway to Targeted Deprescribing**

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**Background:** In aging HIV populations, frailty impacts medication responses, heightening adverse drug effect risks. A predictive model identifying frail individuals could crucially guide deprescribing, optimizing medication regimens and reducing polypharmacy harm.

**Objective:** To estimate to what extent a set of variables can predict the risk of concurrent physical frailty in people living with HIV.

**Method:** We analyzed baseline data from 824 adults living with HIV (85% male, mean age 53) from the Positive Brain Health Now study to explore how sociodemographic, clinical, and medication-related factors predict physical frailty, assessed via a modified Fried's Frailty Phenotype. Employing Learning Vector Quantization for feature selection and logistic regression for model development, we evaluated the model's performance across various metrics, including F1, F-beta, AUC, accuracy, sensitivity, and specificity. Calibration and clinical utility were determined through Brier scores, calibration plots, and Decision Curve Analysis.

**Results:** The prevalence of frailty was 16%. The model demonstrated acceptable discrimination in the test set with AUC = 0.84 (0.77, 0.90), accuracy = 0.73, sensitivity = 0.84, specificity = 0.71, and F-beta = 0.65. A Brier score of 0.11 and a calibration plot confirm the model's reasonable accuracy, with a mean absolute error of 0.074. Decision Curve Analysis showed the model's clinical utility, offering benefits over non-intervention across a range of threshold probabilities, although it did not surpass the "treat-all" strategy entirely. Key predictors, ranked by importance, included weakness, anticholinergic burden, numbness, alcohol use, education, slim limbs, antidepressant use, anxiety/depression, comorbidity count, non-antiretroviral medication count, HIV duration, and albumin levels.

**Conclusions:** The model demonstrated robust discriminative ability in predicting concurrent physical frailty using readily available variables. Given the decision curve, its clinical utility is optimally positioned as a decision support tool for deprescribing interventions, particularly anticholinergics. Further research should aim at external validation and further calibration.

**Keywords:** Anticholinergic burden, HIV, Frailty, Prediction

## **Prevalence of Potentially Inappropriate Medications Among Older Adults with HIV: A MedSafer Study**

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**Background:** Older people with HIV (OPWH) are living longer and, due to a combination of antiretroviral therapy (ART) and multiple co-morbidities, they are subject to polypharmacy (prescription of  $\geq 5$  medications) and potentially inappropriate medications (PIMs). This may increase the risk of medication harm (e.g., falls, fractures, hospitalization). Taking one or more PIMs has been termed "medication overload".

**Objective:** This study aimed to describe the prevalence of polypharmacy and characterize medication overload among OPWH.

**Methods:** In this retrospective cohort study, OPWH  $\geq 50$  years old were randomly sampled from outpatient visits to the tertiary care HIV clinic at the McGill University Health Centre (Montréal, Canada), from June 2022-June 2023. Age, sex, comorbidities, HIV infection duration, select laboratory values (e.g., CD4 count, hemoglobin a1C), and medications (including ART) were extracted from the electronic medical record and entered into MedSafer, a web-based portal identifying and classifying PIMs. The co-primary outcomes were the proportion of subjects with 1) polypharmacy (including and excluding ART) and 2) medication overload ( $\geq 1$  PIMs), with multivariable logistic regression identifying associated factors.

**Results:** One hundred OPWH were included; they had a mean age of 59.4 (sd=6.4, range 50-82) and 42% were female. Fifty-eight people (58%) had medication overload. Including ART, an average of 10 medications (sd=3.4) were prescribed, and 89/100 (89%) had polypharmacy (ART counted per molecule). Excluding ART, an average of 6.9 medications (sd=3.2) were prescribed and 60/100 (60%) had polypharmacy. MedSafer flagged 155 PIMs; 56 (37.6%) were high-risk (e.g., sedative-hypnotic). Multivariate logistic regression (including age, sex, HIV infection duration, CD4 count, and polypharmacy) showed the only independent predictor of medication overload was polypharmacy; OR 6.28 (95% CI=1.21-32.64, p=0.029).

**Conclusions:** Newly described herein, OPWH are at significant risk of medication overload and being prescribed high risk medications. Intervening on PIMs is critical among OPWH to improve medication appropriateness.

Poster 2

**Keywords:** People with HIV, medication overload, potentially inappropriate medications, older adults, electronic clinical decision support, MedSafer

## **Development, Implementation and Evaluation of an Interprofessional Training Program on Deprescribing for Older Adults**

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**Background:** Deprescribing interventions gained international recognition as a proactive approach to address inappropriate polypharmacy. The lack of sufficient knowledge and limited competencies of healthcare providers are among the challenges to implement successful and effective deprescribing in practice. This study's objective is to design, conduct, and evaluate a capacity-building interprofessional training program that enables healthcare professionals to participate in deprescribing interventions successfully in various healthcare practices.

**Methods:** A deprescribing module was designed by mapping the learning outcomes to the competencies required to deliver successful deprescribing interventions. The curriculum adopted adult-learning approach in designing and delivering topics related to identification of target medications and application of the deprescribing process. A workshop comprising didactic and interactive sessions was delivered to participants from different health disciplines in a tertiary hospital in Qatar. To evaluate the success of the module in achieving its learning outcomes, participants were assessed before and after the workshop delivery. The modules were validated by experts locally and internationally through iterative rounds of feedback.

**Results:** Nine hours of interactive and didactic sessions were delivered to 28 healthcare professionals through a two-day workshop. The sessions covered the theoretical framework of deprescribing, the use of deprescribing tools, and hands-on activities on several case-studies to apply deprescribing processes. The average scores of participants in the assessment improved from 53% before the workshop to 61%. Compared to the baseline, improvement in participants' knowledge was foreseen among all assessment questions after the workshop. Overall, 78% of the attendees were satisfied to very satisfied with the delivered topics and activities.

**Conclusion:** In this study, we designed, validated and implemented interprofessional deprescribing modules by addressing the learning outcomes necessary to achieve the required competencies for the successful implementation of deprescribing intervention in older adults. Future studies should determine the utility of the program in healthcare and educational institutions.

**Keywords:** Deprescribing training modules, Adult learning, Capacity building



## **Deprescribing in Portugal: Physicians' Awareness, Training, Attitudes, and Practices**

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**Background:** The importance of deprescribing in clinical practice is growing, especially in aging populations and polypharmacy scenarios, making it a crucial matter in Portugal as one of Europe's most aged nations. This study aims to investigate deprescribing awareness, training, attitudes, and practices among Portuguese physicians to inform future healthcare strategies.

**Methods:** A cross-sectional study via an anonymous online questionnaire was distributed through the Portuguese Medical Association. It gathered sociodemographic and professional data and insights on deprescribing awareness, attitudes, training, and practices. Descriptive statistics (frequencies and percentages) were summarized. Chi-square, Fisher's exact tests (for categorical variables), and the Mann-Whitney U test (for continuous variables) were used. The significance level was set at 0.05.

**Results:** 425 physicians were included, mostly female (61.6%), with a median age of 45 (IQR 34-42). General and Family Medicine (34.1%) and Internal Medicine (16.2%) were the most common specialties. While 81.2% were familiar with deprescribing, 55.4% reported having no formal training. Although a vast majority (91.9%) of respondents reported practicing deprescribing, a smaller fraction employs specific methodologies to deprescribe (39.8%) and criteria for identifying potentially inappropriate medications (PIM) (38.7%). Training in deprescribing was significantly associated with higher deprescribing awareness ( $p < 0.001$ ), use of specific deprescribing methods ( $p < 0.001$ ), use of criteria to identify PIM ( $p < 0.001$ ), and competence in geriatrics ( $p = 0.006$ ). General and Family Medicine practitioners (GPs) showed higher familiarity and training in deprescribing when compared to hospital-based specialists ( $p < 0.001$ ). Deprescribing methodologies were adopted more often by GPs than hospital-based specialists ( $p = 0.004$ ).

**Conclusions:** The study highlights widespread deprescribing awareness but identifies significant training gaps and variability in practices. It underscores the need for targeted educational initiatives that could contribute to medication optimization for older adults in the national healthcare system. It emphasizes the importance of policy development and medical education in promoting safe deprescribing.

**Keywords:** Deprescribing, Physicians Attitudes, Older adults, Portugal.

## **Determinants of Successful Opioid Deprescribing: Insights from French Pain Physicians - A Qualitative Study**

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**Background:** Long-term use of opioids does not result in significant clinical improvement and has shown more adverse than beneficial effects in chronic pain conditions. When opioids cause more adverse effects than benefits for the patient, it may be necessary to initiate a process of deprescribing.

**Objectives:** The aim of this study was to explore the perceptions of French pain physicians regarding the process of opioid deprescribing in patients experiencing chronic non-cancer.

**Methods:** We conducted a multicentric observational study with qualitative approach. Individual semi-structured interviews exploring pain physicians' perceptions, beliefs and representations to assess the determinants of opioid deprescribing with an interview guide drawn from the literature was used. After checking the transcripts, an inductive and independent thematic analysis of the interviews was to extract meaningful themes from the dataset (using NVIVO V.12 software).

**Results:** Twelve pain physicians were interviewed. The main obstacles to deprescribing revolved around patient-specific attributes, characteristics of the opioids themselves, and limitations within the current healthcare system, that hinder optimal patient management. Conversely, patient motivation and education, recourse to hospitalization in a Pain Department with multidisciplinary care, follow-up by the general practitioner, and training and information dissemination among patients and clinicians emerged as facilitative elements for opioid deprescribing.

**Conclusions:** This study underscores the needs to improve the training of healthcare professionals, the effective communication of pertinent information to patients and the establishment of a therapeutic partnership with the patient. It is therefore essential to carry out the deprescribing process in a collaborative and interprofessional manner, encompassing both pharmaceutical and non- pharmaceutical strategies.

**Keywords:** Deprescribing, opioids, pain physician, non, cancer pain, pharmacology

## **Education About Deprescribing for Pre-licensed and Licensed Health Care Professionals: A Scoping Review**

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**Background:** Polypharmacy is a challenge for older adults and can cause significant morbidity and decreased quality of life. Deprescribing is complex as it is patient specific and involves a holistic look at a patient's health, values, and preferences. The World Health Organization and Canadian Deprescribing Network (CaDeN) have recommended that deprescribing be integrated into healthcare curricula prompting the need for further understanding about deprescribing education.

**Objective:** The purpose of this research was to describe the current literature regarding deprescribing education provided to health care professionals

**Methods:** This scoping review was conducted using the 5-step model first introduced by Arksey and O'Malley with revisions from Levac et al. The databases searched include Medline, Scopus, Embase, and ERIC. Papers were included if they were written in English, and contained an educational intervention about deprescribing tailored toward physicians, pharmacists, or nurses. White papers and conference abstracts were also included. Papers or commentaries without deprescribing education were excluded.

**Results:** A total of 4853 abstracts were eligible for screening and 46 papers were included in this review (25 full texts, 15 conference abstracts, 6 White papers). Thirty-three papers utilized group education for their educational intervention and of these, 20 involved interactive portions. Medicine was the most commonly targeted profession, included in 29 papers. The most common outcomes were quantification of the number of medications deprescribed and an increase in learner knowledge and self-efficacy regarding deprescribing using self-assessment surveys or post-educational exams.

**Conclusion:** There is evidence which demonstrates that educational interventions can increase participant knowledge and self-efficacy. To expand the education of deprescribing, future interventions should engage and utilize a variety of professions, not just physicians, and interventions could include application to real patients. Further research is required to determine the long term retention and application of knowledge.

## **How to consider preventive treatments for opposition to nursing and medical cares in nursing homes?**

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**Population:** Dementia is very common in elderly people living in retirement homes. Several clinical forms coexist, such as apathy, agitation, wandering and aggressiveness, sometimes combined in complex patterns. Agitation and/or opposition to nursing and medical cares can be difficult for teams, residents and families. My patient, a 92-year-old man, suffers of vascular dementia, high depression after wife passed-out few years ago, and multiple basal cell carcinomas on face, ears, shoulder, torso. He is not a competent person. There is no compliance to nursing and medical cares: for grooming or dressing, for multiples skincare bandage. However, care is essential to prevent pain or erysipelas.

**Context:** Team requested medical treatments to cure pain, anxiety and depression, also to facilitate care for technical gestures, to avoid violence and to secure caregivers. As the situation evolved months after months, drugs doses were increased: more benzodiazepines (oxazepam), antipsychotic (loxapine) in addition of previous antidepressant (sertraline), then morphine before skincare. A year ago, the patient suffered neurological decompensation with coma, probably a iatrogenic one. All drugs were stopped and then reintroduced gradually and carefully. Situation back to previous: difficult balance between waiting and caring.

**Clinical question:** How to consider preventive treatments for opposition to cares?

**Outcomes:** A second 6-days hospitalization in geriatrics has occur in January 2024, in a period of more somnolence and aggressiveness. Treatments revision was a request. Oxazepam was decreased by half, loxapine was switched to clozapine, sertraline and morphine were kept. One month after, patient was less somnolent but situation didn't elvove positively for cares.

**Lessons learned:** Over-medication escalation as first response to opposition and non-compliance was quite inefficient and iatrogenic. Non-medicated methods and debrescribing to minimal efficiency should be the rule. In this case of non comptent individual, an ethical advise should be useful to provide limitation of care.

**Keywords:** Elderly, opposition, nursing home, benzodiazepines, prevention

## **Interdisciplinary management of medication deprescribing**

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**The population and context of the deprescribing challenge:** In France, hospitalizations related to adverse drug reactions (H-ADR) have risen by 136% in 10 years; 16.1% of them could be avoided with appropriate drug use. Medication review is one way of fighting this risk, but it is a complex and time-consuming procedure to set up at home. Since 2021, in the Home-based Ageing Prevention Unit of the Haute-Vienne (UPSAV, based in central western France), a clinical pharmacologist (CP) identify potentially inappropriate medications (PIMs) and suggests safer alternatives to physicians. However, acceptance by general practitioners (GPs) is low (< 10%), often because they did not start the prescriptions.

**The clinical question related to deprescribing:** To evaluate the impact of a concerted medication review between the CP, the specialists and the GPs.

**How the situation was addressed:** Baclofen and clorazepate were detected in a 77 year old patient with multiple sclerosis and followed up by a hospital neurologist who had falls. A dialogue with the CP, the neurologist and the GP, coupled with psychomotor re-education measures, allowed a program of gradual deprescription of these drugs.

During a hospital stay, fludrocortisone had been added for orthostatic hypotension in a 78- year-old patient with recurrent falls. He was treated by tamsulosin, rasagiline, levocarbiodopa, amantadine, clozapine, amlodipine, bisoprolol and irbesartan. During a home visit by UPSAV, the CP detected multiple drug combinations leading to a decrease in blood pressure. Hospital specialists were alerted, leading to the discontinuation of fludrocortisone and adaptation of the hypertensive therapy.

An 86-year-old woman and an 83-year-old man with insulin-dependent diabetes and falls were exposed to hypoglycemic MIPs (repaglinide, glimepiride). After follow-up home visits by UP- SAV, endocrinologists were alerted by the CP and reinforced patient education was implemented.

**Lessons learned:** Medication reviews, complex and time-consuming for GPs, require a structured and collegial approach. A clinical pharmacologist intervention, making the link between hospital and at home, is useful for improving therapeutic management and recommendation acceptability.

**Keywords:** Medication reviews, structured and collegial approach

## **Detecting and reversing prescribing cascades in nursing homes**

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Among the elderly, polypharmacy is widespread, and even more so in nursing homes. A prescribing cascade is the treatment of an adverse drug reaction (ADR) with another drug.

The aim of this study was to detect and decrease the number of medications prescribed by stopping inappropriate prescribing cascades. The study was monocentric. 57 older patients were included from January to April 2023.

The hospital pharmacist analysed medical records according to geriatric's guidelines and looked for prescribing cascades for each patient's medication history. Then, multidisciplinary medication review was performed with the geriatrician. and. A table of the most frequent prescribing cascades described in the literature was done by the pharmacist to help the process. Summaries of product characteristics were helped the pharmacist too.

Among the patients included in the study, we found an average of 18 (standard deviation (Sd) 5.5) medications and 10.3 (Sd 8.4) prescribing cascades. The number of medications was significantly reduced after the review by 9.6% ( $p < 0.001$ ) on the beginning. The Drug Burden Index measuring exposure to drugs with anticholinergic and sedative effects was medium (mean 0.9, Sd 0.6). 116 types of prescribing cascades were identified. Half of them were inappropriate. The most frequent cascade we found was: "psycholeptics leading to the prescription of anti- constipation drugs".

Our study suggests that reversing prescribing cascades decreases polypharmacy. The types of cascades detected were like previous studies.

Finally, this study demonstrates the need to raise awareness among healthcare professionals about prescribing cascades, and that "problematic" ones may be reversed by deprescribing. However, sometimes it is complicated to find the chronology of medication history, and a comprehensive interdisciplinary management of patients remains fundamental.

**Keywords:** prescribing cascades, deprescribing, inappropriate prescribing, older adults, polypharmacy

## **Deprescribing in Clinical Practice on elderly and at the end of life: Addressing Challenges, Sharing Insights in Emilia-Romagna Region (Italy)**

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Emilia-Romagna is a region in Northern Italy with a population of 3,8 million inhabitant's residents. The Regional Health Department, particularly the Pharmaceutical and Medical Devices Area, in collaboration with the Innovation Sector in Healthcare and Social Services and all the 13 Healthcare Trusts operating in the region, have initiated many projects on deprescribing combining different approaches focusing attention particularly on the elderly population aged 65 years or older and, on the patients, treated with oncological drugs at the end of life.

