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## Contents



# Payment by results in England


Seán Boyle


Payment by Results (PbR) was introduced into the English National Health Service (NHS) in 2003–04 – but not in Wales, Scotland or Northern Ireland. The introduction of a system of regulated national tariff prices was a major change in the financial regime for public healthcare in England.

This article discusses the implementation of PbR and outlines some of its key features. It has been a slow process, perhaps with good reason as PbR has the potential to destabilize the NHS financial system.[1] The article concludes with a discussion of some of the characteristics of PbR.

## Payment by Results

*The NHS Plan*[2] (July 2000) made no mention of PbR. However, the Health Secretary, in *Delivering the NHS Plan*[3](April 2002), introduced the concept, arguing for the need to introduce stronger incentives to ensure improved performance,

"The hospital payment system will switch to payment by results using a regional tariff system of the sort used in many other countries. To incentivize expansion of elective surgery so that waiting times fall, hospitals or DTC/surgical units that do more will gain more cash; those that do not, will not."

He also made clear that primary care trusts (PCTs) – the commissioning agencies in the English NHS – would be free to purchase care from the most appropriate provider whether in the public, private or voluntary sector.

The driving force behind these changes – at least explicitly – was to give providers incentives that would reward better performance. This, in turn, required incentives for those making choices about where patients would be treated (the PCTs that commission services) to send patients to hospitals that performed better. At the same time the Government was looking to hand over more choice directly to the patient (or user). Eventually patients would go to their hospital of choice and 'money would follow the patient', echoing the now (in)famous words describing the Conservative Government's internal market policy of the early 1990s.

Instead of block contracts for activity (which are insensitive to the volume and nature of activity), providers would be paid for the activity they undertook. This would be done using national, average, NHS-provider costs to establish a standard tariff for the same treatment regardless of provider. Over time the NHS would move to a system where all activity is commissioned against a standard tariff using either Health Resource Group (HRG) benchmarks (an English version of DRGs) or other appropriate measures that differentiate activity according to casemix. Local commissioning would focus on volume, appropriateness and quality, not price – as this would be fixed using regional tariffs to reflect unavoidable differences in costs in different parts of the country.

The development of the PbR system was spelt out in more detail in *Reforming NHS Financial Flows*[4] (October 2002) which proposed a switch to a national tariff for hospital activity over five years. By 2005–06 the national tariff was to be applied to the majority of activity. All NHS trust activity would be commissioned using service level agreements (SLAs) that linked payment to volume of


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service provided, using a national tariff which was casemix-adjusted and also took account of regional differences in cost. As the movement towards national tariffs might be difficult for some trusts, the transition was to take place over three years, i.e. full implementation by 2008.

However, the reality has been somewhat different.

## Implementation

The introduction of PbR in England has been slower than originally intended. In 2003–04 national tariffs were applied to extra elective activity in 15 HRGs – regarded as important to the achievement of national waiting time targets. Additional activity over an agreed 2002–03 baseline was commissioned at an individual HRG-level, funded at a national tariff. The list of procedures included cataract extraction, some cardiac procedures, hip and knee replacements, arthroscopies, breast surgery and varicose vein procedures. PCTs introduced cost-and-volume SLAs for just six specialties – ophthalmology, ENT, trauma and orthopaedics, general surgery, urology and cardiothoracic surgery. Price was determined locally with adjustments for casemix made using HRGs.

In 2004–05 national tariffs were applied to an extra 33 HRGs making 48 in total. Cost-and-volume contracts were introduced in all surgical specialties. PCTs were required to commission work from NHS foundation trusts (these were created in April 2004 with more freedoms than NHS trusts) using legally binding cost-and-volume contracts which were set at national tariff rates. Where the costs of foundation trusts were significantly greater than average, as represented by the national tariff, the Department of Health made funds available to cover these costs during what was regarded as a transition period.

Although by 2005–06 the national tariff was supposed to apply to around 80% of activity in acute and specialist hospitals and almost all activity was to be commissioned using cost-and-volume contracts, this did not prove possible. Instead, it was agreed that the mandatory national tariff would only apply to elective care (although extended for foundation trusts). Non-elective cases, outpatients and A&E remained outside the scope of the scheme. It is likely the transition period for trusts, as they move over to PbR, will be moved back as a result of this delay to beyond 2008.

