



Patient population definition based on ambulatory care claims data

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Abstract

Background: The claims database of the Central Research Institute of Ambulatory Health Care in Germany (ZI) comprises nationwide ambulatory care claims data for patients of all statutory health insurance funds in Germany. As the data do not include a unique patient number to identify an individual patient, a patient entity has to be created based on a combination of patients' health insurance number (pseudonymized), the identification number of the sickness fund and the birthday of the patient. As a consequence of this method, the number of patients in the claims data exceeds the number of insured patients according to an official statistic (KM 6-Statistik*), as e.g. every change between sickness-funds results in an allocation of a new health insurance number to a patient.

Methods: In order to quantify this excess, the quotient of the claims data population and the official statistic was built (named *dilution rate*). The influence of age, gender, sickness fund and region on the dilution rate was analysed.

Results: Overall dilution rates accounted for 105.4 % in the year 2007 and for 108.2 % in 2008. Dilution rates varied according to gender, age, sickness fund and as a result of these factors also according to region.

Conclusion: This demonstrates that the results from population based studies which used ambulatory claims data always have to be interpreted in consideration of the specific dilution rate. A valid data based definition of an individual patient can not be accomplished before statutory health insurance funds provide information about patients' basic claims data (especially lifelong health insurance number and period of cover). Thus, these information are essential not only for health service researcher but also for the associations of Statutory Health Insurance Physicians as they require them to meet compulsory demands.

* Only publicly available statistic which gives information about the number of insured patients on the due date 1st of July, stratified by gender, age-group, sickness fund and region. It is published annually by the German Ministry of Health.