This paper explores the real challenges faced by the Healthcare Trusts of the Emilia-Romagna Region on the topic of deprescribing in hospital, community and nursing home settings, clinical questions, strategies employed, outcomes and lessons learned.

Deprescribing represents a dynamic area of clinical practice, fraught with challenges yet replete with opportunities for optimization.

Increased coordination and greater harmonization of deprescribing interventions could make the actions developed more effective. Such an approach could allow for the monitoring of intervention outcomes.

By sharing our clinical experiences and insights at the ICOD2, we aim to foster a collective understanding of deprescribing principles and drive innovation in patient-centered care. Through collaborative efforts, we can navigate the complexities of deprescribing, ultimately enhancing the quality of life for elderly navigating complex medication regimens.

**Keywords:** Polypharmacy, elderly, oncological drugs, end of life, deprescribing

## **Physician Perspectives on Decision-making Processes in Deprescribing with Older Adults in Primary Care**

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**Population and context:** This clinical pearl presents the analysis of ten occasions of deprescription with older adults presenting with polypharmacy in a primary care setting. These events present the deprescription approaches of two physicians who operate at the same clinic, which has explicit deprescription goals.

**Clinical question:** How can a clinician promote deprescribing in the exam room? How the situation was addressed: These approaches were analyzed by coding patient-doctor interactions to the decision-ladder, a tool that maps decision-making to steps of assessment, prioritization, and execution. These mappings were discussed by a team including communication, human factors engineering, anthropology, pharmacy and medicine, and findings were then explored through interviews with the physicians. These interviews focused on two deprescription events which were selected given their representative and detailed nature.

**Lessons learned:** This analysis offered insight into the processes that physicians utilize to identify, prioritize, and navigate deprescription, with a focus on clinical relationships, patient information, and deprescription strategies. The need for a strong clinical relationship to facilitate deprescription meant that deprescription was often a long-term effort. The physicians would “plant seeds” by introducing the concept to patients and prioritize addressing patients' needs to help build rapport for later deprescription. While much of the patient information came from pre-appointment medication review, the patient's understanding of medications was equally important. Both of these sources, documentation and patient knowledge, may also include information gaps that act as barriers to deprescription. Strategies included demonstrating concern, utilizing nonpharmaceutical interventions, and iteration. While the single-visit focus of these analyses doesn't allow for the tracking of long-term outcomes, application of the discussed approaches did lead to buy-in and the initiation of deprescription. These findings may serve as guidance for prescribers as well as an example of the importance of further research investigating the cognitive work of deprescription.

**Keywords:** decision, making, cognitive engineering, behavior, interview



## **Anticholinergic load in a long term care facility in Belgium: a pilot**

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Older adults are more at risk for side effects from medications. Mainly anticholinergic side effects can lead to central and peripheral side effects on somatic and cognitive levels.

In this study, we determined the anticholinergic load of the medication regimens of residents of a residential care center using two validated measurement scales. We also examined to which extent the class(es) of medications influence this anticholinergic load. Finally, we analyzed the association of a high anticholinergic load with incidents (urinary tract infections, falls, delirium).

In this pilot study we see a high degree of polymedication and use of psychotropic drugs with an anticholinergic effect. On average we established a score of 1.67 on the ACB and a score of 0.87 on the DBI. The anticholinergic load in the ACB is mainly determined by antipsychotics ( $\beta = 0,647$ ,  $p < 0.001$ ), in the DBI an influence of all medications with antichoon total anticholinergic and sedative load ( $F = 6.764$ ,  $p < 0.001$ ). A risk score on the DBI has a statistically significant correlation with experiencing a urinary tract infection ( $F = 5.877$ ,  $p = 0.018$ ). This influence remains significant after adjusting for covariates.

The anticholinergic load of medication regimens in residents is high. An increased anticholinergic load is also associated with urinary tract infection. Reducing the anticholinergic load within residential care centers therefore represents an important challenge for the future

**Keywords:** Medication anticholinergic older adults adverse events

## **Development and Evaluation of an Inpatient Multidisciplinary Team Deprescribing Program for Older Patients in a Tertiary Care Hospital in Qatar: A Preliminary Analysis**

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**Background:** Deprescribing is a recognized structured intervention that effectively prevents adverse events associated with inappropriate polypharmacy. The literature has abundant examples of successful deprescribing interventions in outpatient settings. However, inpatient deprescribing is not as well-established. In this study, we aim to design and assess the impact of an inpatient deprescribing multidisciplinary team (IDMT) intervention for older patients in a tertiary hospital in Qatar.

**Methods:** This research is a proof-of-concept, pre-post, single-site study. Inpatient deprescribing is performed by a trained multidisciplinary team using a structured and an integrated workflow. Patients included are medically stable  $\geq 65$  years who are admitted to xxxx inpatient unit and on polypharmacy ( $\geq 10$  medications). Eligible patients undergo standardized stages of deprescribing workflow which includes assessment, formulation, implementation, active monitoring of deprescribing plan, and discharge and post-discharge follow-up. Outcome measures include treatment burden (assessed by TBQ score), health-related quality of life (assessed by EQ-5D-5L tool), Medication Regimen Complexity Index (MRCI), Charlson's comorbidity index, cost benefit and cost-savings.

**Results:** The study commenced in mid-January 2024 and is presently ongoing. Given the early phase of recruitment, very limited preliminary findings are currently available, with more comprehensive results anticipated by the end of summer 2024. The average age of the participants is 72 years. All patients had a medical history encompassing stroke, type II diabetes, and dyslipidemia. Baseline data reveal average initial medication count of 15, Charlson's comorbidity score of 8, a TBQ score of 34, and an MRCI score of 62.

**Conclusion:** The implementation of IDMT program is anticipated to improve health outcomes in older adults with polypharmacy and expected to be cost beneficial.

**Keywords:** Inpatient Deprescribing, Multidisciplinary Team, Older Patients

## **Introduction of an approach to de-prescribing Potentially Inappropriate Medications (PIM) in our nursing homes**

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Several medications listed as potentially inappropriate (PIM) for older adults were identified in nursing homes (NH). The primary aim of our study is to identify and address prescriptions containing PIM among the elderly residents, initiating a deprescription. Our approach involved suggesting alternative medications within our NH.

Through collaborative efforts between a geriatrician and a pharmacist, we compiled a list of PIM prescriptions in our NH. Analyzing prescriptions from 8 units, we gathered data including PIM non-proprietary names, indications, dosages, initiation dates, patient names. For each PIM, we created a deprescription easy-of-use aid sheet with an algorithm to guide prescribers with deprescriptions. The algorithm indicated if the treatment should be stopped abruptly or gradually. Alternatives were proposed for each patient, with pharmaceutical consultations to facilitate deprescription.

Our analysis of 295 prescriptions revealed that 112 patients (40%) had at least one PIM use, involving a total of 37 different medications. The most commonly prescribed PIM, ranked by frequency, included liquid paraffin (n=20/112), paroxetine (n=9/112), propranolol (n=8/112), vildagliptin (n=8/112) and cyamemazine (n=6/112). Predominant drug classes encompassed antidepressants, laxatives, antihypertensives, neuroleptics, hypnotics, anxiolytics and antiepileptics. Initial efforts focused on creating a deprescription easy-of-use aid sheet for liquid paraffin, detailing indications, rationale for deprescribing, guidelines, deprescription protocols and potential alternatives if needed. Subsequent sheets will target medications like paroxetine, fluoxetine, clomipramine, amitriptyline and irritant laxatives (senna), prioritizing deprescriptions of antidepressants, neuroleptics and laxatives, which accounts for 35% of the analyzed prescriptions.

The presence of PIM in 40% of prescriptions underscored the significant challenge of deprescribing PIM in our NH, necessitating substantial investment and time. This initiative aligned with our ongoing efforts to enhance therapeutic management for our elderly residents.

**Keywords:** older patients, nursing homes, potential inappropriate medication, deprescription initiation

## **Optimising medication with focus on deprescribing in older people with multidose drug dispensing system: a pilot study**

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**Background:** The number of older patients with polypharmacy will keep increasing the next decades. Polypharmacy has been linked to increased risk of adverse drug reactions. Although deprescribing guidelines are available, older people often continue the use of chronic medication without regular reconsideration of its appropriateness.

**Objective:** To test the feasibility an intervention consisting of a clinical medication review focused on deprescribing in older people using a multidose drug dispensing (MDD) systems.

**Methods:** Pharmacists received a training and toolbox about performing clinical medication reviews focused on deprescribing and taking into account patient' preferences and health problems. The pharmacists conducted this intervention in older people ( $\geq 75$  years) with hyperpolypharmacy using a MDD-system. They registered drug related problems and interventions. Patients, pharmacists and general practitioners were interviewed about their experience and content analysis was performed.

**Results:** Five pharmacists included 22 patients (mean 84 years old, 59% female) Per patient 4,5 drug-related problems were registered by the pharmacist. In 20 patients (91%), at least one deprescribing recommendation was made. The implementation rate of deprescribing recommendations was 75%. The provided training and toolbox were evaluated positively by the pharmacists. Pharmacists mentioned a limited number of eligible patients to recruit. Both pharmacists and GPs experienced barriers to deprescribe in patients who are also treated in secondary care. Patients were satisfied with the provided information on deprescribing and valued the pharmacists' listening skills.

**Conclusion:** This pilot study suggests that the pharmacist-led clinical medication review focused on deprescribing is feasible and have a potential impact to reduce overtreatment in older people with hyperpolypharmacy and MDD-systems. Both health care professionals and patients were positive about the intervention. To optimise the effect of the intervention, improvements can be made to the training and data collection procedures.

**Keywords:** deprescribing, hyperpolypharmacy, MDD, system, older people, clinical medication review

## **Prevalence of over- and underprescribing determined with the ReNeWAL criteria in nursing home patients with a limited life expectancy and polypharmacy: a cross-sectional study**

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**Background:** The 2015 STOPP/START criteria were adapted to older nursing home patients with a limited life expectancy of 1.5-2 years, by means of a Delphi consensus study. This resulted in the 'Represcribing for older Nursing home residents With A Limited life expectancy (ReNeWAL)' criteria, comprising 132 criteria: 98 criteria to stop and 34 criteria to start.

**Objectives:** To determine 1) the prevalence of over- and underprescribing in nursing home patients with limited life expectancy and polypharmacy using the ReNeWAL criteria, and 2) the absolute prevalence difference between the ReNeWAL and the 2015 STOPP/START criteria.

**Methods:** A cross-sectional study was conducted using the health record data of older adults 65 years with polypharmacy and limited-life expectancy. Potential over- and underprescribing was identified using the ReNeWAL criteria and the 2015 STOPP/START criteria.

**Results:** Preliminary analysis of 51 nursing home patients' health records showed a total of 600 prescribed medications with an average of 12 prescriptions per patient. With the ReNeWAL criteria, 288 cases of potential inappropriate prescribing were identified: 214 potentially inappropriate medications (PIMs) and 74 potentially omitted medications (POMs). With the 2015 STOPP/START criteria, a significant lower number of potential inappropriate prescribing cases were identified, namely 194: 107 PIMs and 87 POMs ( $p < 0.001$ , 95% CL 1.44-2.43). 86.3 % of patients received at least one PIM when screened with the ReNeWAL criteria and at least one case of POM occurred in 80% of the patients.

**Conclusions:** We found a high prevalence of PIMs and POMs in nursing home patients with a limited life expectancy and polypharmacy, with clear opportunity for represcribing in this population. The use of the ReNeWAL criteria results in a higher detection rate of over- and underprescribing practices among nursing home patients with a limited life-expectancy and polypharmacy, compared to the 2015 STOPP-START criteria.

**Keywords:** Nursing home patients, Limited life expectancy, Polypharmacy, Over, and underprescribing, STOPP/START criteria, Inappropriate prescribing

## **An Audit & Feedback and pharmacist intervention to reduce Inappropriate Medication prescriptions in patients over 65 years of age in primary care: the AIM study**

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**Background:** Polypharmacy is a global concern, particularly among adults over 65, leading to increased risks of falls, cognitive decline, hospitalizations, and mortality. In Spain, around 31.6% of adults over 65 are affected, with 34-73% receiving potentially inappropriate prescriptions.

**Objectives:** To assess the effectiveness of an Audit and Feedback (A&F) strategy and a pharmacist intervention for potentially inappropriate medications in patients aged 65 and above, including benzodiazepine prescriptions, proton pump inhibitors used for more than 4 weeks without appropriate indication, or antipsychotic treatments for dementia patients, over a 12-month period. Additionally, secondary objectives include evaluating the effectiveness of each component of the primary endpoint.

**Methods:** A parallel randomized clinical trial, stratified by initial prescription, will be conducted in Mallorca, Spain. All family doctors who have treated patients in the last 3 months and are expected to continue for the following 6 months will be included. The intervention will feature an adaptive Audit and Feedback (A&F) approach, providing doctors with individualized graphs, tailored messages on deprescription indications, and access to an online training course. Additionally, doctors in the 75th percentile of prescribing rates for certain indicators will receive a personalized intervention from a study pharmacist lasting 25-50 minutes. This intervention will involve setting specific objectives, enhancing knowledge of appropriate prescription practices, addressing doubts, and discussing specific cases. Doctors will also have the option to receive lists of patients with potentially inappropriate medication. Control group will be active receiving A&F of antibiotic prescription. Data will be analyzed using an intention-to-treat approach, and a Tobit regression model will be used for censored data, with censoring points at 0 and 100. Evaluation will assess acceptability, reach, adoption, fidelity, feasibility, and sustainability.

**Keywords:** Deprescription, benzodiazepine, proton pump inhibitors, antipsychotics

## **Deprescribing in nursing homes: a qualitative study to identify barriers and enablers for healthcare professionals**

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**Background:** Older adults in nursing homes (NH) often have comorbidities and compromised health, makes long-term survival exceptional. This vulnerability contribute to a disproportionately higher prevalence of polypharmacy, a significant driver of potentially inappropriate medication (PIM) use. While deprescribing, the systematic withdrawal of PIM, offers a practical solution, its rate remains low.

**Objectives:** This study explores the barriers and enablers to deprescribing among NH residents with limited life expectancy and identifies potentially modifiable behaviors that influence healthcare professionals (HCPs) to deprescribe

**Methods:** A qualitative descriptive study was conducted among HCPs working in NHs. Semi-structured interviews were held with 18 physicians, 6 pharmacists, and 4 nurses. The interviews were transcribed verbatim and analyzed using NVivo 1.6.1 software. The analysis involved three stages: inductive thematic analysis, followed by mapping determinants to the theoretical domain framework (TDF), and further mapping TDF domains to behavioral change techniques (BCTs)

**Results:** Six interconnected themes identified as both barriers and enablers to deprescribing: healthcare system and policy factors, resource- and organization-level factors, interprofessional collaboration and communication factors, professional role and competency factors, attitudes and perceptions towards deprescribing, and triadic dynamics in deprescribing. Within these themes, 33 barriers and 14 enablers were identified, mapped to 13 of the 14 TDF domains. The most frequently mapped TDF domain was 'environmental context and resources,' with 'restructuring the physical environment' in NHs identified as the most common mapped BCT.

**Conclusions:** This study identified multifaceted barriers and enablers to deprescribing in NHs, spanning policy to individual-level factors. The identified TDF domains and BCTs offer valuable insights for researchers, aiding in intervention design and implementation in NHs. Addressing competency gaps, improving communication strategies, expanding roles for nurses and pharmacist to involve in deprescribing, and incorporating deprescribing into advance care planning and palliative care models were among the interventions suggested by HCPs.

**Keywords:** Behavioral Change Technique (BCT), Deprescription, Healthcare Professional, Qualitative, Nursing Home, Theoretical Domains Framework (TDF)

## **Ethical and Pragmatic Considerations of Physician Decision Making for Deprescribing Among Older Adults with Dementia**

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**Background:** Physicians endorse deprescribing of risky or unnecessary medications for older adults (65+ years) with dementia, but there is a lack of information on what influences decisions to deprescribe in this population.

**Objective** To understand how physicians make deprescribing decisions for older adults with moderate dementia (MD) and ethical and pragmatic concerns influencing those decisions.

**Methods:** We conducted a cross-sectional national mailed survey study of a random sample of 3000 primary care physicians (PCPs) from the American Medical Association Physician Masterfile who care for older adults was conducted from January 15 to December 31, 2021. The study randomized participants to consider 2 clinical scenarios in which a physician may decide to deprescribe a medication for older adults with MD: One in which the medication could cause an adverse drug event if continued and the other in which there is no evidence of benefit. Participants ranked 9 factors related to possible ethical and pragmatic concerns through best-worst scaling methods (from greatest barrier to smallest barrier to deprescribing). Conditional logit regression quantified the relative importance for each factor as a barrier to deprescribing.

**Results:** 890 physicians (35.0%) returned surveys; 511 (57.4%) were male, and the mean (SD) years since graduation was 26.0 (11.7). Most physicians had a primary specialty in family practice (50.4% (449 of 890)) and internal medicine (43.5% (387 of 890)). 689 surveys were sufficiently complete to analyze. In both clinical scenarios, the 2 greatest barriers to deprescribing were (1) the patient or family reporting symptomatic benefit from the medication and (2) the medication having been prescribed by another physician. The least influential factor was ease of paying for the medication.