In 2003–04 just £61 million of activity was covered by the PbR scheme representing 32,000 spells of inpatient activity. By 2004–05 it is claimed that over 20% of inpatient spells and 50% of outpatient attendances were covered by the scheme, still considerably less than the Government had intended.

**Table 1: Key features of PbR system in England**

| | |
|---|---|
| **Purpose** | **To improve efficiency, quality and choice** |
| **Start date** | **April 2003** |
| **Coverage – activity** | **Intended to cover all activity but limited so far mainly to elective care** |
| **Critical care** | **Currently treated outside the PbR system but the intention is to include it** |
| **Mental health** | **Currently treated outside the PbR system and intention not yet clear** |
| **Coverage – providers** | **Includes public, private and voluntary providers but differences in how PbR is applied** |
| **Tariff system** | **Uses national average NHS provider costs to produce cost per HRG spell, outpatient attendance, etc.** |
| **Regional adjustments** | **Yes, using the Market Forces Factor** |
| **Academic centres** | **Some funds dealt with in PbR but education and R&D funds excluded** |
| **Quality of care** | **Too early to expect evidence** |
| **Increased productivity** | **Too early to expect evidence** |
| **Cream-skimming, up-coding** | **Too early to expect evidence** |

## Key features of the new system

Although as yet PbR has not been rolled out across the whole of the NHS, nor does it cover the range of services intended, some key features of the system have emerged (see also Table 1). These are discussed below:

*Coverage*

The Government intends almost all healthcare activity to be covered by the PbR system. However, this is taking some time to implement. In 2005–06 the national tariff covered all patients admitted for elective care i.e. daycases and inpatients. A wide range of activity is excluded, including: non-elective care, outpatients and A&E attendances; mental health services, learning disability services; ambulance services; community services, continuing and intermediate care, and respite care; chemotherapy and radiotherapy; renal dialysis; and critical care.

However, foundation trusts use a national tariff structure that includes non-elective admitted patient activity, outpatient attendances and A&E attendances. Outpatient tariffs are set at specialty level for first and follow-up attendances. A&E tariffs are set at three levels: high-cost, standard-cost and minor injury unit.

Critical care will eventually be included in the PbR system (critical care includes high dependency units, intensive care units, coronary care units and burns intensive care units). It is not yet clear how mental health services will be treated. Currently, these are commissioned as before but the Department of Health is exploring the experience of other countries that use casemix-based funding.

*Calculating prices*

The national tariff for admitted patients is derived from a weighted average cost of inpatient episodes and daycases. These include all clinical costs, for example, costs of diagnostics and monitoring interventions, and all non-clinical costs, for example, capital charges, food, cleaning and maintenance.

National tariffs for 2005–06[5] were based on reference costs for 2003–04 (which represented the average cost of a finished consultant episode, FCE*) with uplifts to reflect the expected increase in the cost of NHS provision over the two intervening years, the shift from FCE-based reference costs to spell-based tariffs, specific HRG adjustments to take account of National Institute of Clinical Excellence (NICE) technology appraisals, and long-stay outlier payments (patients staying longer in hospital than a pre-determined cut-off point). Previously the tariff was FCE-based. However, from 2005–06 tariffs are based on spells. In all, there are now 550 HRG tariffs.

There are supplementary payments for specific specialist and children's activities. There are a number of exclusions from the calculation of tariffs: services commissioned by the National Specialised Commissioned Advisory Group; some HRGs, for example, heart, liver, lung, and kidney transplants; and some high-cost drugs and devices, for example, beta interferon and implantable defibrillators.

*Regional adjustments to the national tariff*: HRGs are intended to take account of all legitimate differences in costs between trusts. To take account of geographically-determined, unavoidable differences in local cost due to different costs of resources, tariffs for each provider are adjusted by the application of a market forces factor (MFF). The MFF is an index that has been used for many years to adjust allocations of funds to commissioning bodies to take account of unavoidable variations in provider costs directly related to location. The index is a weighted combination of three components reflecting variations in the costs of staff, land and buildings.

