HFMA West Midlands Branch - Research Sub-Committee

Home Thoughts From Abroad

International Comparisons Project

A study of the financial aspects of the prospective payment systems in three different health systems to learn lessons for the introduction of 'Payment by Results' in England.

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02

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03

Contents

04

Foreword

This study has been carried out by the research sub committee of the HFMA's West Midlands branch and is designed to contribute to the ongoing debate about the implementation of payment by results in the NHS in England. The views set out in this publication are those of the study group, which was chaired by Paul Taylor and assisted by staff at the University of Birmingham's Health Services Management Centre.

05

Executive Summary

The NHS is undergoing a radical change to the way hospitals are reimbursed for the patient care they undertake. A key rationale for the need for this change was that the English NHS was "lagging behind" the rest of the developed world in adopting a prospective payment system (PPS).

A review of 3 different health systems has revealed that the English reform is largely going way beyond the PPS in those countries and raises concerns about the risk of such a rapid and extensive application of Payment by Results (PbR) in England.

A number of suggested changes are made in order to better manage the risk:

- A more active **regulation** system be put into place - perhaps managed by the NHS Bank
- Move the **tariff setting** calculation away from the English average to one that reflects best clinical and operational practice, and provide the costing information that supports the tariff price that has been set
- Make the system **less risky** to both commissioners and providers by maintaining cost per case for elective care but introduce more cost and volume contracts based on capacity for emergency care
- Make a greater investment in **data quality** in both activity management and clinical coding, and in particular make better use of individual patient-based data in the calculation of the tariff.

06
Introduction

Definitions
It is probably wise at this point to give a definition of what the study group means by certain terms in this report:

Prospective Payment System or PPS. Prospective means fixed in advance, so we would generally use this term to describe a financial system when the income to be paid to providers of care can be ascertained before the treatment takes place. The term usually applies to a national or regional system where perhaps local differences in pay or prices are accounted for, but nothing else. Purchasers of healthcare can therefore predict what the cost of treating, say, a hip replacement will be by looking at the tariff structure. What differentiates a PPS system from other traditional reimbursement systems is that it generally does not take into account the specific cost structure of the actual provider of healthcare.

It should be noted that some high cost or "pass through" items do exist in PPS arrangements, but these are often the exception rather than the rule.

Healthcare Resource Groups (HRGs). These were developed by the NHS Executive Case-mix Office as a tool for categorising hospital treatments. Cases that are clinically similar, and use a similar amount of resource, are grouped to allow a more manageable way of describing and measuring the mix of cases treated within a hospital. HRGs are used to collate both elective and emergency admitted patient care services. They are the English equivalent of Diagnosis-related Groups (DRGs) which were originally developed in the USA in the 1960s and are now, in one form or another, used as the currency in PPS. HRGs are the English version of a case-mix costing or pricing system. That is to say, HRGs attempt to group similar procedures or treatments together so that there is a manageable number to enable a costing or pricing system to be used.

Relative Value Units (RVUs): A standardised weighting applied to services which reflects the amount of resource consumption to provide that service. A service assigned 2 RVUs consumes twice the resources as does a service assigned 1 RVU. RVUs in the English health system have been suggested as the means by which different HRGs can be added together by using a base price of £1,000 as 1 RVU. This was particularly helpful for comparative purpose when one wanted to exclude the effect of local cost variations.

07
Introduction

Market Forces Factor (MFF). This is a national calculation to assess the difference in labour and non pay costs between different areas of the country. It is used as a proxy for local price variations and it is intended in future for this "excess" element of a Trust's cost structure to be paid directly by the Department of Health - rather than through a local pricing structure. In this way, having removed the differential impact of local costs, a single tariff is possible for all health services covered by a PPS.

Reasons for undertaking the project

When introducing the concept of Payment by Results in documents in 2004, the Department of Health identified that the English health system lagged behind those of much of the developed world in using a PPS for its health services. It was suggested that this was leading to inefficiencies in the current system and did not properly incentivise either the purchasers or the providers of healthcare.

