

Comparative Effectiveness Research on Psychiatric Hospitalisation by Record Linkage of Large Administrative Data Sets (CEPHOS-LINK)



Background and aims of the project

Psychiatric services have undergone profound changes over the last decades in most European countries. Large mental hospitals were downsized or closed and community mental health services were set up, in order to move care of patients with mental disorders from institutions to the community. However, little is known about the effectiveness of this "de-institutionalisation" approach. In fact, psychiatric hospital admission and re-admission rates are still high in many countries, and it is not well understood why, and also not why there are large differences in different countries.

A recent study by the OECD (Health at a Glance; OECD Indicators 2011) demonstrates this large between country differences. This report on sixteen OECD countries has shown that for the year 2009 the 30 days unplanned readmission rates for schizophrenia to the same hospital varied more than six-fold, from a low rate of 4.5 in the Slovak Republic to an astonishingly high one of 29.9 per 100 discharged patients in Norway.

Unplanned hospital readmissions constitute profound interruptions in psychiatric patients' lives and they are feared by patients (among other reasons because of stigma), so that their avoidance can be regarded as patient centred outcome (PCO). In addition, hospital re-admissions are costly and are not regarded as an indicator of efficiency and good quality of care.

The aims of the study is to identify the determinants of hospital readmissions of psychiatric patients by using real world administrative data in order to develop modelling based decision support tools and recommendations for health care planners and politicians for reducing unplanned hospital readmissions.

Study design, data acquisition and analysis

CEPHOS-LINK intends to use existing large administrative electronic health care and other databases covering the total populations of six European countries with different types of health care systems (Austria, Finland, Norway, Romania, Slovenia, Italy – here not the whole country is covered, but one large region), in order to retrospectively:

a) identify comparable cohorts of patients discharged from hospital with a psychiatric diagnosis and

b) follow-them up individually by record linkage methods over 18 months in terms of their subsequent health service utilization, especially in terms of rehospitalisation.

CEPHOS-LINK will explore the relationship between a large array of variables and the rehospitalisation of patients who had been discharged from hospital. Variables to be explored for their potential predictive power for early or later rehospitalisation include those that are available in such data bases themselves on the patient level (e.g. gender, age, diagnosis, length of stay) and the service level (e.g. type of hospital bed; type of ambulatory care), as well as variables which describe the health care system (derived from literature surveys and interviews with users, carers and experts: e.g. payment systems, number of hospital beds, size of hospitals; regulations about compulsory admission and detention).

Objectives 1 and 2 focus on the comparison of several naturally occurring service use patterns after hospital discharge over a period of 18 months as they are modified by the above mentioned variables. Special emphasis will be put on the increasingly recognized problem of the comorbidity of physical with mental disorders.

Given the use of data from multiple databases in six countries, work on data availability, acquisition, management, quality and interoperability, privacy protection and linkage methods will take up the first 18 months of the project time. In the second half of the project local and pooled data analyses will be performed with statistical methods and innovative dynamic modelling approaches.

The innovative character of the record linkage approach in large administrative databases (which has only become possible over the last few years with the availability of ever increasing computer power) has led to the formulation of objective 3 which implies the development of a methods toolkit for conducting such record linkage studies in large administrative databases for improving the evaluation of mental health care systems.

In objective 4 the results of the record linkage studies will be integrated with views from users, carers and experts, cost-effectiveness aspects and findings from systematic reviews of the literature in order to produce guidelines, recommendations and decision support tools for planners and politicians in the field of mental health system and services interventions for improving continuity and quality of care for patients with mental disorders living in the community.



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