*Treatment of capital*: Changes to forecast capital charges at a national level are reflected in the inflation uplift applied to the national tariff. No account is taken of local changes to capital charges except through the MFF. As no account is taken of an individual trust's cost structures or asset base when applying the national tariff, trusts must ensure PFI (private finance initiative) schemes are affordable under the new PbR system.

*R&D and teaching adjustments*: There are subsidies currently provided by the allocation of education and R&D monies to some trusts. Moreover, some work is undertaken as research trials. These may lead to regional variations in the cost of service delivery. The Department of Health has considered both the amount and distribution of existing education and R&D levies with a view to eliminating any significant cross-subsidies between the patient care and levy funding streams. However, it has decided not to attempt to rebase these levies at least until the end of the transition period.

*Independent sector*

Detailed policies on how the national tariff will apply to new providers are still being developed but the intention is to ensure that new providers' costs converge with the tariff by the end of the transition period. Currently, PCTs pay for activity commissioned from the independent sector up to the level of tariff prices and a central budget is used to cover any differences. Where new surgical and diagnostic units set up and run by independent operators face additional start-up costs, including costs associated with staffing substantially with overseas clinicians, these are met from central budgets.

*Quality*

The national tariff includes the cost consequences of general quality improvements, for example, NICE recommendations or National Service Framework requirements, that have occurred after reference cost data were collected. But in general, quality standards are set by mechanisms outside the financial system and underpinned by appropriate clinical governance arrangements and regulation of quality standards. However, SLAs will eventually include appropriate quality provisions agreed between trusts and commissioning bodies.

## Concluding remarks

In the Government's eyes the PbR system is a panacea for all the problems of the NHS: it will bring about increased efficiency and improvements in quality of care while enabling greater choice for individual patients. The reality – if it ever comes – may be different.

Currently PbR has been applied to only a limited number of activities. This in itself can cause distortion in provider behaviour. Moreover, although the aim is to extend PbR so that national tariffs are set independently of the setting in which care is provided – hospital or community – current difficulties experienced in setting hospital prices suggest this may prove an insurmountable task.

The Government has argued PbR will provide incentives for levelling-up quality because prices will be fixed under the national tariff – meaning that providers will have to compete on quality. However, this ignores the possibility of competing on costs. There is evidence from other countries that where prices are fixed, quality is reduced in order to keep costs down.[5]

The Audit Commission[1] found little evidence of improvements in efficiency or increases in activity resulting from the introduction of PbR. There is evidence from other countries that the introduction of similar funding systems was accompanied by 'HRG-drift' where patients are 'up-coded' to more expensive procedures, or by better counting, resulting in apparent increases in activity, or higher rates of intervention and higher levels of admission, all of which may push up total costs.[6] It also has been argued that some providers may cream-skim patients (choosing the easier ones

* An FCE is generated each time a patient is transferred between the care of consultants within one hospital spell. Spells are defined as the entire stay of a patient at a particular provider from admission to discharge or death. Thus, spells can contain more than one FCE.

within a particular casemix category). Therefore, the consistency and quality of the activity and coding data on which national tariffs are based is of fundamental importance.

The Audit Commission also found that the costs of implementing PbR were greater than anticipated. The complexity of the tariff system requires significant improvements in the production and use of detailed finance and activity information. This may contribute, in a general sense, to a better understanding of the healthcare business from the perspective of both providers and commissioning bodies.

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# The DRG reimbursement system in Germany

Jonas Schreyögg, Oliver Tiemann and Reinhard Busse

The Statutory Health Insurance Reform Act of 2000 introduced a new system of reimbursement based on an internationally used system of Diagnosis Related Groups (DRGs). This represents the most significant reform in the German hospital sector since the system of dual financing was introduced in 1972 (where the state is responsible for capital costs while running costs are paid by sickness funds or private patients). The primary motive for fundamentally reforming the old reimbursement system based on per diem charges was to engender a more appropriate allocation of resources under DRGs. The step-by-step implementation of the system also represents an innovative approach to implementing policies and legal provisions, as the legislation has defined only the goals and tasks, as well as the time-frame and roles of the different players – reflecting the fact that this is a 'learn as you go system'.[1] If implementation occurs on schedule the DRG-system will be fully implemented with state-wide base-rates by 2009.

