



*Diagnosis-Related
Groups in Europe:
Towards Efficiency and
Quality*

DRGs and quality: for better or worse

Zeynep Or

Institute for Research in Health economics (IRDES), France

Unto Hakkinen

National Institute for Health and Welfare (THL), Finland

8th European Conference on Health Economics,
Helsinki, 7-10 July 2010

DRGs and quality: what to expect

- DRGs as payment mechanism: provide direct incentives to reduce the cost/length of hospital stay
- Hospitals can cut down unnecessary services & improve efficiency through organisational changes
- The impact on quality of care is not clear “a priori”
- Quality: any aspect of the service that benefits patients during the process of treatment or improves health outcome after treatment

Why quality is problematic in health care

- When purchasers can verify the product/service they get, their choice will reflect their perception of quality
- In health/hospital markets patients and payers demand for hospital services do not reflect quality

Because:

- It is difficult to observe and quantify the quality of care provided (not always consensus on what is good quality)
- Difficult to distinguish whether a bad medical outcome is attributable to the underlying disease or bad quality of care
- In some systems, patients do not have choice about which hospital to attend
- There are several sources of information asymmetries
- Patients and payers have to rely on information and decisions made by the providers

- The providers are “experts” who act on behalf of their patients (principal agency theory)
- Patients, providers and payers may have conflicting interests (Forgione et al. 2005)
 - Patients: seek best care
 - Providers: recover their costs/maximize profit with an acceptable level of quality in the market place
 - Purchaser: meeting health needs while controlling costs
- Literature on contracting: When some dimensions of the product/service are not visible (not specified in the contract), providers withhold on the dimensions that are not verifiable (Chalkley and Malcomson, 1998; Levaggi, 2005)

Quality of treatment provided is a choice variable of the provider

Determined by multiple economic incentives provided by the payment mechanism. Providers can:

- Discharge patients earlier than clinically appropriate
- Omit medically indicated tests and therapies
- Over-provide certain services to push the patient into a higher-paying category
- Under-serve to optimize the payments they get
- Discourage patients whose expected costs are likely to be higher than the expected reimbursement

Review of evidence:

- From US (introduction of DRG-based PPS in 1983):
 - Shorter ALOS
 - Rise in likelihood that patients discharged in unstable condition,
 - but also organisational change (utilisation of new technology/procedures, development of home/ambulatory care)
 - Mostly, no significant impact in terms of mortality/readmission rates
 - Impact might depend on the hospital's economic situation before PPS (higher mortality rates in hospitals facing price reduction)
 - PPS may have contradictory effects for different patients groups depending on the price incentives provided by different DRGs

Review of evidence:

- From Europe (very few studies):
 - Shorter ALOS, in most countries
 - No impact on health outcomes measured by specific mortality and readmission rates in Italy, Norway, Sweden, England
 - Lower patient satisfaction (Sweden)
 - Change in coding practices in Sweden (more secondary diagnosis), France (DRG drift)
 - No cream skimming or early discharge in Germany (survey of 30 hospitals)

Integrating quality in payment:

- Quality would not be a problem in areas where better quality (ex. Introduction of a new technology) induce cost savings
- Otherwise, if the payer/purchaser wants to improve care quality, the basic payment formulation needs to be adjusted to reimburse the hospital for additional cost/effort

$$R^A = \sum p_i \times N_i$$

Where i = DRG category, p = fixed payment/price for each patient treated in each DRG
and N = number of patients

Integrating quality in payment:

- When/if quality can be monitored at the patient level:

$$R^A = \sum p_j \times q' N_j$$

where $q' N_j$ is the quality adjusted number of patients treated

- US Medicare model: no payment is made to hospitals ($q' = 0$) for certain patient outcomes (8 conditions which were not present on admission, such as pressure ulcer, urinary tract infection, etc.)
- Difficulty of determining what is avoidable adverse events and ensuring accurate coding of diagnosis
- Risks of gaming and coding manipulation

Integrating quality in payment:

- Paying for quality at the hospital level:

$$R^A = \sum p_j \times N_j + q''$$

Hospitals are rewarded for quality improvements or progress in care alongside the DRG payments

- England's "Commissioning for Quality and Innovation" (CQUIN):
 - All acute trust hospitals publish "Quality accounts"
 - Purchasers can link a specific proportion of providers' income to the achievement of locally agreed (realistic) goals
 - In 2009/10 the CQUIN payment framework covered 0.5% of a provider's annual contract income

Integrating quality in payment:

- Combining patient level incentives with a quality specific payment at the hospital level:

$$R^A = \sum p_j \times q' N_j + q''$$

- US Medicare encourages hospitals to participate in public reporting of quality information
- Those who do not report on 10 measures of quality receive a 0.4% reduction in their DRG prices
- Where data available, positives incentives can be given for stimulating innovative approaches to improving quality and patient safety

Conclusion:

- DRG based payment represents risks but also provides opportunities for improving quality of care
- DRGs makes it possible to give explicit incentives for procedures/treatments considered “better quality”, to penalise “bad quality care” or to grant financing for improving patient outcomes
- The challenge is to reach a consensus on what constitutes “good quality” in different clinical situations
- Continuous refinement of data and indicators for monitoring quality is fundamental (wide gaps between countries)