**Conclusions:** Findings from this national survey study of PCPs suggests that understanding ethical aspects of physician decision-making can inform clinician education about medication management and deprescribing decisions for older adults with MD.

**Keywords:** Ethics, Dementia, Best, Worst Scaling



**Key stakeholders' views on deprescribing preventive medication in dementia: a systematic review.**

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**Background:** As a care home nurse, I have an ethical dilemma when administering medication because most of my residents with dementia do not have the mental capacity to consent to taking their medications. In the older population, there is increasing evidence to show that preventive medications can actually be harmful, and I do not know if my residents want to keep taking their medications with the intention to prolong this period of their lives.

**Objectives:** General practitioners, nurses, pharmacists, and family members are left to make deprescribing decisions for this population. This systematic review will explore the views of these stakeholders regarding this complex and sensitive subject.

**Methods:** Qualitative primary studies will be searched for in Embase, HMIC, MEDLINE, PsycINFO, CINAHL, PubMed, Cochrane Library, ProQuest, Scopus and the Web of Science. The selection process will be reported on a PRISMA flowchart. Cochrane guidance for qualitative evidence synthesis will underpin this review and the Critical Appraisal Skills Programme and Mixed Methods Appraisal Tool will be used for quality assessment of the identified studies. Thomas and Harden's thematic synthesis approach will be followed.

**Results:** This review is ongoing but will be finished by September. Initial findings indicate that key stakeholders struggle to make deprescribing decisions and it would be helpful to know what the person with dementia's wishes were.

**Conclusions:** In England, deprescribing decisions can be incorporated into an advance directive but this is rarely done. The systematic review will be the preparation work for a PhD, which aims to look at whether the general population would wish to have their preventive medication deprescribed (including life-sustaining drugs, such as insulin) if they were to get dementia in the future and if so whether they can clearly state at what stage of dementia they would want to deprescribe medication in an advance directive.

**Keywords:** deprescribing, dementia, advance directive, advance care plan, nurse, pharmacist, general practitioner, care home

## **Optimizing Deprescribing Practices for Overactive Bladder Treatment in Elderly Patients: A Mixed Methods Study in Primary Care**

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**Background:** Potentially inappropriate medication remains a significant concern in general practices, particularly in the context of overactive bladder (OAB) treatment for individuals aged 65 and older. This study focuses on exploring alternative options for treating OAB and deprescribing anticholinergic drugs commonly used in OAB. The research aims to evaluate deprescribing efficiency through a mixed methods approach, combining quantitative assessment and qualitative exploration of perceptions, experiences, and potential barriers among patients and healthcare personnel.

**Objectives:** To evaluate the efficiency and safety of the intervention where healthcare staff in primary care encourage patients to participate in deprescribing drugs for OAB. Additionally, to identify factors contributing to or obstructing the deprescribing process, driving more informed decisions in deprescribing and supporting effective and safe patient treatment.

**Methods:** The DROP study employs a Randomized Controlled Trial (RCT) with an embedded sequential explanatory mixed methods approach. General practices within the North Denmark region will be paired based on GP numbers and urban or rural locations and randomized into intervention and control groups. The intervention group will receive a deprescribing algorithm, promoting appropriate medication usage. Quantitative data will be collected from the RCT and Danish registries for prescription analysis. Qualitative data will be obtained through interviews and focus groups with GPs, staff members, and patients, merged for comprehensive understanding.

**Results:** The DROP study is in progress, with general practice randomization ongoing. Practices are scheduled for inclusion from December 2023 to April 2024, with a 6-month patient follow-up period. Results will be analyzed using intention-to-treat for the RCT and thematic analysis for qualitative data. Quantitative outcomes will focus on prescription and symptom changes, while qualitative analysis will explore experiences and perceptions.

**Conclusions:** The DROP study aims to provide evidence-based deprescribing interventions in primary care for OAB drugs with unfavorable risk-benefit profiles. It seeks to generate evidence for deprescribing practices, influencing healthcare best practices.

**Keywords:** overactive bladder, primary care, elderly patients, mixed methods

## **STOPPFrail Medication Use in Frail Residents of Nursing Homes: A Comparison Across Four Countries in Asia, Oceania and Europe**

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**Background:** Deprescribing opportunities may differ across healthcare systems, nursing home settings, and prescribing cultures.

**Objective:** To compare the prevalence of STOPPFrail medications according to frailty status among residents of nursing homes in Australia, China, Japan, and Spain.

**Methods:** Secondary cross-sectional analyses of data across four cohort studies (n=1,142; 31 nursing homes). Medication data were extracted from resident records. Frailty was assessed using the FRAIL-NH scale (non-frail 0-2; frail 3-6; most-frail 7-14). Chi-square tests and prevalence ratios (PRs) were used to compare STOPPFrail medication use across cohorts.

**Results:** In total, 84.7% of non-frail, 95.6% of frail, and 90.6% of most-frail residents received  $\geq 1$  STOPPFrail medications. Overall, the most prevalent STOPPFrail medications were antihypertensives (53.0% in China to 73.3% in Australia,  $p < 0.001$ ), vitamin D (nil in China to 52.7% in Australia,  $p < 0.001$ ), lipid-lowering therapies (11.1% in Japan to 38.9% in Australia,  $p < 0.001$ ), aspirin (13.5% in Japan to 26.2% in China,  $p < 0.001$ ), proton pump inhibitors (2.1% in Japan to 32.0% in Australia,  $p < 0.001$ ), and anti-diabetic medications (12.3% in Japan to 23.5% in China,  $p = 0.010$ ). Overall use of antihypertensives (PR 1.15, 95% CI 1.06-1.25), lipid-lowering therapies (PR 1.78, 95% CI 1.45-2.18), aspirin (PR 1.31, 95% CI 1.04-1.64), and anti-diabetic medications (PR 1.31, 95% CI 1.00-1.72) were more prevalent among non-frail and frail residents compared to most-frail residents. Antihypertensive use was more prevalent with increasing frailty in China and Japan, but less

prevalent with increasing frailty in Australia. Anti-diabetic medication use was less prevalent with increasing frailty in China and Spain, but was consistent across frailty groups in Australia and Japan.

**Conclusions:** There were overall and frailty-specific variations in prevalence of different STOPPFrail medications across cohorts. This may reflect differences in prescribing cultures, application of clinical practice guidelines in the nursing home setting, and clinician or resident attitudes towards deprescribing.

**Keywords:** Frailty, nursing homes, medication review, medication management, deprescribing, potentially inappropriate medications

## **Assessing the Usability and Acceptability of MedSafer: A Patient-Centered Deprescribing Tool**

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**Background:** MedSafer is an electronic decision support tool that helps guide healthcare providers through the process of deprescribing, using guidelines for safer prescribing in older adults. It was previously tested in acute care hospitals and found to be safe and effective. We recently developed a version of the software with a new patient-facing portal, allowing older adults and/or their caregivers to enter their medical information and generate a personalized deprescribing report to bring to their prescriber. Successful uptake and scaling of the MedSafer patient-facing application hinges on its usability and acceptability by the public and community prescribers.

**Objective:** We aim to evaluate the usability and acceptability of MedSafer through ease of use, perceived usefulness, and overall user experience among the public (older adults and/or caregivers), and community healthcare professionals (doctors, pharmacists, nurse practitioners).

**Method:** A mixed-methods feasibility study will be conducted through quantitative surveys and qualitative interviews. Up to 100 participants, comprising a mix of older adults and caregivers, and up to 25 healthcare practitioners, with a mix of specialities, will be invited to test MedSafer and answer electronic surveys via RedCap. The Extended Technology Acceptance Model (TAM2) and System Usability Scale (SUS) will be used for evaluation. A semi-structured interview will be conducted with a subset of the participants. Survey results will be calculated, and interview transcriptions will be thematically analyzed to present a comprehensive picture of the participants' perceptions of MedSafer.

**Results:** Ethics approval was sought from McGill University Health Centre in January 2024. Formal recruitment will begin in March 2024. We anticipate that MedSafer will demonstrate feasibility through ease of use and positive acceptance from patients/caregivers, and healthcare professionals.

**Conclusion:** This study will provide evidence on the acceptability and usability of a new patient facing MedSafer portal, generating insights to optimize the tool for broader implementation and scalability.

**Keywords:** decision support tool, deprescribing, feasibility study, patient centered, mixed method

## **What are we measuring**

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Clinical reports show controversy in the benefits of deprescribing. Part of that controversy may be due to what is measured to support beneficial outcomes of deprescribing. To support day-to-day practice of deprescribing, what is measured may need to be changed. Many studies try to show a benefit of reduced falls and hospitalizations. However, those outcomes are multi-factorial and not solely controlled by medications. What if, outcomes that directly affect clinical values are measured?

Only 25% of patients eligible for medication reviews take advantage of this healthcare initiative. Only 40% of pharmacist recommendations to deprescribe are accepted and implemented. Due to the barriers of deprescribing such as patient resistance, clinical inertia, and lack of evidence in deprescribing these statistics remain low. Providing evidence of clinical outcomes due to deprescribing efforts may reduce this reluctance. The purpose of this program is to highlight the studies that have shown clinical improvement such as reduced polypharmacy, reduced anticholinergic burden, and improvement of frailty, to translate this idea to other opportunities of measuring clinical outcomes of deprescribing practices.

In practice, assigning the number of medications (polypharmacy number), calculating anticholinergic burden (ACB score), and assessing frailty (frailty score) allows for a measurement of these scores to be followed. Studies show that these three factors are intertwined. Reducing one score, is likely to reduce the other scores; improving clinical outcomes. The connection of these three factors has been applied directly to patient cases. As with other clinical outcomes, these values change throughout care and need to be addressed, routinely. Moving forward, this same concept translates to therapeutic and clinical outcomes such as improved electrolytes, reduced edema, QTc prolongation normalization, breaking down barriers to deprescribing. Just as prescribing a medication for clinical improvement, deprescribing a medication provides clinical improvement that needs to be measured for direct outcomes.

## **Barriers and enablers of patients and outpatient providers to deprescribing recommendations in a clinical trial (Shed-MEDS)**

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**Background:** Few studies have examined how patients and outpatient providers respond to deprescribing recommendations initiated in the hospital.

**Objectives:** To assess patient and outpatient provider willingness to deprescribe medications and the associated barriers and enablers in ShedMEDS, a clinical trial to reduce polypharmacy.

**Methods:** ShedMEDS enrolled hospitalized older patients with polypharmacy referred to post-acute care. A study clinician reviewed all medications then discussed deprescribing recommendations with the patient. Patient's responses were categorized into barriers and enablers from a published framework: appropriateness of cessation, pragmatic considerations, fear (return of condition), dislike of a medication, influences (impactful events/people), and process of cessation. If the patient agreed, the study clinician contacted outpatient provider(s) to discuss deprescribing recommendations. Provider's responses were categorized into barriers and enablers from another published framework: awareness (insight), inertia (failure to act), self-efficacy (belief and confidence), feasibility (external factors), and/or tacit (no clear reason given).

**Results:** Patients (N=177) agreed with 63% of the deprescribing recommendations (883 medications). Appropriateness of a medication was the most common barrier (88%) and enabler (67%) to deprescribing. Other deprescribing enablers were: influences (23%), process (22%), pragmatic considerations (19%), and dislike (5%). Provider conversations were completed for 98 of 129 intervention patients (76%). Among provider conversations, 349 medications were discussed. Outpatient providers agreed with 291 (87%) deprescribing recommendations. The most common enablers to deprescribing were categorized as tacit (28%), self-efficacy (25%), and inertia (24%). However, inertia (39%) and self-efficacy (35%) also were common barriers.

**Conclusions:** Patients and outpatient providers agreed with most deprescribing recommendations. Appropriateness was the most reported barrier, indicating the deprescribing recommendation did not suffice to change the patient's belief in the need for cessation. Inertia was the most frequent barrier for outpatient providers. Future efforts will require better patient engagement in deprescribing conversations and coordination efforts between the hospital and outpatient settings.

**Keywords:** clinical trial, hospital, intervention, patient, centered, barriers and enablers

## **Deprescribing in palliative cancer care: patients' perceptions.**

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Polymedication in palliative oncology care is a real public health problem. This phenomenon has been shown to increase the risk of iatrogenesis, reduce patients' quality of life and increase healthcare costs. For many years, health policies have been developed in geriatrics to reduce polymedication through deprescription tools. Recently, palliative care initiatives have been introduced, but without having studied the potential specificities of this population (younger, with a different care dynamic and life trajectory). For example, stopping certain treatments can be seen as abandonment by patients who then feel condemned to die. It's important to better understand this population's perceptions of deprescribing in order to adapt tools/actions to make these approaches more efficient.

The primary aim of our reflexion and study is to investigate patients' perceptions of deprescribing in palliative cancer care, and then to investigate factors that may influence patients' attitudes and beliefs.

To achieve our objectives, we will conduct a 3-year national, prospective, observational, multicenter study with an exploratory sequential mixed design. The study will include an initial qualitative phase. Semi-directed individual interviews using a descriptive approach will be conducted (around 25 patients, over an 8-month period). Following analysis of the qualitative data, a quantitative study will determine the distribution of the different profiles within this population and the factors influencing the perception of deprescription. The self-administered questionnaires, rPATD and BMQ, potentially supplemented by other items following analysis of the qualitative data, will be administered to 300 patients.

During this communication, we will present the initial results of the qualitative study and share our feedback on patients' perceptions of deprescribing. We will also discuss with the audience the different approaches in different countries.

Thanks to the different results, we will improve our knowledge of the perception of deprescription in palliative oncology care, in order to develop appropriate approaches.

**Keywords:** palliative care / patients' perception / oncology



**Exploring older adults' views on their use of dietary supplements and their willingness towards deprescribing those: Results from an observational study conducted in Swiss primary care settings**

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Dietary supplements are commonly used in older adults, but their inappropriate use may lead to adverse events and unnecessary costs. To optimise medication use, general practitioners (GPs) should be aware of all substances patients take, including supplements. This cross-sectional study aimed to explore older patients' use of dietary supplements, the rate at which they disclosed this use to GPs, and it compared patients' and GPs' attitudes towards discontinuing dietary supplements. GPs and their older patients from Swiss primary care settings completed a survey on patients' use of dietary supplements and attitudes towards deprescribing those. Patients and GPs responded if they would be willing to stop or reduce any supplement and we compared their responses. We assessed the association of supplement disclosure with patients' characteristics using a multilevel logistic regression. We collected data from 10 GPs (3 (30%) female, average age 52 years (SD=8)) and 65 of their patients (29 (45%) female, average of 7 patients per GP). 70% of the patients (n=45) were taking  $\geq 1$  dietary supplement, and the average number of supplements reported by patients was 3 (SD=2). GPs were not aware of 82 supplements taken by 39 (60%) of their patients. 8% (n=5) patients and 60% (n=6) GPs chose  $\geq 1$  supplement they would be willing to deprescribe. None of the supplements reported by GPs and patients to deprescribe matched. Swiss GPs were not aware of many dietary supplements used by their older patients, which may affect medication optimization efforts.

**Keywords:** Primary care, dietary supplements, deprescribing, polypharmacy, older adults, patient preferences

## **Attitudes of lung cancer patients towards deprescribing regular medicines and proton pump inhibitors**

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**Background:** Potentially inappropriate medicine use, particularly the overuse of proton pump inhibitors (PPIs), may compromise lung cancer treatment efficacy and patient survival, underscoring the need for reassessment and deprescribing.

**Objectives:** To explore the attitudes of lung cancer patients towards deprescribing regular medicines and PPIs.

**Methods:** A cross-sectional study was conducted utilizing the revised Patients' Attitudes Towards Deprescribing (rPATD) questionnaire, which was translated into Slovenian and adapted for PPI use with the author's permission. Lung cancer patients received one of two rPATD versions before their outpatient oncological exams: for non-PPI users or for PPI users. The study primarily assessed the willingness of lung cancer patients to stop regular medicines or PPIs based on doctors' advice.

**Results:** Among the 120 lung cancer patients, 61 (50.8%) were male, with a median age of 67 years (IQR 60-73). The patients were on a median of 2 medicines not intended for cancer treatment (IQR 1-4), and the majority (76; 63.3%) were non-PPI users. Most were treated with chemotherapy (62.1%) and immunotherapy (51.7%), followed by targeted therapy (30.2%). A total of 67 (89.3% of 75 respondents) non-PPI users reported being willing to stop taking 1 or more of their medicines if their physician said it was possible, and 25 (36.2% of 69 respondents) wanted to reduce the number of medicines they were taking. All responding 42 PPI users (100% of 42 respondents) reported being willing to stop taking 1 or more of their medicines if their physician said it was possible. Of these, 33 (78.6% of 42 respondents) were willing to stop taking PPI under the same conditions, and 11 (27.5% of 40 respondents) wanted to reduce their PPI dosage.

**Conclusions:** Healthcare professionals treating lung cancer patients can be assured that a majority are open to deprescribing one or more of their regular medicines, with a significant number also open to deprescribing PPIs.

**Keywords:** Inappropriate Prescribing, Deprescriptions, Proton Pump Inhibitors, Lung Neoplasms, Questionnaires

## **Patients', relatives' and healthcare providers' priorities for research in use of medications among older people: A James Lind Alliance Priority Setting Partnership process**

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**Background:** Medication use is high among older people. Although much research already exists within this topic, prior research questions are rarely posed by older patients, their relatives, or treating clinicians.

**Objectives:** To engage older patients, relatives, and healthcare providers in a systematic process to identify and prioritize evidence uncertainties related to use of medications among older people.