Since January 2000, the Hospital Financing Act has defined the fundamental features of the German DRG system for the case-based reimbursement of inpatient services and day cases of curative care. Under the Act, the self-governing bodies at the federal level (i.e. the Federal Associations of Sickness Funds, the Association of Private Health Insurers, and the German Hospital Federation) are responsible for introducing a reimbursement system based on DRGs that would be 'uniform in application, performance-oriented, and case-based' and that would also take disease severity into account.

Thus, the self-governing bodies are responsible for providing the substantive detail to the provisions of the Hospital Financing Act and continually developing the German Diagnosis Related Groups (G-DRG) system. Uniformity has been operationalized insofar as the G-DRG system applies equally to all patients, regardless of whether they are members of the statutory health insurance (SHI) system, private health insurance (PHI), or are self-paying patients. In addition, the G-DRG system applies, in principle, to all hospitals insofar as certain service types are not explicitly excluded ie. the system applies to all clinical departments with the exception of institutions or facilities providing services in psychiatry, psychosomatic medicine, or psychotherapy.[2]

## DRGs and other reimbursement components

On 27 June 2000 the self-governing bodies approved the use of the Australian Refined DRG system (AR-DRG system) as a foundation for the G-DRG system, which would use cost weights calculated on the basis of German data. The newly founded Institute for Hospital Reimbursement (InEK) provides the organizational structure to maintain and further develop the G-DRG reimbursement system and is, among its other

duties, responsible for calculating cost weights. To derive DRG classifications InEK relies on retrospective cost and claims data collected in German hospitals. Every German hospital is required to provide the institute with hospital-related structural data (for example, the hospital's institutional code and ownership, number of beds, number of trainees, costs for personnel and total costs) and case-related claims data annually. The case-related cost data are calculated using a sampling of data from hospitals participating in a voluntary data sharing programme.

The G-DRG system, (the 2006 version) is based on cost data from the 2004 calendar year. As part of data quality assurance, all data sets are subject to an error checking and correction process. As of May 2005, a total of 221 hospitals had agreed to participate in the data sharing programme, thus serving as a basis for calculating the cost weights for 2007. This corresponds to roughly 12% of the 1,800 hospitals using DRGs in Germany[3] and the medium-term goal is to collect complete cost data information from all hospitals using DRGs in the country. Starting in 2005, hospitals are to be reimbursed for participating in the data sharing programme. The reimbursement consists of a basic flat fee for all hospitals plus a variable fee that will depend on the number and quality of the data sets that each hospital transfers to the Data Collection Centre which then hands over the data to InEK. If certain standards are not met the additional reimbursement is stopped.

In the new Case Fees Catalogue for 2006 there are 914 national DRG cost-weights and 40 (non-national) cost-weights which are negotiated individually with each hospital. The non-national DRGs were excluded from the Case Fees Catalogue either because the sample size was insufficient for calculation or the cost variance was too large.

It is important to note that the contracting parties in the German system of self-governance are authorized to negotiate reimbursement beyond that covered by DRGs by means of supplementary fees for certain complex or cost-intensive services, or very expensive drugs. These fees have become increasingly important because of a lack of sufficient data for calculating certain DRGs and the limited appropriateness of the cost weights currently in use (in terms of reflecting the actual costs incurred; see below). These supplementary fees are generally calculated by InEK in a uniform manner for all of Germany.[4] Since the introduction of supplementary fees in 2004, their number increased from 26 to a total of 82 in 2006. These include 40 supplementary fees where the amounts were fixed by InEK. The other 42 treatment services are to be negotiated on a hospital-by-hospital basis (for example, treatment of haemophilia with blood clotting factors). In addition, the contracting parties are authorized (in 2005 and 2006) to negotiate the reimbursement of additional services by means of case-based or per diem remuneration where the service in question 'cannot yet be appropriately reimbursed through DRGs or supplementary fees'.

