PHARMO Newsletter Special Issue

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.

Pharmacoepidemiologic studies in the area of oncology
The number of patients ever diagnosed with cancer is growing considerably due to the increasing cancer incidence and the improving survival. Recent decades have brought a dramatic increase in the number of new agents being investigated and approved for the treatment of cancer. New drugs can increase the efficacy of cancer treatment, but may also generate late morbidities which may not be detectable in clinical trials. An increasing need has developed for the post-approval surveillance of (new) anti-cancer drugs by means of pharmacoepidemiologic studies in the area of oncology.

The new PHARMO-ECR cohort
To be able to perform pharmacoepidemiological studies in a cohort of cancer patients in the Netherlands, a new data source was created by linking the PHARMO Record Linkage System (PHARMO RLS) and the Eindhoven Cancer Registry (ECR). The linked PHARMO-ECR cohort consists of 40,000 cancer patients newly diagnosed in the period 1998-2006, including 5,500 patients with breast cancer, 4,800 with colon or rectum cancer, 4,400 with lung cancer, and 3,800 with prostate cancer. The patient-centric data available from this linkage includes, among other things, tumour information (histology, grade and stage) of incident cancers obtained from the ECR and data on drug treatment (out-patient and in-patient), hospitalisations and clinical laboratory measurements obtained from the PHARMO RLS, offering a longitudinal perspective. Every year the PHARMO-ECR cohort is updated. The next update will include data up to December 31, 2009 resulting in a cohort of approximately 55,000 cancer patients.

Research possibilities using the PHARMO-ECR cohort
The created PHARMO-ECR cohort facilitates many pharmacoepidemiological and outcomes research. First, data on drug use and comorbidities before cancer diagnosis can be used to measure preexisting morbidities that might influence decisions on the treatment of cancer. Second, data on drug use directly after cancer diagnosis can be used to study the pattern of cancer care: the exact type of chemotherapeutics administered as initial treatment, but also as follow-up treatment or palliative care. Finally, data on drug use and comorbidities after cancer diagnosis and treatment can be used to monitor the effectiveness and safety of cancer treatments. Another important advantage of the PHARMO-ECR cohort is that it allows the selection of a cancer-free control cohort. This creates the opportunity to compare the rate of new morbidities in cancer patients following cancer treatment, with the rate of morbidities found in the general population. Furthermore, it allows the study of the relationship between drug use and the risk of cancer. The PHARMO-ECR cohort is a valuable source especially for epidemiologists and clinicians dealing with treatment patterns, effectiveness and safety of (new) oncology drugs.

PhD thesis of Myrthe van Herk-Sukel
Recently, Myrthe van Herk-Sukel, research manager oncology at the PHARMO Institute, defended her PhD thesis “Medication Use Among Women With Breast Cancer in the Netherlands” at the Erasmus University in Rotterdam, the Netherlands. In her PhD thesis she describes the results of population-based observational studies on the use of chemotherapy and hormonal therapy in patients with breast cancer, as well as studies on morbidities that may occur after breast cancer diagnosis and treatment.

For these studies, she used the PHARMO-ECR cohort. The research presented was performed at the PHARMO Institute, Utrecht, the Netherlands, in close cooperation with the Comprehensive Cancer Centre South, Eindhoven, the Netherlands.

If you wish to receive a copy of the PhD thesis of Myrthe van Herk-Sukel, or would like to have additional information on the research possibilities with the above described databases, please contact PHARMO at pharmo@pharmo.nl.