**Methods:** This project follows the James Lind Alliance Priority Setting Partnership process. The project focuses on Danish older people ( $\geq 65$  years) using  $\geq 2$  medications, their relatives, and treating clinicians. The process includes the following 5 steps: 1) creating a steering group, 2) gathering evidence uncertainties, 3) summarizing evidence uncertainties and checking for existing evidence, 4) conducting an interim priority setting, and 5) conducting a final priority setting workshop. By submission, we are at step 2, gathering evidence uncertainties through a national survey aiming for a minimum of 100 respondents and 500 evidence uncertainties.

**Results:** In step 1, a steering group was established to lead the project, comprising 2 patients, 1 relative, and 7 healthcare providers. In step 2, 46 uncertainties have currently been submitted through an online survey by 25 participants, including 5 patients, 8 relatives, and 14 healthcare providers. The preliminary uncertainties can be grouped into 4 overall themes related to medication optimization and deprescribing ( $n=22$ ), organ impact and drug metabolism ( $n=4$ ), side effects and interactions ( $n=4$ ), and other ( $n=16$ ). By time of ICOD2, we expect to be able to present categories of unanswered research questions.

**Conclusions:** Preliminary findings suggest that research questions related to medication optimization and deprescribing are a key priority for older patients, their relatives, and treating clinicians. The project will map important research foci for researchers within this area, supporting the prioritized use of research funding towards research questions of particular value to older people using multiple medications.

**Keywords:** Deprescribing, older people, medication use, research priorities

## **Are the deprescribing guidelines for proton pump inhibitors in palliative care applicable? A monocentric observational study**

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**Objectives:** Proton pump inhibitors (PPIs) are among the most commonly prescribed medications. The aim of this study was to assess the appropriateness of prescribing PPIs in the palliative care unit on admission and during hospitalisation to determine the applicability of deprescribing recommendations.

**Methods:** A monocentric observational study was conducted over a 6-month period in 2020 in a university palliative care unit. Data on indication, starting date, dose and posology were collected at discharge from the medical record and by contacting the prescriber. A physician and a pharmacist evaluated PPI prescription appropriateness according to guidelines.

**Results:** 131 patients (mean age: 69.5 years; 82% with cancer) were included. Prior to admission, 41% (54/131) of patients were already prescribed PPIs. During hospitalisation, 50% of prescriptions were discontinued, while 12% were initiated. The indication was known for 50% of patients on admission and 59% during their stay. Among patients with PPI prescriptions, 56% had a relevant indication on admission, and 63% during their stay. The prevalence of potential drug interactions was low (< 1/10).

**Conclusions:** While PPIs remain essential for specific indications, this study highlights their excessive prescription even during palliative care. Implementing deprescribing recommendations in this population is crucial to optimise treatment plans.

**Keywords:** palliative care / proton pump inhibitor

## **Development of an evidence-based diuretic deprescribing clinical practice guideline**

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**Background:** Diuretics, a prevalent class of medications, have been extensively prescribed for decades, playing an important role in treating congestive heart failure and managing hypertension. While their efficacy in alleviating congestion and preventing cardiovascular disease is widely acknowledged, their chronic and prolonged use in the absence of congestion lacks high-quality evidence, and is associated with potentially life-threatening adverse events. Despite this, diuretics are often prescribed without a valid indication, posing greater risks than benefits, especially in vulnerable older individuals living with multimorbidity and polypharmacy. Currently, there is a lack of guidance on when and how to taper and cease diuretics in clinical practice.

**Objectives:** We aim to develop an evidence-based clinical practice guideline for the deprescribing of diuretics.

**Methods:** To inform the guideline, we are undertaking the following projects: 1) a systematic review of clinical trials on diuretic deprescribing; 2) an umbrella review assessing the benefits and harms of chronic diuretic use; 3) a systematic review of diuretic deprescribing recommendations in published guidelines and deprescribing tools; 4) a scoping review on diuretic deprescribing patient preferences and attitudes. We will synthesize the results from these projects and will use the GRADE approach. The guideline development team includes experts in clinical pharmacology, clinical experts in geriatrics, cardiology and/or hypertension, a heart failure nurse, and a patient representative.

**Results:** We anticipate finalizing the guideline in Q4, 2024, incorporating practical recommendations for informed decision-making on diuretic deprescribing. Additionally, a one-page clinical decision-support algorithm will be included. We will also provide information leaflets tailored for both patients and clinicians.

**Conclusions:** Our guideline will serve as a comprehensive evidence-based resource, facilitating optimal treatment decisions and aiding patients and clinicians in making individualized, safe, and evidence-based diuretic deprescribing treatment plans.

**Keywords:** Deprescribing, clinical practice guideline, diuretics, optimizing drug therapy.

## **Do Clinical Practice Guidelines for Medication Management of Type 2 Diabetes Consider Older Adults, Those Living with Dementia, Frailty or Receiving End-of-Life Care? A Systematic Review of the Western Pacific**

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**Background:** The Western Pacific Region (WPR) has the fastest ageing population and 38% of the world's population of people living with diabetes. Older adults with Type 2 Diabetes (T2D) are more likely to develop dementia and have a 3 to 5-fold higher chance of frailty than those without T2D. It is unknown to what extent WPR T2D Clinical Practice Guidelines (CPGs) include recommendations specific to vulnerable groups of older adults.

**Objectives:** To identify T2D CPGs within the WPR and investigate the nature of medication management recommendations and whether they consider older adults, dementia, frailty, and those receiving end of life care.

**Method:** MEDLINE, Embase, Scopus, guideline-specific registries and grey literature searches were performed (inception-August 2023). Data were extracted on guideline characteristics and recommendations relevant to older adults, those living with dementia, frailty, co-morbidities associated with ageing or receiving end of life care. Quality appraisal was performed using the Appraisal of Guidelines, Research and Evaluation (AGREE II) tool.

**Results:** 14 CPGs from 37 countries and areas of the WPR included relevant medication management recommendations for our populations of interest. Ten CPGs recommended less stringent and individualised glycaemic targets with a focus on reducing hypoglycaemia in older adults. Six CPGs from Australia, China, Japan, Malaysia, New Zealand and Singapore included deprescribing recommendations for older adults, those living with dementia, people with co-morbidities associated with ageing and those receiving end of life care. Quality of CPGs varied, scope and purpose rated the highest and the largest variance between ratings were for editorial independence.

**Conclusion:** Recommendations for older adults were sparse. Further research is needed to support CPG development in these areas while considering the diversity of the WPR, such as differences in population size, health infrastructure, medication access and socioeconomic status.

**Keywords:** Type 2 Diabetes, Clinical Practice Guidelines, Systematic Review, Older Adults, Dementia, Frailty, End of Life, Medication Management, Deprescribing, Western Pacific Region

## **Implementation of an Inpatient Opioid Stewardship Program at St. Paul's Hospital in Vancouver, Canada**

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**Background:** Opioid prescribing in hospital can be associated with adverse events, increased length of stay and associated costs, and increase the risk for long-term opioid use and dependence following discharge. In January 2020, a hospital-based Opioid Stewardship Program (OSP) was implemented at St. Paul's Hospital in Vancouver, Canada. The OSP team (a clinical pharmacy specialist and addiction medicine physician) provides audit and feedback and clinical consultations daily throughout the hospital. The OSP is also focused on education, research, and quality improvement initiatives.

**Objective:** The objective of this study is to describe the work of the OSP in its first three years of operation - more specifically the number and type of patients assessed, recommendations made, acceptance rate, and consultations requested.

**Methods:** An electronic report is generated daily identifying all inpatients exposed to opioids. Patients managed by addiction medicine, palliative care, and pain services are excluded. Remaining patients are then automatically screened for 13 evidence-based risk factors identified to increase the risk of opioid-related adverse events and prioritized based on number of risk factors present. Audit and feedback practices are then undertaken and recommendations for optimizing opioid prescribing are written in the chart or directly communicated to the prescriber. Consultation requests are accepted by the OSP team and tracked. These data were analyzed using descriptive statistics.

**Results:** Between Jan 2020 and Dec 2022, the OSP offered 6,013 recommendations for improved opioid prescribing among 1,946 patient encounters. The most common recommendations were: stopping as needed opioids, adding non-opioid analgesics, and providing patient education. The mean acceptance rate of all recommendations offered was 95%. The number of requested consultations by the OSP increased by 240% between Year 1 (n=49) and Year 3 (n=118).

**Conclusion:** A hospital-based OSP offers both a feasible and acceptable mechanism to improve opioid prescribing in the acute care setting.

**Keywords:** opioids, opioid stewardship, pain, analgesia, addiction

## **Polypharmacy: Seeking a critical threshold for deprescribing**

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**Background:** The more medications an individual takes, the more the quality of therapy becomes a concern.

**Objectives:** 1) To measure the association between the number of medications and the presence of three indicators of potentially inappropriate therapy: a) potentially inappropriate medications (PIMs), b) drug-drug interactions, and c) anticholinergic burden. 2) To calculate the proportion of individuals in the population with these indicators.

**Methods:** Using the Quebec Integrated Chronic Disease Surveillance System, we included all individuals over 65 years insured by the public drug plan on April 1, 2022. For each individual, we calculated the number of active medications, and mean number of a) PIMs (Beers 2019), b) drug-drug interactions (Beers 2019), and c) anticholinergic burden (ACB scale). The association between the number of medications and the presence of the three indicators was observed graphically. Proportions of individuals with each indicator and their 99% confidence intervals were calculated.

**Results:** We included 1,214,195 medication users (mean age: 75; 56% female) using an average of 5.7 medications ( $\pm 3.8$ ). The prevalence of each indicator increased with the number of medications. From the threshold of 8 medications, the mean number of PIMs and ACB level exceeded 1.00, and drug-drug interactions surpassed 0.1. At a threshold of 13 medications, half the population had a treatment that included either  $\geq 1$  PIM,  $\geq 1$  drug-drug interaction, or  $ACB \geq 3$ .

**Conclusion:** There is a strong association between the qualitative and quantitative aspects of polypharmacy. From a threshold of 8 medications, the presence of at least one indicator is almost certain.

**Keywords:** Deprescribing, polypharmacy, inappropriate polypharmacy



**CompreHensive geriAtRician-led MEdication Review (CHARMER): embedded process evaluation of a hospital deprescribing intervention within a feasibility study**

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**Background:** Half of older people are prescribed unnecessary or harmful medicines that are not routinely deprescribed in hospital. CompreHensive geriAtRician-led MEdication Review (CHARMER) is a behaviour change intervention to support geriatricians and pharmacists to proactively deprescribe inappropriate medicines with older people in hospital. The intervention comprises: a deprescribing action plan, workshops, benchmarking reports, and weekly briefings between geriatricians and pharmacists.

**Objectives:** To undertake a process evaluation of the CHARMER intervention within a feasibility study to explore: intervention fidelity, acceptability, whether it addresses the intended proactive deprescribing behaviour determinants and any refinements required.

**Methods:** Embedded process evaluation within a feasibility study at four hospitals in England (three intervention and one control site). Data were collected to assess intervention fidelity. Rapid qualitative analysis of staff and patient interviews, intervention implementation observations (action plan launch, pharmacist workshop and geriatrician videos), and study meeting minutes was undertaken.

**Results:** Geriatrician and pharmacist principal investigators managed intervention implementation. They were able to implement most intervention components with ease and fidelity. Principal investigators felt that dedicated support for intervention implementation would enable fidelitous implementation of all intervention components. Detailed instructions for preparing the action plan and how it might be delivered were desired. Geriatricians and pharmacists who received the intervention found it acceptable. Pharmacists felt weekly briefings encouraged them to dedicate time to review medicines and raise with geriatricians, opportunities to deprescribe. Geriatricians indicated that participating in CHARMER allowed them to focus on deprescribing conversations with patients and they involved junior doctors more in the deprescribing process.

**Conclusions:** The CHARMER intervention was feasible and acceptable. Revisions to support intervention implementation include providing a template action plan for hospitals to adapt; funds for a project manager to work with CHARMER principal investigators for three-months to oversee implementation, and support from Health Innovation East in the definitive trial.

**Keywords:** proactive deprescribing, older people, process evaluation, hospital

## Exploring care processes to address diabetes overtreatment in LTC homes

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**Background:** Up to 40% of Ontario, Canada's long-term care (LTC) residents live with diabetes; more than 50% are overtreated (i.e., treated to intensive glycemic targets (A1c < 7%)), counter to clinical guideline recommendations. Addressing this issue necessitates an understanding of current care practices.

**Objective:** To explore how an Ontario LTC home provides care for residents with diabetes and identify opportunities to enhance care processes.

**Methods:** This qualitative study involved semi-structured interviews with care providers in an urban LTC home (May - July 2023). The roles of team members in diabetes care practices (including testing, medication, dietary management) and opportunities for care process improvements were explored. Research team members engaged in a collaborative process using an inductive approach to code data and determine themes.

**Results:** Eleven team members (2 physicians, 1 nurse practitioner, 1 pharmacist, 2 registered nurses, 1 registered practical nurse, 2 personal support workers, 1 dietitian, 1 food supervisor) participated. Three themes were identified. First, care team members reported that some management approaches are consistent across the team (e.g., protocol-guided management of acute hypoglycemia), while others are managed on a case-by-case basis (e.g., management of acute hyperglycemia), contributing to practice variability. Second, acknowledgement of overtreatment varied across the team, with some team members identifying testing frequency and medication use as a concern, while others did not. Third, staff education and greater involvement of diabetes specialists were raised as opportunities to improve care processes, including reducing the frequency of testing and deprescribing of medications.

**Conclusion:** Multiple opportunities to enhance diabetes care and addressing overtreatment were identified. Study recommendations will inform quality improvement initiatives at the LTC home and intervention development for the ongoing DIAL (Deintensifying Diabetes Management for Older Adults Living in Long-Term Care) study. DIAL aims to address diabetes overtreatment in Canadian LTC homes and to improve LTC resident well-being.

**Keywords:** Deprescribing, Diabetes, Long, term, care, Hypoglycemia, Hyperglycemia

## **Outcomes in deprescribing implementation trials and compliance with expert recommendations: a systematic review**

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**Background:** Deprescribing, defined as discontinuing or reducing the dose of medications that are no longer needed or for which the risks outweigh the benefits is a way to reduce polypharmacy. In 2022, the US Deprescribing Research Network (USDeN) published recommendations concerning the measurement of outcomes for deprescribing intervention studies.

**Objectives:** The objectives of this systematic review were to identify the outcome categories used in deprescribing intervention trials and to relate them to the previously published recommendations.

**Methods:** We searched MEDLINE, Embase, PsychInfo, and the Cochrane library from January 2012 through January 2022. Studies were included if they were randomized controlled trials evaluating a deprescribing intervention. After data extraction, outcomes were categorized by type: medication outcomes, clinical outcomes, system outcomes, implementation outcomes, and other outcomes based on the previously published recommendations.

**Results:** Thirty-six studies were included. The majority of studies focused on older adults in nursing homes and targeted inappropriate medications or polypharmacy. In 20 studies, the intervention was a medication review; in seven studies, the intervention was educational or informative; and three studies based their intervention on motivational interviewing or patient empowerment. Thirty-one studies presented a medication outcome (primary outcome in 26 studies), 25 a clinical outcome, 18 a system outcome, and seven an implementation outcome. Only three studies presented all four types of outcomes, and 10 studies presented three types of outcomes.

**Conclusions:** This review provides an update on the implementation of gold standard deprescribing studies in clinical practice. Implementation outcomes need to be developed and specified to facilitate the implementation of these practices on a larger scale and clinical outcome need to be prioritized. Finally, this review provides new elements for future real-life deprescribing studies.

**Keywords:** Deprescribing, outcome assessment, polypharmacy, review, potentially inappropriate medications

## **Overlapping concepts of Diabetes overtreatment and Deprescribing criteria in older people with type 2 diabetes: tackling confusion through the insights from a nested cross-sectional study**

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**Background:** In older individuals with type 2 diabetes (T2D), some clinical practice guidelines (CPGs) address diabetes overtreatment, wherein intensive glucose-lowering treatment (GLT) needs deprescription. Conversely, other CPGs propose specific clinical criteria to initiate GLT deprescribing. These two concepts may lead to potential confusion for healthcare providers.

**Objectives:** This study aimed to assess the prevalence of diabetes overtreatment and deprescribing criteria, and explore their overlap in older individuals with T2D.

**Methods:** Cross-sectional study nested in two cohorts of inpatients aged  $\geq 75$  years with T2D on GLT and comprehensive geriatric assessment at a university hospital (Brussels, Belgium, between 2008 and 2015). Diabetes overtreatment was determined based on 2019 Endocrine Society guidelines, with older individuals treated with insulin, sulfonylureas, or glinides (i.e. GLT with high-risk of hypoglycaemia) considered overtreated if their HbA1c levels were below 7.0%, 7.5%, or 8.0%, respectively, for good, intermediate and poor health status. Deprescribing criteria encompassed advanced age ( $\geq 80$  years), malnutrition, impaired renal function ( $eGFR < 30 \text{ mL/min/1.73m}^2$ ), severe neurocognitive impairment, tight glycemic control ( $\text{HbA1c} < 7.0\%$ ), nursing home residency, multiple comorbidities ( $\geq 5$ ), and polypharmacy ( $\geq 10$  drugs/day).