## Calculating costs

The new German reimbursement system is based on a patient classification system that selectively assigns treatment cases to clinically defined groups (i.e. DRGs) that are distinguished by comparable treatment costs. The G-DRG system, uses a grouping algorithm based on a variety of criteria from the inpatient hospital discharge data set, such as diagnosis, medical procedure (for example, stent implantation), clinical severity, age and co-morbidity. All co-morbidities are taken into account but are weighted differently depending on combinations (for example, diabetes mellitus, pulmonary embolism, stroke etc.). Therefore, DRG assignments are unambiguous as treatment cases that have identical records are assigned to a single DRG. Regional medical review boards regularly review case assignment to DRGs and the utilization of services in order to avoid upcoding or low quality of service provision. Where unintended upcoding has occurred hospitals are required to pay back the respective revenues received. Additional penalties are levied in cases of intentional upcoding.

DRG cost weights are meant to cover medical treatment, nursing care, the provision of pharmaceuticals and therapeutic appliances, as well as board and accommodation. The case cost for a particular DRG is generally the product of its relative weight and the base rate (i.e. the monetary value of a relative weight of

**Table 1: Key features of the DRG system in Germany**

| | |
|---|---|
| **Purpose** | **More appropriate allocation of resources** |
| **Start date** | **January 2003** |
| **Coverage** | **All clinical departments except institutions or facilities providing services in psychiatry, psychosomatic medicine, or psychotherapy** |
| **Critical care** | **Included** |
| **Tariff system** | **Case-related cost data are calculated using a sampling of data from 221 hospitals participating in a voluntary data sharing programme (12% of all hospitals using DRGs)** |
| **Regional adjustments** | **Not for cost weights, but done for supplementary fees in individual negotiations and indirectly by state-wide base rates.** |
| **Academic centres** | **Treated equally** |
| **Quality of care** | **Too early to expect evidence** |
| **Increased productivity** | **Too early to expect evidence. 4% reduction in average length of stay (2003-2004), but falling trend already evident before the introduction of DRGs.** |
| **Cream-skimming** | **Too early to expect evidence** |
| **Main challenges** | **Insufficient reflection of actual costs by cost weights; random sample of hospitals participating in data sharing not representative for all hospitals; increasing number of supplementary fees** |

1.0). In order to account for the lower treatment expenses incurred by short-stay outliers (i.e. located below the lower Length of Stay (LOS)-threshold), remuneration in these cases is reduced by means of per diem deductions while long-stay outliers (i.e. located above the upper LOS threshold) are reimbursed by means of per diem surcharges in addition to the DRG case fees.

The relative weights used in the G-DRG system make it possible to quantify the average costs per case in relation to the specific resource utilization. This involves defining the case-mix (CM), which is equal to the sum of the relative weights of all DRGs performed during a specific period of time. The average case weight, or the 'case mix index' (CMI), is calculated by dividing the CM by the total number of cases. The CMI is thus equal to the average DRG cost weight for a particular hospital. With this instrument, it is possible to compare the relative use of health care resources in different hospitals. In turn, the complexity-adjusted, hospital-specific average DRG cost per case – otherwise known as the hospital base rate – is calculated by dividing a hospital's total costs by the case mix.

Currently, the hospital base rate varies considerably among hospitals in Germany, which reflects historical differences in their negotiated rates. Hospital base rates currently range from less than €1000 to more than €4000. The individual hospital base rates will be gradually equalized to a state-wide base rate between 2005 and 2009. The main goal is that at the end of the four-year transition period, the same price will be paid for comparable hospital services in one state (Bundesland) – independent of the level of care, hospital structure, or other factors. In 2005 the individual base rates were calculated as a ratio between state-wide base rates (15%) and individual hospital base rates (85%). For 2005, the average base rate was €2785, where the negotiated state-wide base rate ranged from €2585 in Mecklenburg-Western Pomerania to €3000 in Berlin. The ratio will shift to 35:65 in 2006, to 55:45 in 2007, and to 75:25 in 2008. If implementation occurs on time, hospitals will calculate services based on the state-wide base rate (100:0) beginning 1st January 2009.

