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Billing Deprescribing Interventions: Portrait of an Initiative in Québec, Canada

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ABSTRACT

Background: Deprescribing is a patient-centred process in which a healthcare professional reduces or stops medications to improve health outcomes. Since late 2022, community pharmacists in Québec, Canada, have been able to bill for deprescribing interventions, enabling more robust deprescribing research in large cohort studies.

Objective: This study aimed to assess the prevalence of deprescribing claims in Québec community pharmacies from January 1, 2023, to November 30, 2024, and to identify the most commonly deprescribed medication classes.

Methods: We analysed the total number of deprescribing claims submitted by pharmacists during this period and categorized deprescribed medications using the American Hospital Formulary Service classification.

Findings: Over 90 000 claims were submitted for deprescribing interventions, with most involving central nervous system medications. Although the number of claims increased over time, the overall volume remained modest.

Conclusion: While limitations remain, such as the gradual adoption of billing interventions, Québec's reimbursement model for deprescribing interventions provides an important framework for research, offering a mechanism to study deprescribing in real-world settings.

1 | Introduction

Deprescribing is the patient-centred process, supervised by a health professional, of reducing or stopping a medication to improve health outcomes [1]. However, the term 'deprescribing' is often misused in research, leading to conceptual inconsistencies [2, 3]. Moreover, it can be challenging to distinguish between a medication being deprescribed versus merely discontinued without a prior deprescribing process when analysing research data [3]. For example, the cessation of a medication in an administrative database may indicate either deprescribing or discontinuation for another reason, as the reason and clinical context surrounding the cessation are seldom known and can vary (e.g., non-compliance with treatment, medication change due to drug shortage, deprescribing process). To enhance research quality, there is a need to more precisely define deprescribing exposure [4]. Some authors have suggested that billing claims could help improve the quality of publications studying deprescription [5]. These claims could facilitate the study of deprescribing within large observational cohort studies and reduce information bias by adequately defining exposure to deprescribing interventions.

Since late 2022, community pharmacists in the province of Québec, Canada, can receive public healthcare reimbursement for their deprescribing interventions [6]. This legislation enables pharmacists to bill for an initial deprescription consultation when planning an intervention targeting a medication that poses a risk of adverse outcomes for the patient. Following this

Summary

In Québec, Canada, community pharmacists have been able to bill for interventions aimed at stopping or reducing medications since late 2022, making it easier for researchers to study these interventions. This study examined the number of claims made by pharmacists regarding such interventions and the types of medications targeted between January 2023 and November 2024. Over 90 000 claims were made, mostly for medications affecting the central nervous system, such as antidepressants and sedatives. Although the number of claims increased over time, it remained modest. The ability to bill for these services is a valuable tool for studying medication reduction in real-world healthcare settings.

initial consultation, up to two follow-up interventions can be reimbursed within a 6-month period. Regardless of whether the intervention results in dose reduction or medication cessation, the pharmacist can bill for the completion of the deprescribing process. In this legislation, policymakers have also distinguished between deprescription and discontinuation, as each is associated with distinct billing codes. While deprescribing can lead to discontinuation, discontinuation claims can be made in any circumstance, whether following a deprescribing intervention or a simple cessation to prevent therapeutic duplication, for example. This billing framework provides researchers with a more accurate method for measuring deprescribing within administrative databases.

Although these new billing claims offer significant potential for advancing research in deprescribing, the extent to which pharmacists have adopted this practice and how frequently these claims are used in clinical settings is unknown. To gain a clearer understanding, we aimed to measure the prevalence of billing claims associated with deprescribing in Québec community pharmacies between January 1, 2023, and November 30, 2024. Additionally, we investigated which medication classes were deprescribed during this period.

2 | Methods

We quantified the total number of claims for deprescribing activities billed by pharmacists across the province of Québec between January 1, 2023, and November 30, 2024. The *Régie de l'assurance maladie du Québec* (RAMQ) provided us with aggregated data related to the claims from their database. The public healthcare system (RAMQ) fully reimburses these deprescribing interventions if the following conditions are met [1, 6]: (a) a medication must be deprescribed, (b) the process aims to improve a health outcome and (c) the process is supported by a healthcare professional, in this case, a pharmacist. As a result, patients do not incur any costs, which help reduce barriers to deprescribing. Deprescribing interventions are eligible for all patients, irrespective of individual characteristics, drug insurance status or treatments.

We included all interventions (programme code 07) associated with a deprescribing service code (W1) that were provided in Québec's 1906 community pharmacies. This encompassed the following: the initial consultation (code A), follow-up consultations (code B) and the end of the intervention (code Z). Each intervention must be associated with a medication, as documented by the pharmacist. Consequently, we also identified the classes of medications that were associated with the intervention, categorized according to the American Hospital Formulary Service (AHFS) classification system [7]. Of note, the claim may still be reimbursed if the pharmacist associates the intervention with an incorrect medication (i.e., not the medication being deprescribed).