**Results:** Of 447 patients (median age 83 years (interquartile-range (IQR): 80;87 years); 53% female), 66% were in poor health status and 52% were frail (based on ClinicalFrailtyScale). Median HbA1c was 6.9% (IQR: 6.2;7.8%). Most were treated with at least one GLT with high-risk of hypoglycaemia (78.5%). As per recommendations, 55.5% had diabetes overtreatment, while almost all patients (99.6%) met at least one deprescribing criterion, with 75.6% meeting  $\geq 3$  different criteria.

**Conclusions:** Although GLT deprescription decision-making was indicated for most geriatric patients, not all were overtreated, emphasizing deprescribing aims beyond avoiding intensive treatment, but also to limit GLT that offer low benefit or are at risk of other adverse effects. A comprehensive assessment in older patients with diabetes is crucial to enhance safety and avoid unnecessary treatments.

**Keywords:** Type 2 diabetes, older people, diabetes overtreatment, criteria for deprescribing initiation, glucose, lowering treatment

## **Sustainable implementation of multi-level interprofessional Deprescribing service in nursing homes**

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**Background:** An Integrated Pharmacy Service is implemented in some nursing homes throughout Switzerland. This service has been used to test deprescribing interventions at the resident- and the nursing home-level, which showed that this approach is relevant and feasible. However, dissemination requires supportive measures and strategies to ensure a successful implementation.

**Objectives.** This study will evaluate the implementation and impact of a facilitated interprofessional deprescribing service in Swiss nursing homes.

**Methods:** After an education session combining in-person activities and e-learning, pharmacists will implement one or both of the following interventions in their nursing homes: medication reviews targeting individual residents, and interprofessional practice groups, gathering physicians and nurses, to elaborate local deprescribing consensus and implementation strategies. A facilitation service will support pharmacists in the implementation of this service, and a digital platform will be used to facilitate communication between professionals within the nursing home and support data gathering. The study, which will take place from September 2023 to September 2026 and be opened to all Swiss NHs, follows an hybrid (type 3) effectiveness and implementation evaluation design.

**Results:** 40 NHs, totaling about 2000 beds, are currently enrolled in the study. The prescription frequency and consumption (using Defined Daily Doses) of inappropriate medication will be assessed during the impact evaluation. The implementation evaluation will focus on the acceptance and maintenance rates of therapy modification proposals, the implementation strategies used, and the satisfaction of stakeholders (professionals, politicians, patients).

**Conclusions:** This study will provide insights on the value of various measures aimed at implementing a facilitated and structured interprofessional deprescribing service, and the contextual parameters to be taken into account at different levels (professional, systemic) with a view to make this practice widespread.

**Keywords:** nursing homes, interprofessional practice, deprescribing interventions, hybrid implementation effectiveness study

## **Among elderly patients, deprescription of long half-life benzodiazepines, tramadol and hydroxyzine initiated in emergency units: what becomes of it ?**

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Since 2021, a multi-professional team (pharmacists and geriatricians) has been working in emergency units to organise medication reviews. It is proposed to deprescribing inappropriate drugs to elderly patients : arguments (side effects in elderly population), deprescribing guidelines, advices for substitution.

The aim of our study was to check whether the pieces of deprescription advice initiated in emergency units had been successfully completed for patients with a prescription of the following drugs: long half-life benzodiazepines (LBDZ) (bromazepam, clobazam, clorazepate, prazepam and diazepam), tramadol and hydroxyzine.

Among the patients who have benefited from a medication review in 2022, the patients concerned by the use of these drugs have been identified. For these patients, pharmacies and retirement homes were contacted to find out whether the target drug(s) had been deprescribed. Other information collected included dosage, the time between the deprescribing advice and its implementation and if any substitution was moleculeor posologyled.

83 patients were involved with 21 already dead. Of all LBZD prescriptions analysed (n= 30), 50% (n= 15/30) were discontinued, 30% with a switch to a short half-life benzodiazepine such as oxazepam. Of all tramadol prescriptions analysed (n= 31), 64% (n= 20/31) were discontinued, 52% with a switch to paracetamol (n= 16/31). Of all the hydroxyzine prescriptions analysed (n=6), 67% (n=4/6) stopped this drug. However, 33% (n=2) of patients continued their treatment with hydroxyzine despite the deprescribing recommendation. Only 40% (n=25/62) continued the same treatment even if the posology was sometimes lower (if necessary).

In conclusion, this study highlighted the positive results of this medication review in emergency units, with 60% (n=37/62) of patients having stopped the targeted drugs, as well as the value of this project to initiate the deprescription of LBZD, tramadol and hydroxyzine in elderly patients even in emergency units.

**Keywords:** benzodiazepine, elderly, tramadol, deprescribing, hydroxyzine, emergency

## Costs of Gabapentinoids-Associated Adverse Events

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**Background & Objective:** Gabapentinoids, namely gabapentin and pregabalin, are commonly prescribed off-label, despite marginal benefits, and an increased risk of adverse events (AEs) (e.g., falls, fractures, and cognitive impairment). The economic burden remains largely unexplored. This scoping review aimed to evaluate the costs of gabapentinoid-related AEs.

**Methods:** Systematic literature searches were conducted in Medline, Embase, Cochrane, and Google Scholar from inception to February 2023, to identify candidate studies of: gabapentinoids, treatment-associated AEs, and costs. After removing duplicates, studies were screened and data extracted by two independent reviewers, with disagreements resolved by a third. Randomized controlled trials and observational studies in adults were included with diverse treatment indications (e.g., diabetic neuropathy, fibromyalgia). Studies on epilepsy were excluded.

**Results:** From 2,635 records, 12 studies were included (8 cost-utility/cost-effectiveness analyses and 4 retrospective cohorts; 3 examined gabapentin, 6 pregabalin, and 3 both). The majority (8) were conducted in the United States. Reporting of costs was heterogeneous. For instance, 5 studies defined the cost of intolerable AEs, poor pain relief, or AE-related medication discontinuation as an additional medical visit. One study estimated AE-specific costs to the patient (eg. dizziness \$44USD per patient). Some studies focused on the cost per QALY balancing effective pain relief vs. severe AE rate. For example, one study (N=110,184 patients) investigated the costs associated with altered mental status (a severe AE) in high vs. low-dose gabapentin. Higher doses increased 30-day total healthcare costs compared to lower doses. The authors estimated total savings of ~\$1,123,282 if 100% of study patients receiving high-dose gabapentin were to switch to low-dose.

**Conclusions:** Despite heterogeneous data reporting, our scoping review found that gabapentinoids were associated with AEs, increased healthcare utilization, and excess costs. Given gabapentinoids are increasingly prescribed off-label with only marginal benefits, they are a candidate class for deprescribing.

**Keywords:** Gabapentinoids, gabapentin, pregabalin, costs, adverse events, adverse effects, deprescribing, deprescription

**Healthcare providers' perspectives regarding discontinuation of antidepressants: a focus group study**

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**Background:** Discontinuing antidepressants (ADs) in the group of long-term users can be challenging for both patients and health care providers (HCPs). Better understanding on how HCPs handle these challenges is needed to improve care regarding AD discontinuation.

**Objective:** The aim of this study was to identify barriers and facilitators of discontinuing ADs from the viewpoint of HCPs of various disciplines, and to explore their views on their specific roles during AD discontinuation.

**Methods:** Two mixed focus group discussions with in total four general practitioners, six pharmacists and three psychiatrists, were conducted in two regions in the Netherlands. The discussions were recorded and transcribed verbatim. Directed content analysis was performed on the basis of the Theoretical Domains Framework. Two researchers independently coded the data and notable deviations were discussed with experts.

**Results:** Six themes were identified: (1) identification of patients, (2) behavior of HCPs regarding AD discontinuation, (3) fears and emotions, (4) context and resources, (5) knowledge and skills and professional attitude. All HCPs agreed that AD discontinuation is highly relevant. Barriers include a lack of evidence based guidance and expertise, fear of relapse or burdensome discontinuation symptoms, poor collaboration between HCPs and a lack of resources. Barriers on the level of medication included the use of paroxetine or venlafaxine, having used antidepressants for a long time and previous unsuccessful attempts of discontinuation. The ability to identify patients that might benefit from AD discontinuation and the availability of a guideline, guidance and structured discontinuation schemes were considered a facilitator for the process of AD discontinuation. HCPs were unaware and therefore uncertain about each other's' roles and responsibilities. In particular general practitioners (GPs) and psychiatrists were unaware of the potential of community pharmacists (CPs) to support patients in all steps of the process of AD discontinuation.

**Conclusion:** HCPs were concerned about the risk of overtreatment versus relapse and showed motivation to provide guidance during AD discontinuation. As evidence based guidelines are lacking, AD discontinuation deserves a tailored approach. Within this approach, agreements about the roles and responsibilities of the different disciplines are needed, as well as sufficient resources including HCP time and reimbursement.

**Keywords:** Antidepressants Discontinuation, Healthcare Provider Perspectives, Knowledge and Evidence, Contextual Factors, Roles and Responsibilities



## **Feasibility of a theory-based intervention towards benzodiazepines deprescribing in nursing homes: the END-IT NH pilot randomised controlled trial**

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**Background:** We developed a complex intervention towards benzodiazepines deprescribing in Belgian nursing homes (NHs) using a theory-based approach. The intervention encompasses 6 components: process and goals setting, healthcare providers education, physical environment adaptations, audit and feedback, nursing home residents (NHRs) awareness raising, and multi-disciplinary work.

**Objectives:** To evaluate the feasibility and acceptability of the intervention, and to evaluate the feasibility of evaluating the effectiveness and cost-effectiveness of the intervention over a 6 months follow-up.

**Methods:** We conduct a pilot cluster-randomized controlled trial in 6 NHs, aiming at recruiting 10 to 15 NHRs per NH. 4 NHs were assigned to the intervention group, and 2 to the control group. We evaluate the feasibility of the intervention following the approach for process evaluations recommended by the Medical Research Council guidance, meaning that we investigate implementation fidelity, potential mechanisms of impact, and contextual factors. For this purpose, we collect quantitative data at baseline, 3- and 6-month. Additionally, qualitative data will be collected through interviews with a sample of NHRs and healthcare providers. Feasibility of the evaluation of the intervention effectiveness and cost-effectiveness is assessed through participation and attrition rates, rate of missing data, and a satisfaction survey with NH partners.

**Results:** 66 NHRs agreed to participate. Five NHRs dropped out before baseline data collection, leaving 45 NHRs in the intervention group, and 16 in the control group. The number of intervention component implemented per intervention NH ranged from 2 to 5. End date for quantitative data collection is March 2024, and the qualitative interviews will begin shortly after. Study results will be available in summer 2024 and could be presented at ICOD 2.

**Conclusion:** Results will guide any required refinements to the intervention and study design and allow to decide whether conducting a full implementation trial is worth considering.

**Keywords:** Benzodiazepines, Nursing homes, Older adults

## **Deprescribing after hospital-based medication reviews in older adults: A Swedish nationwide register study in 2022**

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**Background:** Medication reviews are advised for older adults (aged  $\geq 75$  years) with polypharmacy in Sweden. To date, only medication reviews conducted in hospitals are registered in national data. Little is known about the changes in drug use after these registered medication reviews.

**Objectives:** We aim to investigate changes in number of medications and identify the drug classes most frequently discontinued after a medication review in persons 75 years and older.

**Methods:** We used the nationwide Swedish Prescribed Drug Register individually linked to the National Patient Register to identify adults 75 years and older with a medication review in 2022. Medication use was defined as all medications dispensed in the three-month window before and after the date of the medication review. We estimated the change in number of medications and inappropriate medications after a medication review for the overall population, and stratified by age and sex. The most frequently discontinued medication classes will be identified by ATC-codes.

**Results:** We identified 137,096 older adults with a registered medication review in 2022, (54% females, median age 82), corresponding to 15% of persons 75 years and older. Overall, 38% used fewer drugs after the medication review. The mean reduction was -0.3 after the medication review (before: 7.7 drugs vs after: 7.4). Men and women showed a similar reduction in number of medications after the medication review. Persons aged 95 years and older, used a lower number of drugs than younger age groups before undergoing a medication review but experienced a similar reduction. We will further analyze the medication classes most often discontinued after medication review.

**Conclusions:** A small proportion of persons 75 years and older had a medication review performed at a hospital in 2022. There was a modest reduction in the number of used drugs after medication reviews.

**Keywords:** Deprescribing, medication review, register

**Identification of the potential prescribing cascade “dihydropyridine calcium channel blockers - lower extremity oedema - loop diuretics” and assessment of its prevalence and determinants in French databases: a protocol.**

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**Background:** Polypharmacy is associate with serious drug event as hospitalizations or falls. Prescribing cascades contribute to polypharmacy by increasing the burden of inappropriate medications. A prescribing cascade occur when a drug is prescribed to treat an unrecognized adverse drug event caused by a previously prescribed drug. Nine clinically important prescribing cascades have recently been identified. Among these, the cascade “dihydropyridine calcium channel blockers (DHCCB) - lower extremity oedema (LEE) - loop diuretics (LD)” have been increasingly studied. Its signal was clearly identified into international administrative databases and its prevalence was estimated at 1.4 to 4.8% in international cohorts. However, to our knowledge, this cascade has never been studied using large-scale French databases.

Objective

**Objectives:** The first aim of this study protocol is to identify the signal of the potential “DHCCB- LEE - LD” prescribing cascade using the French National Health Data System (SNDS). The second aim is to calculate the prevalence of this cascade and to identify factors associated with, using the new french Plateform for data in Primary care (P4DP).

**Methods:** SNDS will be used to identify DHCCB adults’ users who received a first delivery of LD in a range of +/- 365 day after delivery of DHCCB. Prescription sequence symmetry analysis will be used to calculate an adjusted sequence ratio. We will use adults that initiated LD +/- 365 day after angiotensine converting enzyme inhibitor/angiotensine-2-receptor blocker as negative controls to adjust for disease progression and comorbid indication. P4DP will be used to identify adults’ patients who have encounter a first occurrence of lower extremity oedema following by LD initiation after the prescription of DHCCP. Prevalence will be calculated and adjusted for prescriber’s characteristics. Logistic regression will be used to identify factors associated with this cascade.

**Perspectives:** The results of this study will help to develop quaternary prevention initiatives to avoid the occurrence of this cascade.

**Keywords:** Prescribing cascades, Pharmacovigilance, polypharmacy, Drug Related Side Effects and Adverse Reactions, Primary Health Care

## **Polypharmacy's association to mortality: A methodological case study**

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**Background:** Studies consistently associate use of multiple medications with increased mortality. However, such studies often lack adequate adjustment for confounding, particularly from underlying diseases.

**Objective:** To illustrate challenges in studying the association between polypharmacy and mortality by examining this relationship in two separate populations.

**Methods:** A register-based nationwide study utilizing a cohort of all Danish citizens admitted to care homes 2015-2021 (n=95,057) and a general population cohort aged  $\geq 65$  years (n=1,005,963). We assessed the association between medication use and one-year mortality with varying levels of adjustment.

**Results:** In the care home cohort, we found a linear increase in mortality with number of medications used. Adjusting for sex, age and comorbidities markedly attenuated the association from an odds ratio of 4.70 (95% CI 4.24-5.21) to 2.23 (95% CI 1.99-2.49). Paradoxical associations were observed for individual drug classes, such as antimentia drugs showing a strong inverse association with mortality. When examining the stability of number of drugs used over time, we found considerable fluctuations for individual residents. In the general population cohort, adjustment for covariates showed even stronger impact on the association reducing the odds ratio from 10.39 (95% CI 9.79-11.03) to 1.34 (95% CI 1.25-1.43). Further, the individual-level use of medication was found to be stable over time in the general population.

**Conclusion:** The association between polypharmacy and mortality is strongly affected by confounding by indication. Adjusting for comorbidities attenuates but does not eliminate the association, emphasizing the need for cautious interpretation of findings associating high use of medication to mortality.

**Keywords:** Drug Therapy, Mortality, Care home, Pharmacoepidemiology, Polypharmacy

## **Use of fall risk increasing drugs (FRIDs) at time of care home admission: a nationwide Danish cohort study**

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**Background:** Falls are common and have major impact on care home residents. Causes are multifactorial and use of Fall-Risk-Increasing Drugs (FRIDs) constitute a major component.

**Objectives:** To describe the use of FRIDs among older people upon care home admission.

**Methods:** All Danes 65+ yrs admitted to care homes during 2015-2021 were identified and individual level data linked with nationwide prescription registries. FRIDs were defined following STOPP-Fall tool (benzodiazepines, antipsychotics, benzo-related drugs, opioids, antidepressants, anticholinergics, antiepileptics, diuretics, alpha-blockers as antihypertensives/prostate hyperplasia, centrally acting antihypertensives, antihistamines, cardiac disease vasodilators, urinary frequency/incontinence drugs).

**Results:** The cohort comprised 96,691 residents (62% female; median age 84 years). At time of admission (0-90 days before admission), 78% (n=75,622) used at least one FRID. Furthermore, diuretics were the most commonly used FRID (36%, n=34,866) and the most frequent FRIDs classes used in combination were diuretics and opioids (6.0%, n=5,806) followed by diuretics and antidepressants (5.4%, n=5,244). Mean (SD) number of individual FRIDs and FRIDs medication classes were 1.8 (1.6) and 1.6 (1.3), respectively. No difference was seen between sexes. Over half (65%) of all care homes residents experienced an increase in their use of FRIDs at time of admission compared to one year prior to admission.

**Conclusions:** Use of FRIDs are very common among older adults newly admitted to care home and increases up to time of admission.