## Challenges

One of the main challenges of the German DRG-system is the low quality of cost data used to calculate the DRG cost weights. Cost weights for the 2005 version of the G-DRG system do not sufficiently reflect the actual costs incurred. At least for non-surgical cases, DRG cost weights strongly correlate with the length of stay. Therefore, differences between complex and less complex cases unrelated to the length of stay, for example, due to drugs, were not adequately reflected. The main reason for this is the infancy of cost accounting systems which do not allow hospitals to provide InEK with data calculated by means of ordinary step-down accounting.[5]

Another problem is that the sample of German hospitals participating in the data sharing programme does not reflect the reality of care provided in Germany. Comparisons among the participating hospitals indicate that medium-sized hospitals (with 301–600 beds) and, in particular, large hospitals (with over 600 beds) are over-represented while only a few small hospitals with less than 300 beds participate in the data sharing programme. One possible reason for this disparity is that smaller hospitals are less likely to have access to the personnel and technical resources required to undertake the data collection.

Finally, the fact that various exceptions and additional reimbursement components have considerably limited the scope of the G-DRG system also needs to be viewed in a critical light. It is certainly too early to search for evidence on increased productivity. While there definitely has been a decrease in the average length of stay (since 2003) by roughly 4% to 7.75 days in 2004, we should bear in mind that such decreases are also part of an historical trend - over the last ten years the average length of stay has been reduced by one third (from 12.7 days in 1994).[6]

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# DRGs in Finnish health care

Unto Häkkinen and Miika Linna

In Finland, 432 local governments (municipalities) decide the annual health care budget and the way resources are divided among different health sectors. Health care is financed by local taxes and state subsidies. These subsidies are non-earmarked, lump-sum grants calculated prospectively by using a needs-based capitation formula.

Specialist care is provided by 21 hospital districts, which are federations of geographically grouped municipalities. Each district has a central hospital and, in some districts, a smaller local hospital. Tertiary care is given in five university hospitals, which also act as central hospitals for their hospital district.

As purchasers, municipalities negotiate annually the provision of services with their hospital district. A hospital district's budget is based on these negotiations and is formally decided by a Council, whose members are appointed by each municipality. The actual prices (for municipalities) are based on the total budget and the predicted use of services. If the budget is exceeded, the municipalities must cover the deficit from their own revenues, usually by paying higher prices for services. In the case of a budgetary surplus, the prices paid by municipalities can be lowered. Thus, the major purpose of hospital pricing systems has been to cover the costs of production and to allocate hospital costs fairly between the municipalities financing the provision of services within a hospital district.

Hospitals enjoy a monopoly position, with only supplementary services bought from other districts. The health sector is also an important employer, and its employees generate income tax revenues for the 'host municipalities'. In the absence of nationally set regulations or even guidelines, hospital districts determine the pricing methods used, which may vary from district to district. Thus, the opportunities for municipalities to compare prices are very limited.

## DRG coverage

There has been a trend away from the bed-per-day price towards case-based prices, and presently most hospitals use some kind of case-based payment. In 2005, 9 out of 21 hospital districts and 15 out of 42 hospitals used diagnosis-related groups (DRGs). These nine hospital districts provided about 50% of all specialist services in the country. In these districts 43–75% of total payments are based on DRGs. Thus, about 30% of the expenditure on somatic specialist care in Finland is based on DRG payments. In addition, the Helsinki-Uusimaa hospital district has started to develop DRG-based pricing for outpatient and psychiatric care. Expensive patient groups such as premature newborns (requiring long spells in Intensive Care Units) are excluded from DRG pricing. Moreover, hospitals have made efforts to reduce their financial risk by actively developing various outlier rules for DRG pricing that determine when costly patients are not included. Where the predefined outlier limit (specified for each DRG group) is exceeded the patient is defined as a 'cost outlier' and the reimbursement is based on full costs.

## Calculating prices

The national version of Nordic DRGs (NordDRG) is used. Almost all hospitals have IT systems capable of providing cost-accounting/ billing data for intermediate outputs such as procedures, X-rays, laboratory tests, equipment and ward costs, although only a few hospitals routinely integrate these data into patient administration systems. Cost-accounting data at the patient level is regularly produced in only seven hospitals of the Helsinki-Uusimaa district, and the cost weights based on these data are employed in other districts using DRGs.

