27th International Conference on Pharmacoepidemiology and Therapeutic Risk Management

Abstract Number: 750084
Submission Type: Oral/Poster

Presenting/Contact Author: Phuong T Khong

Department/Institution: Division of Pharmacoepidemiology and Clinical Pharmacology, Institute for Pharmaceutical Sciences (UIPS), Utrecht University

Address: Sorbonnelaan 16, 3584 CA
City/State/Zip/Country: Utrecht, Netherlands
Phone: +31642328384
Fax:

E-mail: t.p.khong@students.uu.nl

Subfield within pharmacoepidemiology: Drug Utilization Research/Health Services Research

Does your contribution focus on a specific exposure? Yes
Choices: Medicines acting on nervous system

Does your contribution focus on a specific outcome? Yes
Choices: Endocrine / diabetes

Does your contribution focus specifically on methodological aspects? Yes
Choices: Measurement methods

Does your contribution focus on a specific population? Yes
Choices: Older People

Does your contribution fit with the interests of one of the SIGs? Yes
Choices: Drug Utilization/Health Services Research

Presentation format: Oral presentation preferred

Explain how you intend to encourage audience participation?

Disclosure: Yes: The division of Pharmacoepidemiology and Clinical Pharmacology, Utrecht Institute for Pharmaceutical Sciences, employing the authors PK, JG, FdV, and OK, has received unrestricted funding for pharmacoepidemiological research from GlaxoSmithKline, private-public funded Top Institute Pharma (www.tipharma.nl) and includes co-funding from universities, government, and industry, the Dutch Medicines Evaluation Board and the Dutch Ministry of Health. OK has been consultant to Sanofi-Aventis on issues not related to this abstract. The authors PK, JG and HP are employees of Roche. Roche has products in the benzodiazepine class, the drugs that are subject of this publication. The PROTECT project was supported by funding from the European Community's Seventh Framework Programme (FP7/2007-2013) for the Innovative Medicine Initiative (www.imi.europa.eu) under Grant Agreement n° [1150004]. In the context of the IMI Joint Undertaking (IMI JU), the Department of Pharmacoepidemiology and Clinical Pharmacology, Utrecht University, also received a direct financial contribution from Pfizer. The views expressed are those of the authors only and not of their respective institution or company.

Presentation Release - I give ISPE permission to post my presentation, which will be given at ICPE 2011 in the Members Only section of the ISPE website after the ICPE. No

Student Award: Yes
Potential impact of benzodiazepine use on the rate of hip fractures in Denmark (DK), the Netherlands (NL) and Norway (NO)

Phuong T Khong, BSc1,2, Frank de Vries, PharmD, PhD1, Jennifer SB Goldenberg, BSc1,2, Olaf H Klungel, PharmD, PhD1 and Hans Petri, MD, PhD2. 1Division of Pharmacoepidemiology and Clinical Pharmacology, Institute for Pharmaceutical Sciences (UIPS), Utrecht University, Utrecht, Utrecht, Netherlands and 2Epidemiology and Patient Reported Outcomes, Roche Products Limited, Welwyn Garden City, United Kingdom.

Background: Benzodiazepines can increase the risk of falls and have therefore often been associated with an increased risk of hip fractures. However, estimations of the potential impact of benzodiazepine use on the population rate of hip fractures are missing.

Objectives: To estimate the possible population impact of the use of benzodiazepines on the rate of hip fractures in DK, NL and NO. The study is part of the IMI PROTECT study and is also conducted to test the suitability of publicly available databases for drug utilization research.

Methods: We conducted a literature review to estimate the pooled relative risk (RR) for hip fractures and current use of benzodiazepines. Prevalence year rates (Pe) were calculated by dividing number of ever-users of benzodiazepines in one year by the total population. The numbers of users were obtained from publicly available databases of three countries: the Register of Medicinal Product Statistics of the Danish Medicines Agency (2007), the Dutch GIP databank (2008) and the Norwegian Prescription Database (2008). Both the RR and Pe were used for calculation of population attributable risks (PAR) of hip fractures associated with benzodiazepine use.

Results: An increased risk of hip fractures was found in benzodiazepine users (RR 1.4; 95% CI 1.2-1.6). Prevalence rates of benzodiazepine use showed small differences between countries; 10.7% (DK), 13.2% (NL) and 14.5% (NO). This is reflected in results of the PARs; estimated attribution of benzodiazepines to the risk of hip fractures were 4.1% (95% CI 2.5-5.9) in DK, 5.0% (95% CI 3.1-7.1) in NL and 5.5% (95% CI 3.4-7.8) in NO.

Conclusions: This study shows that it is possible to estimate Pes and PARs using data from the three public databases. The PAR estimates suggest that the potential attribution of benzodiazepine use on the population rate of hip fractures in the three EU countries varies between 4.1% and 5.5%.