**Keywords:** Fall risk increasing drugs, FRIDs, Care homes, Drug use

## **How do General Practitioners want to be involved in Medication Reviews carried out by Community Pharmacists for patients with Poly medication in Belgium?**

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**Background:** International guidelines encourage the use of medication reviews (MedRevs) to manage poly medication and improve the appropriateness of prescriptions. Since April 2023, the National Institute for Health and Disability Insurance (NIHDI) has been funding Belgian community pharmacists (CPs) to carry out MedRevs. A number of criteria must be met: the patient is a chronic user of five or more reimbursed medicines, has a comprehensive medical record with a general practitioner (GP) and a designated reference CP. The CP must discuss the treatment plan with the patient and provide online feedback and recommendations to the GP. At present, we do not know the best channels of communication between GPs and CPs, or what GPs expect from this pharmaceutical service.

**Objectives:** Find out what involvement the GPs want to have in these MedRevs and how they want to communicate with the CPs in this context. Understand what information GPs want to obtain from the online pharmaceutical report to help them manage their patients with poly medication.

**Method:** An anonymous online questionnaire was distributed in French and Dutch to active Belgian GPs. The aim of the survey is to provide quantitative data on GPs' wishes for collaborating with CPs on MedRev. A descriptive and inferential statistics analysis will be carried out in early 2024 using SPSS and the results will be presented at the congress.

**Results:** The study aims to elucidate the specific information (CP recommendations) that Belgian GPs require in order to adapt their prescribing practices.

**Conclusion:** This online survey will contribute to a clearer understanding of the content and format of MedRevs, which will help primary care providers and policy-makers.

**Keywords:** General practitioners, Community Pharmacists, Poly medication, Medication Reviews, Collaboration

## **Insights from a pharmacist's geriatric assessment: defining deprescribing potential of commonly used medications**

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**Background:** Commonly prescribed and used medicines such as proton pump inhibitors (PPI), non-steroidal anti-inflammatory drugs (NSAID), opioid analgesics (OPI), or benzodiazepine receptor agonists (BZN) can be inappropriate for older adults. Comprehensive geriatric assessment provided by a pharmacist can give valuable insight into potential deprescribing targets while highlighting important aspects of various health domains.

**Objectives:** Analyse the deprescribing potential of four medication classes among community-dwelling older adults and identify potential factors associated with an increased likelihood of needing deprescribing.

**Methods:** Using a 17-part geriatric assessment questionnaire data was collected for 388 community-dwelling older adults from a Croatian cohort of the EuroAgeism H2020 ESR 7 international project on inappropriate prescribing and availability of medication management services. Deprescribing criteria based on guidelines was applied during medication review to assess the deprescribing potential for each participant being prescribed PPI, NSAID, OPI, and/or BZN. Binary logistic regression was used to explore the effects of age, gender, number of medicines, number of diagnoses, self-reported health, frailty score, and healthcare utilization on the likelihood of needing deprescribing.

**Results:** More than half of participants (n=216, 55.2%) would be candidates for deprescribing, with 31.1% of PPI, 74.8% of NSAID, 75% of opioid, and 96.1% of BZN users meeting at least one criterion. Additionally, 33.8% of older adults could have one medicine deprescribed, 18.8% two, and 3.4% three medicines. Most common criteria for deprescribing were inappropriately long use and safety concerns. Women (aOR=2.58; 95%CI 1.59-4.18; p< 0.001), those reporting poor self-reported health (aOR=5.14; 95%CI 1.17-1.44; p< 0.001), and those exposed to polypharmacy (aOR=1.29; 95%CI 1.73 - 15.25; p< 0.001) had higher odds of needing to have medicines deprescribed.

**Conclusion:** The high rate of deprescribing potential warrants prompt action to increase patient safety and decrease polypharmacy. Pharmacist's geriatric assessment and deprescribing-focused medication review could be used to lead a personalised approach.

**Keywords:** benzodiazepines, geriatric assessment, community pharmacist

## **Pharmacist-led deprescribing of potentially inappropriate medications for cancer patients in a specialist palliative care setting**

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**Background:** As patients approach end of life, the focus of care shifts to comfort and symptom control, making many medications inappropriate or unnecessary due to reduced benefits and heightened risks.

**Objectives:** To determine the prevalence of potentially inappropriate medications (PIMs) among cancer patients in an inpatient palliative care setting in Ireland, the rate at which physicians implemented pharmacists' deprescribing recommendations, and the cost implications of deprescribing.

**Methods:** Medication reconciliation was performed for each eligible patient, with both the OncPal deprescribing guideline and clinical judgement applied to identify PIMs. PIM prevalence was evaluated for each medication class, and both the physician recommendation implementation rate and medication cost savings were calculated. Chi-squared analyses were performed to assess for significant differences in recommendation implementation rates, whereby  $p < 0.05$  represented statistically significant differences.

**Results:** In the 48 included patients, 25.2% of medications were PIMs (mean 2.4/patient) - with 86.7% OncPal-defined PIMs, most commonly vitamins, medications for gastro-oesophageal reflux disease (GORD), and lipid-modifying agents. The 28-day cost was €1,165.08 for these PIMs. Pharmacist deprescribing recommendations were implemented 71.7% of the time. Implementation rates varied based on patient admission type, with a significantly higher ( $p < 0.05$ ) rate in those admitted for end-of-life care (83.3%) versus symptom control (65.1%) and respite (30%) admissions. Recommendations to deprescribe GORD medications had a significantly lower rate of implementation (26.7%) compared to all other medications ( $p < 0.0001$ ).

**Conclusions:** This study underscores the benefits of pharmacist-led deprescribing in inpatient palliative care, resulting in cost savings and reduced medication burden. There is a notable need for proactive deprescribing before reaching inpatient care. Different deprescribing rates across medication types highlights the significance of reviewing medications which may have a role in symptom management. The omission of some medications from OncPal emphasises the importance in refining future deprescribing guidelines in palliative care.

**Keywords:** deprescribing, pharmacist, cancer, palliative care, inappropriate prescribing



**The missing link? Pharmacists' views on discontinuing long-term use of antidepressants: a qualitative study**

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**Background:** Long-term antidepressant use, much longer than recommended by guidelines, can lead to harms and unnecessary costs. Community pharmacists play an important role in dispensing medication and providing guidance on the appropriate and safe use of medication including antidepressants. Additionally, they have regular contact with patients using antidepressants. While general practitioners acknowledge pharmacists as potential partners in the antidepressant discontinuation process, there is a gap in knowledge about pharmacists' perspectives on discontinuing antidepressant and their roles in the process.

**Objectives:** To explore pharmacists' perspectives on discontinuing long-term antidepressants, their role in the discontinuation process and their barriers and facilitators.

**Methods:** In this qualitative study, 14 semi-structured face-to-face interviews were conducted with Belgian pharmacists. Interviews were analysed thematically.

**Results:** The first theme 'Antidepressants at the pharmacy: a persistent taboo' highlights the challenges pharmacists encounter in initiating discussions about antidepressants and mental health with patients. Secondly, when reflecting on antidepressant discontinuation, pharmacists fear the risk of relapse, but they recognize that the potential harm from continuing the antidepressant may outweigh these concerns. Thirdly, despite being a potential starting point for discontinuation, pharmacists find engaging in discussions with patients challenging, raising questions about their role. They seem to prefer GPs to take on this responsibility.

**Conclusion:** The taboo around antidepressants and the fear of relapse are significant barriers for pharmacists. Empowering pharmacists through education and confidence-building is crucial to facilitate their involvement in the antidepressant discontinuation process and supporting patients during the discontinuation process. Multidisciplinary collaboration and clear agreements with GPs are necessary to reduce unnecessary antidepressant treatment.

## Deprescribing after primary care pharmacist's intervention

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**Background:** Multimorbidity and polypharmacy generates medication-related problems (MRP) affecting patient safety. Medication review (MR) by the primary care pharmacist (PCP) is one of the clinical activities contemplated in the chronic patient's care process improving quality of care.

**Objectives:** To quantify MRP detected by PCP during medication review process. To estimate the acceptance of recommendations, and to quantify the deprescription by the general practitioner (GP).

**Methods:** Pre-post longitudinal study during 2023. PCP performed MR of polymedicated chronic patients by consulting electronic medical records. In our routine practice, MR are performed according to a systematic method following the Spanish Society of Primary Care Pharmacists (SEFAP) algorithm: MRP are classified into Necessity (untreated pathology, no indication, other alternative with more evidence), Appropriateness (posology, treatment duration, duplicity, adherence), and Safety (contraindication, interaction, potentially inappropriate medication, possible adverse drug reaction, or reconciliation error). PCP prepared a report with recommendations, and forwarded it to the GP. Acceptance was verified through prescription changes in electronic medical records, or through GP feedback.

**Results:** Treatments of 356 patients were reviewed, mean age 77.3 (SD 11.9) years, 63.9% female. A total of 1149 MRPs were identified, mean of 3.3 (SD 2.0) MRPs/patient; the distribution by type was: Safety (48.9%), Appropriateness (30.4%) and Necessity (20.7%). The five most frequent MRPs, representing 75% of the total were: duplicity (21.1%), no clear indication (16.3%), dosage (12.8%), duration of treatment (12.6%) and drug-drug interaction (12.4%). Mean drugs/patient pre-review was 14.3 (SD 5.4), and post-review 12.8 (SD 5.1), representing a deprescription of -1.5 drugs/patient (95%CI -1.7 to -1.4). GPs accepted 61.3% (95%CI 58.4 to 64.1) of the recommendations sent. Of the recommendations not accepted, 24% were due to clinical reasons.

**Conclusions:** The participation of pharmacist in medication review identified MRP especially related to Safety as duplicities and to Necessity as drugs without clear indication. Acceptance by the GP was high, achieving a remarkable deprescribing.

**Keywords:** deprescribing, primary care pharmacist, medication, related problems

## **Description of interventions performed by pharmacists involved in the care of older adults with neurocognitive disorders in family medicine groups in Quebec, Canada**

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**Background:** In Quebec, Canada, pharmacists have been integrated into Family Medicine Groups' (FMG) interprofessional primary care teams, since 2015. In recent years, regulatory changes have expanded their autonomy for managing pharmacotherapies in targeted populations under defined conditions. Little is known about the nature of pharmacists' interventions in these settings.

**Objective:** The objective of this study was to describe the interventions performed by FMG pharmacists regarding older adults in investigation for or recently diagnosed with neurocognitive disorders.

**Method:** Within a larger quasi-experimental study, we performed a cross-sectional descriptive analysis of pharmacists' interventions. We collected information on interventions through structured online interviews with pharmacists between August and October 2023 on interventions performed between January 1st and June 30, 2023. This time window allowed us to mitigate recall bias at the time of data collection. All interventions were classified according to the Drug-Related Problems (DRP) classification of the Pharmaceutical Care Network Europe, V9.1. We performed a descriptive analysis to report frequencies of performed interventions, detected DRP and associated causes of these problems.

**Results:** We collected data on 96 interventions performed by four pharmacists involving 24 patients (median number of interventions per patient = 3; (interquartile range: 2 - 5.5)). Of these interventions, 37.5% (n=36) were implemented by the pharmacists themselves, primarily encompassing patient counselling (n=9) and dosage adjustments (n=7), while the rest were recommendations to prescribers. The most common DRP was adverse drug events (33%, n=32). The leading related cause was too elevated drug doses (35%, n=11). Pharmacists' interventions were accepted 83% of the time (n=80). Detected DRP were considered either fully or partially solved 77% of the time (n=74).

**Conclusion:** Despite having increased autonomy for interventions, pharmacists predominantly made recommendations to prescribers who typically embraced them, and frequently requested the pharmacist to implement these interventions. The FMG pharmacists prioritized collaboration, opting to propose recommendations before acting independently.

**Keywords:** Drug Utilization Research, Intervention, Drug Related Problem

**Clinical pharmacological medication reviews in patients suffering from coexisting diabetes and severe mental illness: A randomized controlled trial on medicines optimization.**

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**Background:** Patients suffering from mental illness have an increased risk of developing metabolic complications such as dyslipidemia, diabetes and obesity. This adds to an increased overall mortality for this group of patients and though a myriad of factors seems to play a role in adding to this risk, the often complex and extensive drug treatment seems no less important in this aspect.

**Objective:** To investigate whether medication reviews by a clinical pharmacist can improve efficacy and tolerability of drug treatment in patients suffering from diabetes and severe mental illness.

**Methods:** This study is a prospective randomized clinical trial enrolling 48 adult patients from an outpatient psychiatric clinic treating patients with coexisting diabetes and severe mental illness. Patients were allocated to either an intervention group where their medication was reviewed by a clinical pharmacist and discussed in a multidisciplinary forum also including a psychiatrist and an endocrinologist or a treatment-as-usual control group. The following primary outcome parameters were measured at baseline and follow up: DDD (defined daily dose) and prescribed drugs. Secondary outcome parameters were also measured at baseline and follow up and include: adverse drug reactions according to UKU ("Udvalg for Kliniske Undersøgelser") rating scale, psychiatric symptom score (e.g. PANSS-6 ("Positive And Negative Syndrome Scale"), CGI ("Clinical Global Impression Scale"), Hamilton-17, YMRS ("Young Manic Rating Scale")), drug adherence and quality of life.

**Results:** As 48 patients have completed the clinical trial, we are currently in the process of initial data analysis. At the conference, we will present differences in outcome parameters between intervention and control group.

**Keywords:** Clinical pharmacology, polypharmacy, Psychiatry, Medication reviews, clinical randomized trial

## **DROPIT - A plan with patients and providers to deprescribe inappropriate proton pump inhibitors in the Swiss primary care setting**

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**Background:** Proton pump inhibitors (PPIs) are widely prescribed treatments of gastric acid-related disorders. Concerns about the growing inappropriate PPI use are emerging in Switzerland, particularly among general practitioners (GPs), who seek guidance on how to successfully reduce inappropriate PPI prescribing.

**Objectives:** The DROPIT project aims to develop an intervention to guide GPs and patients through the process of deprescribing inappropriate PPIs in a safe, sustainable, evidence-based manner. Subsequently, it aims to evaluate the effectiveness and safety of the intervention in a cluster-randomized controlled clinical trial in the Swiss primary care setting.

**Methods:** An intervention, consisting of a set of resources to guide GPs and patients through PPI deprescribing, was developed. It builds on previous research on deprescribing, behavioural change theory, and codesign with GPs, patients, and experts, and it is tailored to the Swiss primary care settings. The intervention will be tested in a cluster-randomized controlled clinical trial, including 400 adults with inappropriate PPI prescription in Switzerland who will be cluster-randomized by their GP (80 GPs) into the control group (i.e., usual care) or the group receiving the intervention. Participants will be followed for 12 months, with data collected every 3 months from GPs and patients. Primary outcomes assess the effectiveness of the intervention (i.e., change in prescribed PPI dose) and non-inferiority of gastrointestinal safety compared to usual care. Secondary outcomes assess other clinical aspects of effectiveness (e.g., PPI stop) and safety (e.g., ulcers). Additionally, the cost-effectiveness of the intervention will also be investigated.

**Results:** The intervention, designed with a practical mindset to overcome challenges associated with deprescribing in Swiss primary care settings, has received positive preliminary feedback. The clinical trial will start in summer 2024.

**Conclusion:** We expect that following the success of the DROPIT trial, the deprescribing of

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inappropriate PPIs will gain presence in the Swiss GP practice.

**Keywords:** proton pump inhibitors, PPIs, deprescribing, clinical trial, protocol, behavioural change intervention

## **Treatment with anticoagulants in the last year of life - risk factors, deprescribing and side effects**

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**Introduction:** Patients in palliative care are often treated with anticoagulants even in the late palliative phase without clear guidelines regarding deprescribing the treatment.

**Objective:** The aim of this study was to investigate bleeding as a side effect of anticoagulants and deprescribing during the last year of life.

**Methods:** We performed a retrospective cohort study where we screened medical records for all deceased patients admitted to a palliative care unit in Stockholm, Sweden, 2016-2018. Of 1501 patients, 897 (Mean age 75,2 years, 41% women) were treated with anticoagulants during the last year of life. Data on bleedings and side effect due to deprescribing the treatment were extracted from the medical charts. We used logbinomial models to explore factors associated with bleeding.

**Results:** Of 897 patients, 144 (16%) had bleeding during the treatment. Most (56%) continued treatment up to the last 3 days of life. The risk for bleeding was significantly higher for men with prostate cancer compared to other cancer forms, adjusted relative risk 1.9 (1.2-3.3). A higher risk for bleedings was noticed for Non-vitamin-K Oral Anticoagulants and warfarin compared to other treatments in the unadjusted models, but not in the adjusted model. No differences in risk of bleeding were found between sex, age groups or indication. Two patients (0.2%) suffered from strokes after deprescribing anticoagulants.

**Conclusions:** Treatment with anticoagulants the last year in life is associated with a high risk of bleeding. In this cohort, men with prostate cancer seemed to have more side effects of bleedings than other groups, and few experienced side effects of deprescribing

**Keywords:** deprescribing, anticoagulants, palliative care, Sweden

## **Antihypertensive Deprescribing in Long-Term Care: A Randomized Controlled Trial (OptimizeBP)**

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**Background:** Antihypertensive medication use is prevalent in frail older adults, yet literature suggests that antihypertensive medications in this population have limited benefit and may be harmful.

**Objective:** To determine in frail older adults in long-term care facilities whether deprescribing antihypertensive medication to a systolic blood pressure of  $\leq 145$  mmHg compared to standard practice will lead to a change in time to all-cause mortality.