Descriptive statistics were employed to summarize the frequency of billing codes by consultation type, and the data were visualized to examine temporal trends. The frequencies of deprescribed medication classes were reported. The study was conducted in accordance with the *Basic & Clinical Pharmacology & Toxicology* policy for experimental and clinical studies [8]. The reporting of this study conforms to the STROBE statement [9].

3 | Results

A total of 90 840 deprescribing claims were recorded between January 2023 and November 2024, including 42 594 initial consultations (47%), 36 089 follow-up consultations (40%) and 12 157 completions of the deprescribing intervention (13%) (Figure 1). The number of billed deprescribing interventions increased over the study period. As expected, the number of initial and follow-up consultations increased in a similar fashion.

Most deprescribed medications were central nervous system agents (28:X under the AHFS classification), accounting for 87% of interventions (Table 1). Antidepressants, anticonvulsants and benzodiazepines were the most frequently deprescribed medication classes over the period, standing out substantially from the others. There were 4059 claims not linked to a specific AHFS code, including medical furniture and 760 medications not covered by the regular list of the public drug regimen. These 760 medications are classified as 'exception medications' and require a special formulary for coverage under the RAMQ. Their AHFS codes are not available in our data.

4 | Discussion

Pharmacists in Québec, Canada, claimed more than 90 000 deprescribing interventions from January 2023 to November 2024. More than 85% of these claims concerned central nervous system medications.

The number of deprescribing claims appears to have increased over time, which may suggest that pharmacists required time to integrate the new legislation into clinical practice. Considering the 1906 pharmacies in Québec, the average number of claims associated with initial deprescribing consultations is 22 per pharmacy over the period—which represents approximately one deprescribing initiation per month per pharmacy. Nevertheless, our findings may underestimate the scope of deprescribing initiatives in Québec, as pharmacists might engage in deprescribing without billing for their interventions. Additionally,

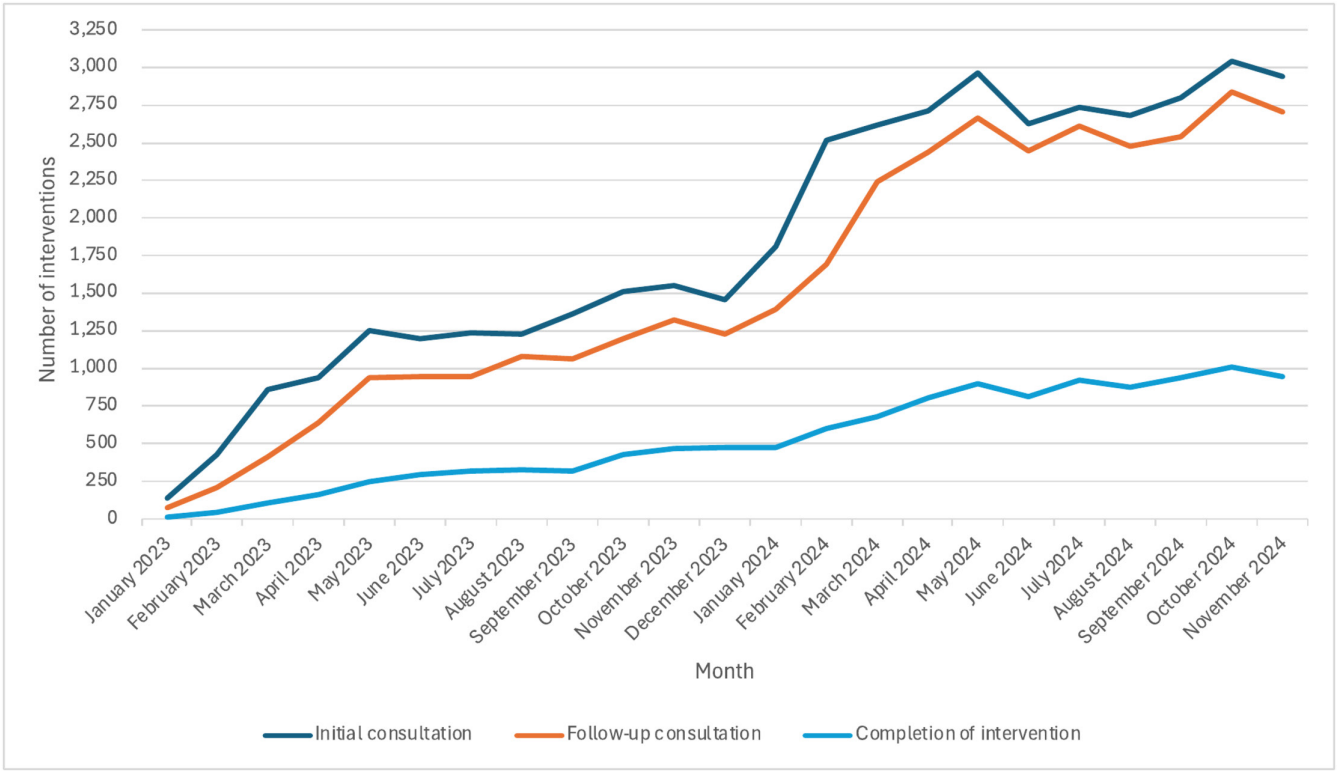

FIGURE 1 | Monthly number of deprescribing interventions billed to the RAMQ by community pharmacies in Québec, by consultation type (January 2023–November 2024).

