

PHARMO Newsletter June 2011

The PHARMO Institute for Drug Outcomes Research specialises in the collection and analysis of complex, longitudinal patient-centric data, detailing the relationship between drug exposure, outcomes and costs in real-life settings.

We invite you to read our newsletter.



Database Research Opportunities

The Netherlands Perinatal Registry

The Netherlands Perinatal Registry (PRN) is a national and anonymous registry including all information regarding perinatal care, both within and outside the hospital setting (www.perinatreg.nl). Since 1998, for all pregnancies in the Netherlands, pregnancy related information has been collated, before, during and shortly after delivery of babies with a gestational age of at least 16 weeks. Furthermore, the PRN contains information on newborns such as birth weight, gestational age, apgar score, congenital anomalies and hospitalizations shortly after birth. The PRN however, does not hold detailed information on medication use during or shortly before pregnancy. In addition, the follow-up of newborns is limited.

Linkage PHARMO and the Perinatal Registry

The linkage of PHARMO and The Netherlands Perinatal Registry enables detailed research into drug exposures and co-morbidities during pregnancy, in addition to allowing studies on the (long-term) health status of newborns. The linked PHARMO-PRN infant cohort includes over 175.000 singleton born infants with available birth information and a follow-up period extending up to 10 years. Currently, the PHARMO-PRN infant and/or mother cohorts are used for studies addressing health care utilization for pre-term born infants, studies on the relationship between pregnancy (drug) exposures and (long term) outcomes among infants, in addition to studies addressing the relationship between outcomes and premature birth. Prior approval from PRN for the use of the linked data for scientific research is required.

PHARMO news

European collaborations

PHARMO participates in several projects funded by the European Commission under the VII Framework Programme. Besides, PHARMO collaborates with other European research organizations in several industry-sponsored projects.

Together with 16 partners in Europe, PHARMO is participating in the ARITMO project, a multidisciplinary project using anonymised medical data from more than 27 million European patients.

ARITMO

The ARITMO project investigates the arrhythmia-related risks of antipsychotic, antihistaminic and anti-infective medicines. Drug-induced cardiac arrhythmias are a major pharmacological safety concern as they are difficult to predict. As a result of the difficulties in predicting which drugs may result in serious arrhythmic side effects, a number of antipsychotic, antihistaminic and anti-infective drugs have been withdrawn from the market in recent years, and others were restricted in use.

ARITMO will integrate information from literature review, in silico modelling, clinical and observational studies, pharmacovigilance databases and health care databases (such as the PHARMO Record Linkage System) with the ultimate aim to generate a score based on both the quality and strength of information, and a risk chart for clinicians, which will allow for a more informed treatment and decision making in prescribing drugs.

The ARITMO project (full title: "Arrhythmogenic Potential of Drugs") is funded by the Health Area of the European Commission under the VII Framework Programme.

Publications

We would like to draw your attention to recently published studies using PHARMO data and/or publications by PHARMO staff:

Cardiovascular diseases/diabetes:

- Use of serotonergic drugs and the risk of bleeding. Verdel BM, Souverein PC, Meenks SD et al., *Clin Pharmacol Ther*, 2011, 89(1): 89-96.
- Risk of recurrent myocardial infarction with the concomitant use of clopidogrel and proton pump inhibitors. Valkhoff VE, 't Jong GW, van Soest EM et al., *Aliment Pharmacol Ther*, 2011, 33(1): 77-88.
- Platelet aggregation inhibitors, vitamin K antagonists, and risk of subarachnoid haemorrhage. Risselada R, Straatman H, van Kooten F et al., *J Thromb Haemost*, 2011, 9(3): 517-23.

- Time-trends in treatment and cardiovascular events in patients with heart failure: a pharmacosurveillance study. de Peuter OP, Lip GY, Souverein PC et al., *Eur J Heart Fail*, 2011, 13(5): 489-95.
- Impact of orlistat initiation on cardiovascular treatment use: a 6-year population-based cohort study. Czernichow S, Knol MJ, Fezeu L and Grobbee DE. *Eur J Cardiovasc Prev Rehabil*, 2011, in press.
- Estimates of statin discontinuation rates are influenced by exposure and outcome definitions. Geers HC, Bouvy ML and Heerdink ER, *Ann Pharmacother*, 2011, 45(5): 576-81.

Oncology:

- Myocardial infarction, ischaemic stroke and pulmonary embolism before and after breast cancer hospitalisation. A population-based study. van Herk-Sukel MP, Shantakumar S, Kamphuisen PW et al., *Thromb Haemost*, 2011, in press.
- Prevalence and incidence of acute and chronic comorbidity in patients with squamous cell carcinoma of the head and neck. Landis SH, El-Hariry IA, van Herk-Sukel et al., 2011, in press.

Drug safety:

- Combining electronic healthcare databases in Europe to allow for large-scale drug safety monitoring: the EU-ADR project. Coloma PM, Schuemie MJ, Trifirò G et al., *Pharmacoepidemiol Drug Saf*, 2011, 20(1): 1-11.
- Non-steroidal anti-inflammatory drugs and risk of pulmonary embolism. Biere-Rafi S, Di Nisio M, Gerdes V et al., *Pharmacoepidemiol Drug Saf*, 2011, in press.

Other:

- Evaluation of smoking cessation drug use and outcomes in the Netherlands. Penning-van Beest FJ, Overbeek JA, Smulders M et al., *J Med Econ*, 2011, 14(1): 124-9.
- Pharmacologic treatment of attention-defecit/hyperactivity disorder in children: incidence, prevalence, and treatment patterns in the Netherlands. Hodgkins P, Sasané R and Meijer WM, *Clin Ther*, 2011, 33(2): 188-203.

Congresses

PHARMO will attend the 27th ICPE: International Conference on Pharmacoepidemiology & Therapeutic Risk Management, August 14-17, 2011, Chicago, USA, where we will present our latest research:

- Cost of hospital events for patients with metastatic colorectal cancer
- Cardiovascular co-morbidities among patients with metastatic colorectal cancer
- Major changes in chemotherapy regimens administered to breast cancer patients during 2000-2008
- Record-linkage for pharmacoepidemiologic studies in cancer patients
- Occurrence of co-morbidities in patients with soft tissue sarcoma
- Occurrence of myocardial infarction, ischemic stroke and pulmonary embolism in lung cancer patients

We would like to invite you to visit our booth at the ICPE.

PHARMO will attend the ESC congress 2011, August 27-31, Paris, France, where we will present our latest research on heart failure:

- Frequency and timing of heart failure readmissions in the Netherlands
- Recent in-hospital mortality trends among patients with heart failure in the Netherlands

Furthermore, PHARMO will attend the 47th EASD Annual Meeting, September 12-16, 2011, Lisbon, Portugal, where we will present our latest research on diabetes:

- Population attributable risk (PAR) of macrovascular events associated with HbA_{1c}, blood pressure or weight in patients with type 2 diabetes mellitus: evidence from a Dutch cohort