EuroDRG: Diagnosis-Related Groups in Europe: towards Efficiency and Quality

A project funded under the 7th EU Research Framework Programme

Background

Payment mechanisms represent one of the fundamental building blocks of any health system, introducing powerful incentives for actors in the system and fierce technical design complexities. Since the introduction of Diagnosis Related Groups (DRGs) for USA Medicare patients in 1983, case payment mechanisms have gradually become the principal means of reimbursing hospitals in many developed countries, including most European countries.

DRGs are nowadays used as a payment mechanism with ambitious aims: they seek to reimburse providers fairly for the work they undertake, but intend to encourage efficient delivery and to discourage the provision of unnecessary services and thereby target to overcome some of the drawbacks of more traditional hospital reimbursement such as fee-for-service (with the danger of inefficiencies due to an overproduction of unnecessary services), per-diem payments (with potential inefficiencies due to longer than necessary hospital stays) or global budgets (leading to access problems and underprovision of necessary services).

A case payment system that fulfils these hopes requires carefully balanced incentives as well as a methodologically sound system. Especially, DRGs need to accurately reflect the resources and costs of treating a given patient, in the light of (1) observable and measurable patient characteristics, especially diagnosis, severity and comorbidity – but, to a varying degree, also (2) the interventions chosen, the intensity of the use of inputs (e.g. physician or nursing time spent for patient), i.e. the "medical/ hospital decision variables", as well as (3) factors explained by the hospital, e.g. its size and location, and regional or national factors influencing the costs of inputs (e.g. wages). The relevance of the latter was demonstrated in the HealthBASKET project funded under the 6th EU Research Framework Programme (cf. the freely available articles in the special issue of Health Economics: http://www3.interscience.wiley.com/journal/117882416/issue).

If this is not done appropriately, severe adverse affects such as patient cream-skimming, patient dumping or low quality services may worsen the quality of care provided and hospital resource utilization. Clearly, fierce debate among practitioners, researchers and the public indicates that case payments still poses considerable technical and policy challenges, and many unresolved issues in their implementation remain.

In addition over the last decade the Europeanization of health services markets generated additional pressure on national reimbursement systems by adding complexity via issues such as increases patient mobility and health system interconnectedness. The latter implies that policy makers across

Europe increasingly need to be aware of the structural differences and similarities as well as of the advantages and disadvantages of DRG systems across Europe to tackle regulatory and reimbursement challenges. Moreover, although a direct harmonization of European DRG-systems seems an unrealistic scenario in the short term, the methodological and managerial problems of having, and further developing, different DRG systems across the EU (vs. the challenges and potentials of comparability, transparency and possibly harmonization) need to be scientifically analysed and politically discussed to anticipate the implications of – and possibly to encourage – a pan-European hospital market.

Project idea and approach

The EuroDRG project takes up these issues. Part one concentrates on the complexities of case payments for hospitals in general. Special emphasis is put on identifying those factors, which are crucial for (1) calculating adequate case payments, (2) examining hospital efficiency within countries and across Europe fairly and (3) study the relationship between costs and the quality of care provided in hospitals. The project uses comparative analyses of DRG systems across 10 European countries embedded in various types of health systems (Austria, Estonia, Finland, France, Germany, the Netherlands, Poland, Spain, Sweden and the UK). The second part of the project seeks to identify pan-European issues in hospital case payment and includes conducting efficiency analysis across European countries, establishing a European hospital benchmarking club as well as identifying those systemic factors, which will be crucial for successful policy design in a slowly emerging pan-European hospital market.

To achieve its objectives, the project is organised in phases: 1. Analysis of national DRG-systems and development of a methodology for trans-national analysis; 2. Trans-national DRG issues - hospital cost functions, efficiency and quality; 3. Translation into practice, synthesis and recommendation. To achieve a high scientific quality and a high policy impact, the strategy involves (based on the successful HealthBASKET project): encouraging partners to publish in peer-reviewed journals; using excellent links to major international organisations; establishing an EU-wide hospital “benchmarking club”; organising seminars at major conferences; a final conference with invited experts; involving representatives from countries with emerging DRG-systems.

Methodology

In phase I, we will systematically analyze the DRG-systems in ten European countries, to explore which variables are considered for defining DRG groups, how data is collected and handled, and how the systems deal with new and emerging technologies. Besides a general analysis of the DRG-systems, this will be done in-depth for 10-12 predefined hospital services (in the project referred to as “inpatient episodes of care”, amended from the methodology developed in the HealthBASKET project).

In phase II, cost and outcome data on patient and hospital level will be used to identify and assess the importance of structural factors on the national, regional and hospital level to explain variation in costs within and between European countries in a systematic way assessing. Special emphasis is given to their relevance vis-a-vis the two sets of variables commonly used, i.e. (1) patient variables

such as age, (main) diagnosis and co-morbidity and (2) medical/ hospital decision variables such as treatment patterns or the use of new technologies.

In its main part, the project aims at developing well-grounded service specific cost-functions, which adjust for structural differences in hospital costs and the well known patient and medical/clinical decision variables. The latter are calculated a) within countries and b) across the participating European countries. The insights on hospital costs will at later project stages allow fair efficiency comparisons between hospitals across Europe.

In addition we will use the rich data collected to investigate the relationship between the quality of care and costs in DRG systems across Europe. To date there are only few studies which address this important issue. If the quality of care is worse in hospitals with lower costs or shorter length of stay, this could be an important implication for European DRG-systems e.g. the need to integrate quality measures into DRG-systems.

Besides these research-oriented objectives, the project also aims at tackling the managerial challenges by assembling a group of hospitals which will voluntarily participate in a benchmarking exercise based on comparable data collection and analysis ("benchmarking club"). This part of the project will be done jointly with HEMA, the European Health Management Association.

In phase III of the project, we will synthesize prior results to identify those systemic factors, which will be crucial for successful policy design in a slowly emerging pan-European hospital market.

Project consortium and management

Project partners are:

TUB	Germany	Department of Health Care Management, Technische Universität Berlin
CHE	England (UK)	Centre for Health Economics, University of York
CPK	Sweden	The Centre for Patient Classification, National Board of Health and Welfare
EHESP	France	Ecole des Hautes Etudes en Santé Publique
iBMG	The Netherlands	Institute for Health Policy & Management, Erasmus Universitair Medisch Centrum Rotterdam
IMAS	Spain	Institut Municipal d'Assistència Sanitària
IRDES	France	Institute of Research and Information on Health Economics
MSIG	Austria	Department for Medical Statistics, Informatics and Health Economics, Innsbruck Medical University
NHF	Poland	National Health Fund

PRAXIS	Estonia	PRAXIS Center for Policy Studies, Estonia
THL	Finland	National Institute for Health and Welfare
EHMA	Ireland	European Health Management Association

The following have so far agreed to be members of the Advisory Board:

- Dr. Josep Figueras, Research Director and Head of the Secretariat, European Observatory on Health Systems and Policies, and Regional Advisor, WHO Regional Office for Europe
- Dr. Bernhard Gibis, Kassenärztliche Bundesvereinigung, Berlin, Germany
- Dr. Manfred Huber, Director Health and Care, European Centre for Social Welfare Policy, Vienna, Austria
- Professor Pere Ibern, Strategic Development Director at DKV Seguros and Associate Professor, Department of Economics at Universitat Pompeu Fabra, Barcelona
- Professor Miriam Wiley, Head of the Health Policy & Information Division, the Economic and Social Research Institute, Ireland

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