pharmacists can bill for a separate intervention—modifying a treatment to ensure patient safety—which, in some cases, may involve dose reduction and thus fall within the broader concept of deprescribing. However, since this intervention is not explicitly categorized as deprescribing, such cases would not be captured in our analysis. (Of note: if deprescribing involves a dose reduction, both interventions can be billed simultaneously.) On the other hand, pharmacists may submit claims for deprescribing interventions that do not meet the definition of deprescribing, potentially leading to an overestimation of these activities. To address this, the RAMQ has implemented an inspection process to verify the validity of claims [10]. These elements have important implications for research. While the RAMQ's validation process ensures high specificity in identifying deprescribing within administrative databases, issues of sensitivity may persist. These are likely to improve over time as pharmacists become more familiar with the billing processes and as these processes gain broader recognition. Nonetheless, dedicated studies will be necessary to validate these hypotheses. There is also significant discrepancy between the number of 'initial consultation' and 'completion of intervention' claims. One possible explanation is that pharmacists may overlook submitting the completion of intervention claim, as it is primarily administrative claim and does not result in payment. Another possibility is that some interventions require a longer time frame, and many may still be in progress.

Deprescribing aims to reduce the use of potentially inappropriate medications (PIMs) [1, 11], which can be identified by widely recognized tools, such as the Beers criteria and the STOPP/START criteria [12, 13]. This might explain why the most used PIMs among community-dwelling older adults in the province of Québec, which include proton-pump inhibitors but also central nervous system agents (e.g., benzodiazepines, certain antidepressants) [14], also appear as the most frequently deprescribed medication classes. We believe the high rate of deprescribing interventions related to anticonvulsants may be driven by efforts to reduce the use or dosage of pregabalin and gabapentin, commonly used to treat neuropathic pain, among other conditions. Many deprescribed medication classes require tapering to mitigate the risks associated with dose reductions or discontinuation [11], including central nervous system agents and beta- and alpha-adrenergic blocking agents. This need for follow-up, which requires both time and resources, may encourage the use of deprescribing billing processes. Therefore, the reimbursement of deprescribing interventions helps alleviate certain barriers in clinical practice. However, the restriction on the number of reimbursed follow-ups per 6-month period remains a considerable obstacle for more complex interventions that may require additional follow-ups to ensure patient safety and treatment success.

Information bias can arise when evaluating deprescribed medications. Pharmacy software does not require linking the specific deprescribed medication from the patient's medication list to the deprescribing intervention. Instead, pharmacists may associate any medication to the intervention for reimbursement. Consequently, some pharmacists may correctly claim a deprescribing intervention without properly associating the correct deprescribed medication. The extent of this misclassification remains unknown and warrants further investigation. Another limitation is that our data do not allow for the identification of

TABLE 1 | Medication classes with over 200 deprescribing interventions claimed in community pharmacies in Quebec from January 2023 to November 2024.

AHFS code	Medication class[a]	Number of claims
28:16.04	Antidepressants	33 155
28:12.92	Anticonvulsants, miscellaneous	20 361
28:24.08	Benzodiazepines	15 685
56:28.36	Proton-pump inhibitors	3609
28:24.92	Anxiolytics, sedatives and hypnotics, miscellaneous	3412
28:08.08	Opiate agonists	2800
28:16.08	Antipsychotics	2470
68:16.04	Oestrogens	855
24:24.00	Beta-adrenergic blocking agents	549
24:08.16	Central alpha-agonists	456
28:20.04	Amphetamines	350
24:28.08	Dihydropyridines	324
28:20.92	Anorexigenic agents and stimulants, miscellaneous	286
68:04.00	Adrenals	271
28:92.00	Central nervous system agents, miscellaneous	267
56:32.00	Prokinetic agents	256
24:06.08	HMG-CoA reductase inhibitors	232
28:36.20	Dopamine receptor agonists	216

[a]Medication class according to the American Hospital Formulary Service (AHFS) classification.

specific outcomes that pharmacists aimed to improve with deprescribing, such as the reduction of side effects. While reducing medication burden generally improves health outcomes, further investigation into the specific purposes of deprescribing interventions would be valuable.

5 | Conclusion

Following the implementation of new legislation, pharmacies in Québec have begun billing for deprescribing interventions. Québec's innovative approach to billing claims for deprescribing provides a valuable framework for advancing research. By enabling more accurate tracking of deprescribing interventions, this approach enhances the quality and reliability of studies assessing the associated outcomes in large observational cohort studies. While limitations remain, such as the gradual adoption of billing activities, Québec's initiative marks a significant advancement in deprescribing research. It offers a model that other regions could adopt to improve their own healthcare practices and research in this field.

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Ethics Statement

No ethical approval was needed to conduct this review.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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