Many finance professionals in the NHS realised at that time that they knew little of the detail of alternative healthcare financing systems, and the Department of Health provided little additional information from its own research to assist in this respect. Consequently the HFMA Financial Management and Research Committee commissioned the West Midlands Branch to undertake some research to fill this gap and to see if there were any lessons to be learned from elsewhere. Given the number of different health systems throughout the world an initial literature search was undertaken to see which countries it would be helpful to look at to give a breadth of experience. Eventually the following health systems were chosen:

- **United States of America**
  The USA was chosen as the country with the longest history of a PPS and one where costing was perhaps the best developed
- **Victoria, Australia**
  A more recent implementer of a PPS - and one that it was understood had influenced the Department of Health to adopt its own system
- **Scandinavia**
  A public healthcare system exists in Sweden and Norway in particular which are most similar to the English system and they have been introducing a PPS during the 1990s.

08
Introduction

Scope of the project

The objective of the project was to learn about the financial aspects of the prospective based payment system, and particularly if there are any learning points from other health systems which would help the successful implementation of PbR in England.

Four work-stream areas were identified so a consistent approach to understanding each country's system could be taken. This was particularly important as it was recognised that each country's health provision arrangements were very different and sometimes difficult to assimilate.

The work-stream areas were:

- General understanding and contract management
- Non acute care including mental health
- Costing
- Calculation of the tariff.

The intention throughout was not to produce a financially based travelogue, but to learn lessons from elsewhere to assist our own implementation of the most radical shake up of NHS finances in three decades. The aspect of the project that was most difficult to ascertain without extensive foreign travel was the costing systems. This element has been largely excluded from this report although it remains a key concern for the study group. Similarly little conclusion was reached about non-acute care because very little evidence was found of PPS being used in areas other than hospital care.

Structure of the report

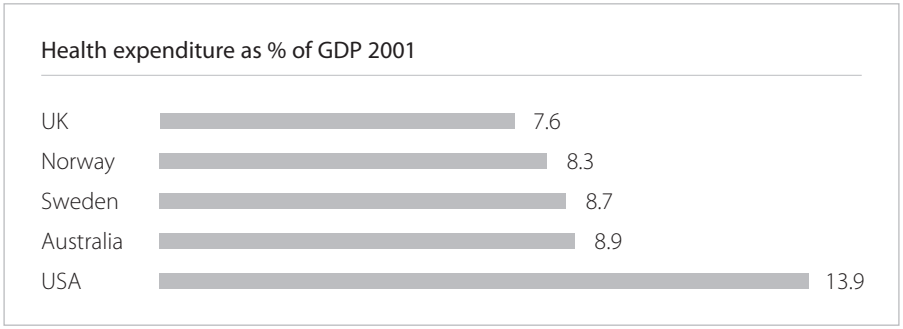
A concise commentary of each country's health system is undertaken on pages 10 to 18 following a common structure to replicate the work-streams. This is followed by a longer analytical analysis from page 19 of what this means in terms of lessons learned.

Comparing different health systems

Attachment 1 to this report sets out a short analysis that attempts to identify the key differences between the selected countries. The following points are worth highlighting here:

09
Introduction

- In all the systems the study group looked at, the role of primary care and secondary care clinicians is very different. This makes comparison and understanding difficult
- Frequently what we would consider to be day case treatment in England would be classified as outpatient or ambulatory care elsewhere. Non acute care varies even more with community services as we know them being very limited in many health systems
- The sizes and densities of the populations also have a significant impact on the delivery of healthcare. With a population of 50 million people, England is significantly larger than the populations of Norway, Sweden and Victoria (Australia). But the differences do not stop at geography. The graph below shows the relative levels of spending on health in each of the selected countries:



- Some of these health systems have a greater reliance on private health insurance than the current English health system.

These differences in the way the health service is delivered and financed make direct comparison of the health systems very problematic. The paragraphs hereafter have been guided by the differences and have concentrated only on those aspects of the systems which we have found interesting when compared to similar aspects of the introduction of PbR in England.

10
USA

General background

The United States of America has one of the largest populations in the world of 295 million people, and one of the most complex and expensive health systems. Healthcare is provided within a highly regulated entrepreneurial healthcare market rather than a comprehensive integrated system. The USA is considered by many to be the home of PPS, and so is probably a good place to start. The USA health system, though, is very different from the English being largely not free at the point of access. It is financed largely by employer based insurance arrangements and for some people, the State. Provision of health services is provided by a myriad of private and not for profit institutions.