## Scope

The implementation of DRGs in Finland in many ways is different compared to its development in other countries. The initiative to use DRGs has not originated from central authorities (the Ministry of Social Affairs and Health) as in the United Kingdom's NHS or in Germany, Norway, and Portugal. The motivation behind using DRGs has a practical basis, namely to simplify the product definitions used in hospital management. Clearly, some unique features in DRG implementation have arisen as a result of individual hospital districts modifying their DRG pricing (and also in the maintenance and development of different grouping versions). These can be seen in

**Table 1: Key features of the DRG system in Finland**

| | |
|---|---|
| **Purpose** | **Fair allocation of hospital costs among (municipal) purchasers** |
| **Start date** | **Different according to hospital/hospital district; 3 out of 21 districts used DRGs in 2000, 7 in 2003 and 9 in 2005.** |
| **Coverage** | **Some plans for wider coverage but currently limited to somatic inpatient care in 15 public hospitals in 9 hospital districts (2005)** |
| **Tariff system** | **Uses local (hospital district) reference costs to produce cost per DRG spell** |
| **Regional adjustments** | **Yes** |
| **Critical care** | **Typically treated outside the DRG system (cost outliers)** |
| **Quality of care** | **Too early to expect evidence** |
| **Increased productivity** | **Not explored yet** |
| **Academic centres** | **Hospitals are reimbursed for teaching and research activities separately (not included in the DRGs)** |
| **Cream-skimming** | **Too early to expect evidence** |

the tendency to create local DRG definitions which usually result in the continuous splitting of the DRG-groups into smaller subgroups. Another example is the development of the so-called 'open-DRGs', where the splitting is based only on the number of bed-days used. It is also well recognized in the university hospitals that the costs of teaching and research activities cannot be fully covered by DRGs without adjustments. This limits the comparability and clear-cut use of nationally-set DRG prices.

## Implementation effects

There is some evidence that the coding of multiple procedures and secondary diagnoses have increased among the DRG users. However, in Finland 'DRG-creep' is not a major problem, since hospital budgets are not based on revenues calculated on the basis of DRGs. That is, the DRG system is used more commonly as a hospital management tool than as the means of billing municipal purchasers. Moreover, since hospitals are owned by municipalities, the possibilities for patient selection (cream skimming) are limited.

The measurement of outcomes or quality is not taken into account in hospital pricing. In Finland, outcome measurement has begun on a voluntary basis, initiated mostly by researchers. The incentives for quality measurement have been low, partly due to the fact that the opportunities available to patients to choose a service provider are restricted. It has been the general view that the high standard of education and training for doctors, nurses and other health personnel is an important means of guaranteeing the quality of services. In addition, national non-binding recommendations have been developed in the Finnish Office for Health Care Technologies (FinOHTA). Clinical guidelines have been developed on a voluntary basis by professional associations, and providers have been eager to demonstrate their quality through certifications given by private consulting firms.

The effect of DRG use on productivity has not been studied in Finland. However, according to some earlier studies on hospital productivity, it seems that changes in productivity are more closely associated with direct economic constraints (affecting municipalities) than with changes in payment methods.[1]

## Conclusion

It is possible that the introduction of a DRG-based pricing system could lead to several improvements in the management and provision of hospital services, such as greater transparency and more accurate cost information. So far, however, the development of the pricing system has occurred locally—at hospital district level—without any national guidelines. Enhancing wider coverage and the full benefits of DRG pricing will require a more active role on the part of the central government in developing the pricing rules. This is also important because private and non-profit—and even multinational—firms are entering the health care market. However, given the current structure of the health care system, the choice of pricing method is not the most crucial one to be made. Efforts should also be devoted to more important questions, such as the development of contracts between municipalities and hospitals, the management and control of care chains (total episodes of care), quality of services, and reducing the financial risk for small municipalities.

On the other hand, the DRGs have a significant role in various evaluations, development projects, research projects in health economics and health services, where the use of local or national health registers are needed. Since 1988, all inpatient care in the national discharge register has been grouped according to the DRGs. It has proved to be an important standard and a useful tool in measuring service production in hospitals.

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