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

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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.
Theory

- 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:

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

where $q' N_i$ 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:

\[ R^A = \sum p_i \times N_i + q'' \]

*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:

\[ R^A = \sum p_i \times q'N_i + q'' \]

- 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 make 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).