**Methods:** Prospective, parallel, randomized, open-label, pragmatic, blinded end-point trial. This study is in partnership with the Alberta SPOR SUPPORT Unit Data and Alberta Health Services, which use Alberta Health Services administrative data to identify and randomize residents and complete data analyses. Participants are long-term care residents in the province of Alberta, Canada,  $\geq 70$  years of age, average systolic BP

**Results:** Twenty-two LTC facilities and  $\sim 450$  residents are participating. At 3 months post-randomization, 75% (intervention) and 21% (control) were deprescribed at least 50% of the dose of one antihypertensive, and 51% (intervention) and 12% (control) were fully deprescribed an antihypertensives. Two percent (intervention) and one percent (control) started on a new antihypertensive at 3 months. The average baseline blood pressure was 121/71 mmHg (intervention) and 123/70 mmHg (control), and 6 months post-randomization was 131/73 mmHg (intervention) and 129/71 mmHg (control).

**Conclusion:** Deprescribing antihypertensive medication in long-term care is feasible. This study will provide further evidence about the benefits and potential risks of deprescribing antihypertensive medication in the frail older adult population. Final results are expected in 2025.

**Keywords:** Frailty, Blood pressure, Hypertension, Antihypertensive, Deprescribing, Randomized Controlled Trial



**Barriers and facilitators to pharmacist-led deprescribing of antihypertensive in long-term care: results from the OptimizeBP randomized controlled trial**

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**Background:** OptimizeBP is a randomized controlled antihypertensive deprescribing trial in Alberta, Canada, with pharmacists primarily conducting the deprescribing. As part of the trial, pharmacists complete a pre- and post- survey to identify perceived factors that impact pharmacist-led antihypertensive deprescribing in Alberta long-term facilities.

**Objective:** To describe the facilitators and barriers pharmacists experience in their antihypertensive deprescribing in Alberta long-term care.

**Methods:** The RE-AIM knowledge translation framework informed the development of the survey with a focus on the implementation, adoption, and maintenance dimensions. The surveys were tested and revised with feedback from experienced long-term care pharmacists. The survey took ~15 minutes to complete and included Likert-scale, open-ended and closed-ended questions. All pharmacists completed the pre-survey prior to their orientation and the post- surveys (ie, after deprescribing) are expected to be completed in 2024.

**Results:** Twenty-three pharmacists completed the pre-survey between October 2021 and January 2024 (87% female; 78% have been a pharmacist  $\geq 10$  years; 87% have Additional Prescribing Authority (provides authority to prescribe)). Adoption facilitators reported: Confidence in deprescribing antihypertensives and most coworkers/allied health professionals support deprescribing. Adoption barriers reported: 40% of pharmacists do not normally deprescribe; 43% of pharmacists have never deprescribed antihypertensives; systolic BP that triggers deprescribing is too low (i.e.  $\leq 120$  mmHg); unclear guidelines/evidence; concern about a CV event; and the dynamics in the physician/pharmacist relationship. Implementation facilitator reported: Sufficient data to deprescribe. Implementation barrier: Additional time required to deprescribe. Maintenance facilitator reported: 83% of pharmacists feel deprescribing antihypertensives is beneficial for their facility. Maintenance barriers: none reported.

**Conclusion:** Despite experienced pharmacists with authority to prescribe, pharmacists identified considerable adoption and implementation barriers and few facilitators for pharmacist-led deprescribing of antihypertensive medication in long-term care. The post-survey will help to further delineate the facilitators and barriers.

**Keywords:** Long, term care, hypertension, antihypertensive, pharmacist, barriers, facilitators

## **Potentially Inappropriate Duration of Dual Antiplatelet Therapy following Acute Coronary Syndrome in British Columbia Long-Term Care: A Retrospective Cohort Study**

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**Background:** Dual Antiplatelet Therapy (DAPT), involving aspirin and a P2Y12 inhibitor, is the standard treatment for acute coronary syndrome (ACS) and is generally recommended for one year post ACS. However, the optimal duration remains uncertain. After the first year post-ACS, a significant 20% residual risk persists over 3-5 years. Extending DAPT aims to enhance outcomes, but guidelines lack a specified maximum duration and leave it to clinicians to decide based on risk/benefit assessment. Prolonging treatment beyond recommended period, without an in-depth assessment, may expose patients to bleeding risks without additional benefits, particularly in the elderly population.

**Objectives:** The aim of our study is to examine potentially inappropriate duration of dual antiplatelet therapy following ACS among urban long-term care (LTC) residents in British Columbia, Canada.

**Methods:** This study is a retrospective chart review using data from July 1, 2022, to July 1, 2024. The study focuses on ACS patients with a history of dual antiplatelet therapy residing in LTC sites owned by Providence Health and Vancouver Coastal Health, British Columbia, Canada. Data on baseline characteristics, rates of DAPT de-escalation, and rates of potentially inappropriate DAPT use based on the Canadian Cardiovascular Society guideline will be collected during the follow-up period. This information, along with clinical outcomes (including Major Adverse Cardiovascular Events and major bleeding), will be extracted from electronic LTC resident charts using a structured, piloted data extraction form in Microsoft Excel. We will use descriptive statistics in Microsoft Excel to summarize the data.

**Results:** We will be able to describe rates of potentially inappropriate DAPT use in LTC residents and examine whether deprescribing occurs in such residents. We expect to see results by September 2024.

**Conclusions:** We expect that the results will inform quality improvement initiatives and further research to optimize benefit/harm balance of antiplatelet therapy in frail older adults.

**Keywords:** Dual Antiplatelet Therapy, Acute Coronary Syndrome, Duration of Therapy, Long Term Care

# Workshops

## **W1- Deprescribing Research: A Workshop Addressing Study Design, Measurement, and Implementation Challenges in Primary Care**

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**Introduction:** Small groups will work through key decisions needed to design a deprescribing study, using primary care as an example, addressing study design, measurement, and implementation challenges. At different points participants will be asked to consider options and choose. The goal is to gain experience considering different strategies and be able to provide a rationale for choices. This format was successfully implemented at the 2023 North American Primary Care Research Group meeting.

**Intended audience:** Early-career investigators and all interested in trials and quality improvement (QI)

### **Learning objectives:**

- To appreciate key considerations in designing a deprescribing trial or quality improvement initiative
- To develop insights into behavior change targets and strategies that can facilitate effective deprescribing
- To understand opportunities and challenges of outcome measures for deprescribing interventions
- To facilitate collaborations between workshop participants for potential future work

**Methods:** This interactive workshop will give participants hands-on experience with key design challenges in developing a clinical trial or quality improvement initiative around deprescribing.

The workshop will begin with a brief introductory talk (10 minutes) that provides an overview of key design decisions in developing a trial or QI initiative around deprescribing and introduces the small-group activity (10 minutes)

The majority of the session (60 minutes) will comprise breakouts where participants will divide into groups of 5 to 8 people, aligned around a broadly shared interest. In each small group, a program faculty member or group nominee will use a discussion guide to lead the group in discussion around a series of 7 choice nodes for study design. Learning will occur in the group's discussion about each choice, i.e. the challenges and opportunities that arise from different potential choices. Groups will be encouraged to spend the most time on choices #3 (Intervention) and 5 (Outcomes). The choice nodes are:

Choice #1: What medication(s) do you wish to target?

Choice #2: What type or scale of project do you want to plan?

Choice #3: Design or describe your intervention, including:

3a) Who will receive the intervention? Whose behavior are you trying to influence?

3b) What will the intervention entail?

3c) Will there be a control or comparator arm? What will that arm get? if you are discussing a QI project, what will you use as your control group so that you can measure whether the intervention has made a difference?

Choice #4: Identifying and recruiting your population

Choice #5: Process and Outcome measures

Choice #6: Stakeholder Engagement

Choice #7: Informed Consent

The final 20 minutes will be devoted to each group briefly sharing the project they developed, with the focus on which choices were most difficult, why they made the choices they did, and how they will apply learnings to their future work. Full-group discussion to expand on these points will be facilitated by the workshop leaders.

**Conclusion:** This interactive workshop will give participants hands-on experience in thinking through intervention design considerations, providing learnings for future work. In addition, small groups aligned around common interests may stimulate potential collaborations between participants for future work.

**Keywords:** deprescribing study design, primary care

## **W2- Deprescribing Communication: Global summary and Application Opportunities.**

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**Introduction:** The need for deprescribing is well known globally. While all interventions ultimately include some form of communication, not all interventions are explicit about how this communication occurs. Deprescribing interventions and associated communication techniques range from interpersonal conversations to broadly disseminated and widely accessible information at the population level. A global review of deprescribing communication has been conducted by an international group of deprescribing researchers. Findings of this review will be summarized and a conceptual framework of deprescribing communication will be presented during this workshop. Using these findings and contributions from other workshop participants, attendees will be able to apply acquired knowledge of communication techniques to inform the development of deprescribing interventions that are relevant and feasible in their local environments.

**Intended audience:** Clinicians and researchers involved in the delivery and/or study of communication techniques associated with deprescribing.

### **Learning Objectives:**

- Identify findings of a global review of deprescribing communication.
- Discuss findings to identify communication techniques that are most applicable to participants' practice/research.
- Identify and share communication strategies and tools for deprescribing interventions from the participant's practice/research/network
- Using knowledge gained from LO's 2 and 3, draft deprescribing interventions with corresponding communication strategy targeting the clinical encounter, health system or community for implementation in participants' locale.

**Methods:** A brief presentation will be followed by a series of small group discussion activities that will engage participants in active collaborative learning to accomplish the above objectives.

15 minutes - presentation of findings from the literature review and a proposed conceptual framework for deprescribing communication. (LO #1)

15 minutes - small group discussion to identify communication techniques applicable to individual's practice/research. (LO #2)

15 minutes - small group discussion to identify communication strategies/tools not identified in the literature review. Report back to large group. (LO#3)

10 minutes: Break and Networking opportunity

30 minutes - participants choose an area of interest from 1) clinical encounter, 2) health system or 3) community/public health. Through sharing and analyzing communication strategies and tools, groups brainstorm and draft intervention(s) and report back. Reports will include a) intervention, b) communication technique(s)/tool(s), c) implementation plans and d) plans to study communication effectiveness. (LO #4)

5 minutes - Final reflections/recommendations

**Conclusion:** Workshop participants will gain and share knowledge on deprescribing communication for application in home environments.

**Keywords:** Deprescriptions, communication

### **W3- Integrating Deprescribing Competencies into Health Care Curricula: A ‘How To’ Workshop**

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**Introduction:** A number of health care professionals’ barriers to deprescribing have been identified in research, including the need for more knowledge and skills about how to deprescribe safely. In 2023, the Canadian Medication Appropriateness and Deprescribing Network Health Care Provider Education Committee published a curricular framework to support deprescribing education. This framework outlines seven essential competencies mapped to current prescribing frameworks, relevant knowledge and skills, sample teaching and assessment strategies, an example curriculum mapping exercise and a supportive toolkit. This workshop aims to help educators identify curricular gaps and look for efficient and effective ways to integrate deprescribing competencies. It will adopt a train-the-trainer approach to equip interested participants with the information and tools they need to subsequently host this workshop with others in their institution, profession or region.

**Intended audience:** This workshop will be relevant to educators in the health professions, particularly those in medicine, pharmacy and nursing involved in the design and delivery of entry-to-practice and residency programs, interprofessional education as well as to health professional program accreditors. This will be of interest to those involved in teaching therapeutics, professional practice skills, experiential/clerkship education, and curriculum administrators.

**Objectives:** At the end of the workshop, participants will be able to:

- Outline the deprescribing competencies and related knowledge and skill requirements;
- Develop a plan to integrate deprescribing components into curriculum, and
- Hold a similar workshop with others in their institution, profession or region who could apply this information.

**Methods:** Registrants will have been guided to the published manuscript in advance and will be able to bring their teaching materials (e.g. course outlines, case studies, lecture handouts) and any relevant materials to share.

The 90-minute interactive workshop begins with a short presentation about the essential knowledge and skills for deprescribing, then uses a World Café approach to identify and share teaching and assessment strategies for integrating deprescribing competencies. Participants will rotate through facilitated small group discussions and report back take away points to the larger group. The workshop will include the development of individual action plans to incorporate deprescribing competencies focusing on identifying curricular gaps, determining curricular content and considering strategies to teach and assess deprescribing.

This workshop will also adopt a train-the-trainer approach. Following the session, a toolkit describing methods and materials will be provided to participants interested in holding a similar workshop for others in their institution, profession or region.

**Conclusion:** This workshop will equip health care professional clinician educators with tailored strategies to advocate for, and integrate, deprescribing competencies into curriculum. Furthermore, by adopting a train-the-trainer approach, this workshop will provide deprescribing leaders the



opportunity to ultimately hold a similar session in their own institution, profession or region.

**References:**

Farrell B, Raman-Wilms L, Sadowski CA et al. A Proposed Curricular Framework for an Interprofessional Approach to Deprescribing. *Med Sci Educ* 2023;33:551–567. <https://doi.org/10.1007/s40670-022-01704-9>

**Keywords:** deprescribing, curriculum, framework, education, competencies, healthcare professionals, interprofessional

## **W4- W13- Developing and implementing team-based deprescribing actions at the institutional level**

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**Introduction:** Most deprescribing interventions target individuals. However, in some settings, many deprescribing actions can be initiated at the institutional level, which requires less resources and can have a broad impact. In this workshop, participants will experience the methodology developed for the Simple.ID project, which helps interprofessional teams create local deprescribing consensus to improve the care of nursing home residents.

**Intended audience:** This workshop is best suited for clinicians working in institutions (nursing homes, home care networks, rehabilitation ward, etc.), and researchers interested in these settings.

### **Learning objectives:**

- At the end of this workshop, the participants will be able to
- Select metrics to identify and prioritise deprescribing actions in their institution;
- Integrate the perspective of different professional groups to craft a collaborative deprescribing consensus;
- Devise implementation strategies for the chosen deprescribing consensus;
- Identify the facilitators and barriers to this kind of intervention in their respective environment.

**Methods:** After a brief presentation of the speakers, their research context, and the Simple.ID project, the participants will engage in the activities described below. All group activities could be held in language groups (French and English) to allow for the participation of as many as possible. The maximum number of groups will be defined by the number of available moderators.

*Group discussion: Data* (Duration: ≈ 15 minutes)

With the help of a moderator, groups of ≈ 10 participants will discuss which data can be used to identify "low-hanging fruits" deprescribing actions in their institution. Questions to be discussed are:

1. What data are available in your setting?
2. Which metrics can you build /use to identify deprescribing opportunities and needs?
3. How can you prioritise the deprescribing opportunities that you have identified?

*1-2-all: Work on real-life data* (Duration: ≈ 45 minutes)

Within the previously established groups, participants will form "interprofessional pairs" and work on real-life data (provided by the speakers) to identify deprescribing opportunities and needs in the institution. Participants will first work individually to identify 3 deprescribing actions, then compare their results within the interprofessional pair, and finally discuss them with the whole group.

The group will then be tasked to select 3 actions to be implemented. A "whole workshop" discussion will then be held to compare the results of the different groups.

Groups will then work on implementation strategies to ensure that the 3 chosen actions are enacted, and present them to the whole workshop.

*Group discussion: Context* (Duration: ≈ 15 minutes)

Groups will discuss the contextual factors needed to implement similar interventions in their environment. The points to discuss include which professionals are needed in the team, their

respective roles, the educational requirements, and the resources needed for success.

*Synthesis discussion*

Each group will be asked to summarise the results of their discussions, with the speakers providing insights evidence from practice.

**Conclusion:** Following this workshop, participants will be able to implement an efficient deprescribing practice in their institutions.

**Keywords:** interprofessional, institution, data driven approach, implementation

## **W5- Inappropriate prescribing cascades: Identifying and deprescribing the domino effect**

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**Introduction:** Prescribing cascades occur when a medication is prescribed to treat an adverse effect related to another medication. These cascades are often inappropriate, whereby a medication's adverse effect may be misinterpreted as a new medical condition, leading to the prescription of additional medication(s) to address this adverse effect, rather than deprescribing the original medication. This phenomenon represents a significant and often overlooked challenge in clinical practice, leading to inappropriate polypharmacy, increased risk of adverse drug reactions, and diminished patient quality of life. Even when prescribing cascades are identified, clinicians can find it difficult to know how to deprescribe this domino effect, especially when it comes to the more complex scenarios involving 'deprescribing cascades'. Through interactive patient cases and deprescribing activities, this workshop will allow participants to gain deeper insights into recognising and deprescribing these cascades to enhance patient care.

**Intended Audience:** This workshop is designed for healthcare professionals (e.g. including pharmacists, physicians, nurse practitioners, and physician assistants) and students training to become healthcare professionals who are or will be involved in prescribing medications or managing patients' medication regimens.

**Learning Objectives:** This workshop will help participants to:

- Describe the different types of prescribing cascades and why they matter.
- Consider practical steps that can be incorporated into practice to help minimise prescribing cascades for patients.
- Critically evaluate and discuss patient cases with prescribing cascades.
- Enhance their abilities to identify prescribing cascades as well as generate deprescribing recommendations to address inappropriate prescribing cascades.

