Collecting prescribing data from primary care using two different methods: extraction from the electronic patient record versus registration on paper sheets.

Hans Vandenberghe, Viviane Van Casteren, Pascale Jonckheer, Hilde Bastiaens, Johan Van der Heyden, Marie-France Lafontaine, Etienne De Clercq

**Background:** As electronic networks for data collection in primary care begin to emerge, it has become necessary to evaluate this data collection method. One way of doing this is to compare study results obtained from the electronic patient record (EPR) with results from other data collection methods, such as data collection on paper sheets (GPs fill out a paper sheet for each patient included in the study).

**Objectives:** To compare, in a heterogeneous context (various EPR software systems on the market in Belgium), outcomes from two data collection methods (EPR and paper sheets) used simultaneously in a primary care research project on the pharmacological management of osteoarthritis in the elderly.

**Subjects:** 222 GPs collecting data from 4,321 patients with osteoarthritis on paper sheets and 146 GPs extracting data from the EPR of 3,055 osteoarthritis patients, in Belgium.

**Methods:** The proportion of patients with respectively a drug prescription, paracetamol, an NSAID (non-steroidal anti-inflammatory drug) and ibuprofen were compared between both data collection methods. The independent impact of the data collection method on these proportions was examined in a multilevel model incorporating patient and GP characteristics.

**Results:** After adjustment for patient and GP factors, the EPR-derived method gave a significantly lower proportion of osteoarthritis patients with a drug prescription compared to the paper sheets data collection (adjusted OR: 0.31; 95% CI 0.25 -0.39). The proportion of users of a specific type of drug was, however not significantly different between the data collection methods compared.

**Conclusions:** This study may suggest the usefulness of EPR-data for quality assessment where the proportion of patients on a specific type of drug among those with a drug prescription are considered, rather than the proportion of patients on medication of any sort.

**Relevance to EGPRN:** These findings may be of interest to other countries with a comparable heterogeneous setting of the EPR-market.