Prevalence of Potentially Inappropriate Prescriptions (PIPs) in Québec’s Elderly Population, 2000-2006

Conseil du médicament
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Background
A drop in the percentage of people 65 and older who have had at least one potentially inappropriate prescription (PIP) was noted in some Canadian provinces from 2000 to 2006.

The objectives were to determine and track the prevalence of PIPs in Québec’s elderly population.

Methods
A retrospective repeated cross-sectional study was conducted using data banks administered by the Régie de l’assurance maladie du Québec (RAMQ).

Study population
For each fiscal year from 2000-2001 to 2005-2006, the study population included all users 65 and over, that is, people who had had at least one prescription paid for under Québec’s public prescription drug insurance plan.

Identification of PIPs
PIPs were identified using the 2002 Beers criteria; diagnosis and conditions were not taken into account.

"Chronic Beers use" refers to seniors who received at least 3 prescriptions totalling a minimum of 100 solid units in a fiscal year.

"High-risk Beers use" corresponds to seniors who received prescriptions for drugs potentially causing adverse outcomes of high severity.

Analysis
Proportions of users with at least one PIP were assessed for each fiscal year using data provided by pharmaceutical services.

Results
Figure 1. Percentage of users 65 and over having had at least one PIP, in fiscal 2000-2001 to 2005-2006

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Table 1. Number and percentage of users 65 and over having had at least one PIP in fiscal 2005-2006 (total = 857,239), by user characteristics

Table 2. Average annual increase in the percentage (%) of users having had at least one PIP of any type, from 2000-2001 to 2005-2006

Discussion
The percentage of users 65 and over having had at least one PIP of any type remains significant in Québec, despite a decrease between 2000 and 2006. Moreover, almost three quarters of the individuals in question had at least one PIP associated with chronic use or with a high-risk drug in 2005-2006. The percentage of users having had at least one PIP associated with a high-risk drug was more stable. This is explained primarily by the fact that the drugs showing the greatest decrease in both the number and percentage of users were oral conjugated estrogens and digoxin, drugs which are at low risk of causing severe adverse side effects and whose use is almost exclusively chronic.

The limits of this study lie in the very nature of the data banks consulted, the relevance of using the Beers criteria and the underestimation of the actual prevalence of PIPs resulting from the exclusion of drug interactions, duplications and therapeutic errors (including incorrect indications and non-compliance with contra-indications).

Conclusion
The percentage of users 65 and over who had at least one PIP of any type or with a high-risk drug remains comparable to that observed elsewhere in Canada. Chronic Beers use, however, was higher in Québec than in the Canadian Prairies. The gap regarding chronic-use drugs may be due to different prescribing or prescription-filling practices in Québec.

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