**Methods:** The workshop will commence with an explanation of its aims and learning outcomes, followed by an interactive icebreaker to assess participants' challenges in this area (5 minutes). Secondly, brief presentations will introduce key concepts and provide an overview of practical steps and good deprescribing practices that can be used to help identify and deprescribe prescribing cascades (20 minutes). Clinical cases based on real-life patients will then be provided to participants in small groups, which will require discussion and problem-solving to identify prescribing cascades and collaboratively generate deprescribing plans and other management strategies (25 minutes). Thereafter, a plenary discussion will take place to combine feedback and questions from small-group discussions to the whole group, facilitating learning from each other and stimulating further discussion on deprescribing strategies (35 minutes). At the end of the workshop, key resources and take-home messages will be highlighted to participants to aid the minimisation of prescribing cascades in future (5 minutes). Workshop moderators (from three countries) will be available to engage with participants throughout the workshop (e.g. by dipping in and out of small groups) to address any queries and facilitate group discussions.

**Conclusion:** This workshop will equip participants with the knowledge and skills necessary to

identify and deprescribe prescribing cascades, ultimately improving patient outcomes and reducing the burden of inappropriate polypharmacy.

**Keywords:** Prescribing cascades, patient cases, deprescribing

## **W6- Deprescribed or discontinued? A lexical question that makes a significant difference for research and clinical practice**

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**Introduction:** Deprescribing research is trending, with an increasing number of articles being published on this topic. However, the term "deprescription" is sometimes misinterpreted in research, complicating the attainment of conclusive results and implementation in clinical practice. The workshop aims to present the latest data on primary research outcomes and systematic reviews in deprescription, to differentiate between studies focusing on deprescription and those addressing medication discontinuation in a broader sense. Participants will be asked to weigh in on what should be part of the standards to establish deprescription and differentiate it from other forms of discontinuation, in various contexts (clinical trials, observational studies, including medical-administrative data). Ultimately, these elements will be integrated into an article to provide the groundwork for guiding research and clinical practice.

**Intended audience:** Clinicians and researchers interested in deprescribing research and/or its implementation in clinical practice.

### **Learning objectives:**

- Differentiate between studies focusing specifically on deprescription and those addressing medication discontinuation more broadly.
- Identify the challenges and complexities in defining deprescription in research and its implication for clinical practice.
- Discuss and propose standards for defining deprescription in research and distinguishing it from other forms of medication discontinuation in different contexts.

**Methods:** The workshop will begin with a review of the various definitions of deprescription in clinical trials, observational studies, and systematic reviews. We will identify the main characteristics and divergences between these definitions in relation to key deprescription concepts. We will discuss the implications of these divergences on study outcomes (Objective 1). Next, participants will be invited to examine various scenarios where deprescription definitions will be proposed for different types of studies. They will weigh in on the essential elements to clarify in the definition or methodology for an accurate conceptualization of deprescription in each context. Pitfalls to avoid will be highlighted, and the capacity to replicate/ transfer the results into clinical practice will be assessed (objective 2). At the end of the scenario discussion, participants will vote to establish a prioritized list of the key elements to include in the different studies (objective 3).

**Conclusion:** This workshop will allow participants to grasp the challenges associated with defining deprescription in various study contexts, as well as the methodological implications for results and their translation into clinical practice. Framing deprescription research with rigorous methodology will yield evidence-based data that facilitates the implementation of deprescription in clinical practice.

**Keywords:** pharmacoepidemiology, deprescribing definition, methodology

## **W7- Deprescribing long-term use of antidepressants: strategies for clinical practice.**

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**Introduction:** Long-term antidepressant use is high in high-income countries. Depression guidelines recommend that antidepressants should be taken up to 6-12 months after remission and up to 2 years after remission in those at high risk of relapse. However, an increasing number of patients who feel well continue to use antidepressants much longer than recommended, even for years, without clear indication. This long-term usage contributes to the rising consumption of antidepressants. For health care professionals and patients, fear of relapse is a major reason for not initiating a discussion about discontinuing the antidepressant. The workshop integrates the latest research findings with clinical aspects and offers practical insights for safe and effective deprescribing long-term antidepressant use.

**Intended audience:** General practitioners, pharmacists, geriatricians, psychiatrists, nurses, and psychologists.

### **Learning objectives:**

- Understanding the rationale, the pro and the cons of deprescribing long-term antidepressants, including the risks and benefits with long-term use
- Insights into the pharmacological principles and the tapering schemes for deprescribing antidepressants
- Recognize potential barriers to deprescribing antidepressants and explore strategies to overcome them.
- Develop strategies for engaging patients in discussions about deprescribing antidepressants, and supporting them through the deprescribing process.
- Collaborating with a multidisciplinary healthcare team in the deprescribing process.

**Methods:** This workshop stimulates intensive interaction with the participants by using clinical cases, poll votes, video fragments and discussions of participants' views and experiences.

**Conclusion:** This workshop aims to increase participants' confidence by providing practical tools, and to facilitate safe and effective deprescribing long-term antidepressants in clinical practice. In addition, the workshop encourages a dialogue between researchers, clinicians, and other stakeholders to address this deprescribing challenge.

## **W8- The role of the private sector in deprescribing: What role should pharmaceutical and biotechnology companies play?**

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**Background:** Pharmaceutical and biotechnology companies play an important role in developing and bringing new medical products and devices to the market (e.g., new medications, AI-driven solutions to optimize prescribing). It is also important to recognize the intricate link between industry-driven conflicts of interest and the promotion of unnecessary or excessive prescribing, and how this dynamic contributes to the critical need for deprescribing initiatives. Pharmaceutical and biotechnology companies have started to express an increased interest in deprescribing by offering sponsorship for ICOD 2024. This has raised concern over conflicts of interest and stimulated early discussion about the potential benefits and downsides of such partnerships. Dialogue is needed to establish ground rules to guide sponsorship opportunities and future collaborations with private sector actors.

**Objective:** The aims of this workshop are to discuss the role of pharmaceutical and biotechnology companies in supporting deprescribing, to identify the key steps that are needed from private-sector actors to make medication deprescribing more feasible for clinicians and to determine how to move forward with parameters and principles regarding future collaborations.

**Approach:** Before this workshop, we will conduct an online survey with clinicians and deprescribing researchers. The survey will assess respondents' attitudes towards opportunities and future collaborations with private sector actors. The content of the survey will be based on the literature on conflicts of interests. The survey will help identify the key ways that engagement with pharmaceutical and biotechnology companies can help address needed information about medication deprescribing (e.g., share pharmacokinetic data in frail older people/patients with renal impairment/etc. from clinical trials, share clinical trial data on types, prevalence, and severity of adverse drug withdrawal events during and after stopping medications, deprescribing recommendations in product monograph, sponsorship of deprescribing trials, etc.). At the workshop, we will first present the findings from the survey and discuss examples from the existing literature and repositories (e.g., on data sharing). Next, there will be a roundtable discussion with clinicians, researchers, and representatives of private sector actors to discuss the main challenges and opportunities for collaborating with private sector actors around deprescribing (e.g., how potential conflicts of interest can be avoided and/or addressed).

**Findings:** The expected output of this workshop will be a manuscript summarizing the discussion and detailing the key issues and lessons identified to guide future collaborations with private sector actors in the field of deprescribing.

**Conclusion:** This workshop will shed light on the role of pharmaceutical and biotechnology companies as well as other private sector actors in the field of deprescribing. It will help establish



ground rules on how future International Conferences on Deprescribing will engage with private sector actors.

**Keywords:** deprescribing, pharmaceutical companies, biotechnology companies, private sector, conflicts of interest

## W9- Innovations and challenges in deprescribing opioids in older people

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**Introduction:** In the Netherlands, increased attention for deprescribing has resulted in the development of a Dutch guideline for stopping and tapering medication. Part of this guideline are deprescribing protocols for 10 different medication groups. In 2023, another 5 protocols for psychotropic drugs were developed by SIR Institute for Pharmacy Practice and Policy.

In 2022 a Dutch cluster randomized trial has been launched to investigate the effect of a clinical medication review with the focus on deprescribing in older patients. During this pharmacist-led intervention pharmacist are trained on consultation and deprescribing, and a developed toolbox to support the intervention is provided.

**Intended audience:** Clinical pharmacists and researchers.

**Learning objectives:** This workshop will focus on improving the participant's knowledge, skills and techniques on deprescribing. After attending this workshop participants should be able to:

- Use the provided tools and resources to carry out deprescribing and enhance their clinical judgement, in particular assess each drug in regard to its current or future benefit potential compared with current or future harm or burden
- Describe the steps of a deprescribing protocol, and the importance of the follow-up targeting older people using psychotropics and/or opioids
- Become familiar with different patient' perspectives on deprescribing and how to address these in the patient consultation
- Describe the importance of considering individual patient characteristics, preferences and patient involvement in the context of deprescribing

### Methods:

- *Introduction:* Short presentation of the Dutch guideline for stopping and tapering medication and deprescribing protocols and objectives of the workshop
- *Interactive quiz :* Participants will be invited to use their smart phone to answer questions about cases of adverse drug events and deprescribing
- *Practicing with a patient case in small groups:* The group will be split into small groups of 3 persons. We give participants the opportunity to work with clinical case studies. They will receive medical and medicine information and have to set up in a pharmaceutical care plan taking into account patient' preferences and using deprescribing guidelines. The pharmaceutical care plans will be discussed plenary.
- *Take home messages:* Summary of the information presented and take home messages

**Conclusion:** We will create a supportive learning environment and enhance engagement of the participants throughout the workshop. After a short presentation and introduction, an interactive quiz will be held. Furthermore, we will work in small groups to give participants the opportunity to practice in a safe environment. The moderators will facilitate and enhance discussion if needed.

**Keywords:** deprescribing, psychotropics, opioids, older people

## **W10- Global Workshop on Engaging Stakeholders in Deprescribing and Age Friendly 4Ms Care**

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**Introduction:** The intent of this workshop is to share insights into Age Friendly 4Ms (<https://www.ih.org/initiatives/age-friendly-health-systems>) efforts focusing on the medication "M" and the importance of involving stakeholders and community partners in deprescribing efforts. These partnerships help identify and address community concerns which can lead to the co-design of culturally centered education and programs to overcome misconceptions about deprescribing as well as address "What Matters". Furthermore, these relationships need to go beyond the traditional paradigms to ensure equity, diversity and inclusivity and create meaningful and enduring collaborations.

**Intended audience:** Clinicians and clinician-researchers from any healthcare professional background as well as consumers interested in stakeholder engagement and global perspectives.

**Learning Objectives:** At the end of this workshop, the participant should be able to:

- Define what is stakeholder engagement
- Identify approaches to successful stakeholder engagement across all stages of the research and collaboration.
- List opportunities and challenges of stakeholder engagement
- Create a network as well as personal collaborations for future opportunities

**Methods:** This interactive workshop will give participants hands-on experience with developing a stakeholder engagement plan and strengthening stakeholder relationships. The workshop will begin with a brief overview (10 minutes) that provides participants a global perspective on 4M's Age Friendly Care focusing on the Medication "M" and the importance of stakeholder engagement focusing on deprescribing efforts. Themes as well as examples of stakeholder engagement projects to co-design resources will be shared. Then there will be an expectation setting for the small-group activity (5 minutes). Most of the session (60 minutes) will comprise of breakouts where participants will divide into groups of 6-8 individuals. The facilitated groups will: 1) Create a stakeholder engagement plan that relates to deprescribing in an identified setting based on their interests; and 2) Share resources that are needed or exist to support stakeholder engagement. (e.g. Lee, M., Brandt, N., Reyes, C.E., Mansour, D., Maslow, K., Sarkisian, C. Practical Incorporation of Stakeholder-Informed Ethics into Research Funding Decisions. Progress in Community Health Partnerships. (Forthcoming.) 2 January 2024) The workshop will close with a facilitated global discussion between the small groups to summarize main discussion points and key learnings. (15 minutes)

**Conclusion:** Sharing the voice of stakeholders and partners will help to maximize the relevance and impact of research on deprescribing harmful or inappropriate medicines taken by older adults aligning with Age Friendly 4Ms efforts. It is imperative to involve stakeholders through all phases of the research process to harness an open learning environment to improve medication use and safety for older adults and those who care for them.

**Keywords:** stakeholder engagement, Age Friendly 4Ms Care, deprescribing

## W11- Economic evaluations of deprescribing interventions

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**Introduction:** Deprescribing interventions have significant economic implications and potential benefits across different levels of the healthcare system, from individual patient costs to broader societal healthcare expenditures. Robust economic evaluations are needed to assess whether funding deprescribing interventions represents high-value use of scarce healthcare resources. Value is typically assessed by examining the costs and effects (e.g. Quality-Adjusted Life Years (QALYs), or "natural units" like number of inappropriate medications), versus a comparator. For deprescribing interventions, there are various challenges in fully capturing relevant costs/effects within economic evaluations.

There is a growing body of deprescribing trial-based economic evaluations. The economic evaluation of the SPPIRE trial (Supporting Prescribing in Older Adults with Multimorbidity in Irish Primary Care) has recently been completed. This evaluated the effectiveness of GP-delivered, deprescribing-orientated medication reviews for people on  $\geq 15$  medications. The economic evaluation concluded that on average, the SPPIRE intervention was dominant over usual care, with non-statistically significant mean cost savings of €410 (95%CI: -2211,1409) and mean health gains of 0.014 QALYs (95%CI: -0.011,0.039).

This workshop aims to orientate participants to key principles of economic evaluations as they apply to deprescribing interventions, and stimulate discussion on optimal approaches.

### Intended audience:

- Researchers (e.g. health services, health economics)
- Clinicians (e.g. primary care physicians, geriatricians, pharmacists)
- Other stakeholders (e.g. policy-makers, educators, patient /consumer representatives)

### Learning objectives:

- Understand the economic implications of deprescribing interventions in healthcare settings.
- Evaluate important costs and effects to capture for deprescribing interventions.
- Appraise study designs and methodological options for economic evaluations of deprescribing interventions, and understand the key considerations for designing economic evaluations as applied to deprescribing interventions (e.g. perspective, type of analysis, time horizon).

### Methods/Workshop Structure:

*Introduction and Core Concepts (20mins):*

Introduce the workshop's objectives and describe brief examples of different approaches from the facilitators' research of relevance to deprescribing.

Overview of the SPPIRE economic evaluation as an exemplar, considering the design, results, and strengths/limitations of the approaches used.

*Breakout Activity 1 (25mins):*

- Group Work (15mins): Small groups (ideally 6-8), ensuring a mix of expertise/backgrounds to facilitate diverse perspectives, will consider:

- What costs and effects are important to capture for deprescribing interventions?
  - What are the challenges to capturing these?
- Group Discussion (10mins): Each group presents on their discussions and further comments are invited from the wider group.

*Breakout Activity 2 (30mins):*

- Group Work (20mins): Each group is assigned an aspect of economic evaluation design (i.e. perspective, type of analysis, time horizon) and will brainstorm different options/considerations for evaluating deprescribing interventions.
- Group Discussion (10mins): As above.

*Plenary (15mins):*

- Open Discussion (10mins): Discussion (with online polling/Q&A) will centre on the question "What would support and enable more widespread economic evaluation of deprescribing interventions?"
- Closing Remarks (5mins): Brief summary of the workshop, and key priorities arising from activities.

**Conclusion:** Current evidence indicates that deprescribing interventions hold significant potential for economic benefits, yet there is a clear need for further research to fully understand their impact and inform policy-maker decisions on implementation. This workshop will equip attendees with the critical skills and insights needed to navigate these complexities.

**Keywords:** economic evaluation: deprescribing interventions: workshop: cost effectiveness: QALY

## **W12- Finding the Sweet Spot: Choosing Glycemic Control Wisely for Older Adults with Diabetes**

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**Introduction:** Older adults with diabetes and frailty living in the community and long-term care homes are often treated counter to recommendations from evidence-based guidelines, increasing their risk for adverse outcomes. Health care professionals face daily dilemmas regarding the roles of new monitoring technology and medications classes. In this workshop, we will use clinical cases to facilitate discussion about these clinical uncertainties.

**Intended audience:** This workshop is designed for healthcare professionals (e.g. including pharmacists, physicians, nurse practitioners, etc.) and researchers interested in deprescribing and diabetes management for older adults with diabetes and frailty

**Learning Objectives:** After this workshop, participants will be able to:

- Explain the evidence that supports relaxed glycemic targets and deprescribing in older adults with frailty.
- Discuss the role of new monitoring technologies and novel antihyperglycemic medication options for older adults with frailty.
- Describe approaches for having conversations with older adults and their families regarding goals of diabetes care, including deprescribing.

**Methods:** This workshop will be facilitated by an endocrinologist and pharmacists with expertise in long-term care and primary care practice. In the first part of the workshop (55 minutes), we will use real-world clinical cases to gather participants' insights and explore options for managing clinical cases, and then discuss the state of the evidence that exists (where it does) to support management options. In the second part of the workshop, attention will turn to exploring how health care professionals can approach shared decision-making conversations with patients from the clinical cases. Tools, developed by deprescribing.org in partnership with health care professionals, older adults and their families, to support these conversations will be presented (10 minutes). Participants will then be divided into small groups, with each group facilitated by a workshop lead, where they discuss how the tools could be applied to one of the clinical cases and then in their own clinical contexts (15 minutes). At the end of the workshop, key resources and take-home messages will be reviewed for participants (10 minutes).

**Conclusion:** This workshop will provide a forum for international sharing of clinical controversies and management approaches to support older adults living with diabetes and frailty. Through this workshop, we will develop a list of knowledge gaps that can be used to stimulate future research into management options for older adults with diabetes.

**Keywords:** diabetes, older adults, frailty, deprescribing, pharmacotherapy

