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SUMMARY

Description of the Use of Proton Pump Inhibitors (PPIs) in Adults Covered by the Public Prescription Drug Insurance Plan

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Background

Proton pump inhibitors (PPIs) are some of the most widely used and most expensive drugs in Québec. The high cost associated with the use of PPIs led the Québec government to consider a number of steps aimed at improving their use. Thus, key messages directed at physicians and pharmacists were developed in 2002 and updated in 2009. Since 2000, no study has described PPI use in individuals covered by Québec's public prescription drug insurance plan.

Objectives

The study's objectives were to describe PPI use, from 2007 to 2010, among adults aged 18 years or over who were covered by the Public Prescription Drug Insurance Plan and to compare this use with optimal utilization criteria in order to assess compliance with them.

Method

A retrospective cohort study was carried out using three databases administered by the Régie de l'assurance maladie du Québec (RAMQ). The beneficiary data were from the registration file of individuals covered by the public portion of the basic prescription drug insurance plan. The data on the drugs were from the database containing the pharmaceutical services billed to the RAMQ by pharmacists under the Public Prescription Drug Insurance Plan. As for the information on the medical services received, it was from the database containing payment requests from physicians paid on a fee-for-service basis. The data from these three sources were linked using the unique beneficiary identifier (scrambled). For each year examined, the new users were described according to several variables, such as the duration of treatment, the number of medical visits, the use of certain medications during PPI therapy, and the discipline of practice of the physician who prescribed the initial PPI therapy. The total duration of new users' PPI therapy was determined without distinction to the generic name of the PPI. The number and proportion of new treatments that met the optimal utilization criteria based on three key messages from the Conseil du médicament were calculated. These three criteria were once-daily dosing of the initial PPI, a 4-week duration for the first prescription for a PPI, and a reevaluation after 4 weeks of PPI therapy. The first optimal utilization criterion was applied to all the new users, while the second and third were applied only to the new users with uninvestigated dyspepsia who had not started *Helicobacter pylori* eradication treatment or who were not using medications suggesting PPI gastroprotection, namely, an NSAID, an antithrombotic or a corticosteroid. The savings that could have been achieved by prescribing the least expensive versions of PPIs were estimated by generic name and for all PPIs.

Results

There were 461,185 PPI users in 2007 and 558,528 in 2010, for a prevalence of PPI users of 19.2% and 21.5%, respectively. In 2010, the prevalence of PPI use among people 65 years of age or older was 34.1%. The prevalence among « *adhérent* » (AD) that is persons age 18 to 64 not eligible for a private plan or a claim slip was 11.1%. The number of new users was 135,198 in 2007 and 113,242 in 2010. The same year, the proportion of new users who were aged 65 years

or older and the proportion of those who were AD were 49.3% and 36.7%, respectively. General practitioners initiated most of the PPI treatments (76.2%) in 2010. More than half of the new PPI users (55.0%) used, at some point during their first week of PPI therapy, one of the three categories of drugs suggesting PPI gastroprotection. In 2010, during the ninth week of PPI therapy, 56.0% of the new users who were still covered and being followed were using medications suggesting PPI gastroprotection. Most of the new PPI users (69.6%) had a treatment of less than 8 weeks' duration. The level of compliance with the utilization criterion "once-daily dosing of the initial PPI" was 93.1% for the new users during the 4 years of the study. The level of compliance with the criterion "a 4-week duration for the first prescription for a PPI" was 19.1%. Only 14.7% of the new users among those whose PPI therapy met the second optimal utilization criterion had a medical visit suggesting a reevaluation after 4 weeks of treatment (third criterion). The observed cost of PPIs, excluding pharmacists' fees, was $217 million in 2010. The cost of PPIs would have been $125 million that year if all the PPI prescriptions had been substituted with generic rabeprazole at the equivalent daily dose.

Conclusion

The results of this study provide a brief overview of the practice and will give PPI prescribers food for thought regarding their prescribing habits. This reflection should mainly concern the frequent PPI treatments of 12 or more weeks' duration and the fact that there was no medical visit in 20% of new PPI users within the year following the start of treatment. The difficulty in providing a close follow-up of all patients who are not very ill probably explains the low level of compliance observed for the second and third optimal utilization criteria. Improvement in PPI use does, however, seem possible. This improvement would require a better follow up or evaluation of the treatment indication. We can even suppose that a better assessment of the treatment indication may improve use. The preferred use of generic rabeprazole might also substantially reduce the cost of PPIs for the Public Prescription Drug Insurance Plan with no loss of efficacy in most users. Further studies would be useful for determining if the key messages updated in 2009 and disseminated in June 2010 have had an effect on clinical practice in Québec in the short or medium term.