Even so, 6% of GDP in 2001 was spent on publicly funded health care - only 1.6% behind the proportion spent in the UK on all healthcare. The majority of publicly funded healthcare is provided through 2 national public health programmes - Medicare and Medicaid - which have been set up to provide a safety net for certain underprivileged elements of American society.

Medicare is the federal health care insurance programme for people over age 65, the disabled, or those who have end-stage renal disease. It is funded by a federal tax on income that is paid partly by the employee, and partly by the employer. Medicaid is the programme for underprivileged patients who are poor and meet means test criteria. Medicaid programmes are administered by individual states, not the federal government. The federal government contributes federal funding and regulatory oversight. Most states pay hospitals using the Diagnostic Related Groups (DRG) system, although there are state-by-state variations.

Calculation and application of the tariff

In April 1983 it was decided in Congress to introduce a PPS for overnight stays in hospital covered by Medicare. Before this date hospitals issued invoices for the actual cost of providing care to each individual. The payments were made on the basis of DRGs that had been widely used before this point as a method of measuring relative hospital efficiency. During the first few years of PPS in the USA a mixture of old pricing according to the procedure carried out and fixed DRG pricing was used. Only fairly minor adjustments to the DRG pricing model were made in the early years because of the mixture of old and new pricing used.

11
USA

In 1988 a significant change to the model produced the 5th version of the DRG, which was introduced by the HCFA (Health Care Financing Administration) and applied to both Medicare and Medicaid. The HCFA is the body that oversaw the Medicare and Medicaid programme - it is now called the CMS - Centres for Medicare and Medicaid.

Further revisions have been made since that time by the New York state and then by the HCFA following work by Yale University. Today 19 American States use a hybrid DRG which simplified the previous classification systems. Under this classification the number of DRGs was brought down from 1,170 to 337. It also reduced the reliance on clinical complications and age in coding.

At the moment Medicare pays hospitals a prescriptive amount of money for the total hospitalisation costs of a patient after the patient is discharged under the DRG system. The associated amount of money for each DRG is determined by the CMS based upon average lengths of stay and average costs associated with the DRG. If there are exceptional costs associated with a specific patient's stay then the hospital is allowed under certain criteria to apply for additional funding.

Since the hospital receives a single amount of money for a given hospitalisation, a hospital is not financially rewarded for keeping patients for longer stays or for incurring higher costs. Hospitals report their charges and cost: charge ratios to CMS on a regular basis. An individual hospital may receive adjustments to its DRG fee structure based on the overall number of Medicare patients it cares for (disproportionate share adjustments).

In discussing this project with members of the American HFMA all confirmed that hospitals would contend that the DRG reimbursement was less than the cost of treating a patient in hospital.

The basic DRG cost is based on a basket of goods approach taken by the CMS. This was originally developed in 1988 and uplifted and updated incrementally since then.

Each year the price list is uplifted based on returns from hospitals and CMS's own analysis of costs and changes in the clinical practice. Practitioners would again contend that the annual

uplifts do not match the levels of cost inflation in hospitals. However, as Medicare and Medicaid funding is from the public purse the agreed increases are not so much a technical exercise in cost analysis, as a political exercise in affordability.

There is much less experience of using a PPS for ambulatory care. In the USA ambulatory care includes what we would call day case surgery - and a greater percentage of care would be undertaken as day cases in the US than in the UK. A PPS for ambulatory care has only been introduced in 2000 in most states. Most use a classification system called Ambulatory Payment Classification (APC) which is much simpler than the equivalent DRG classification system.

Use of PPS in non acute care

There has been no evidence found of PPS being used for non-acute care. Indeed, the development of Health Maintenance Organisations (HMOs) in the US shows a PPS system to be sub-optimal. The HMOs are associations whose members pay a membership fee against which they are offered a range of services. An HMO consists of an association of providers of healthcare services with an affiliated group of members, i.e. potential patients. Members of an HMO are affiliated to a certain group of doctors, a hospital and so on. For a fixed yearly fee/ premium members can expect their healthcare needs to be met regardless of price. In this way the incentive for budgetary control is passed to the providers of care. Studies have shown a 40% reduction in hospital costs within HMOs, although fears exist that HMOs are "taking the cream" by only allowing relatively well and relatively affluent members into their HMOs.

Elsewhere in the US there is little provision of community services outside of the HMO structure. Small pockets of provision of community nurses exist - for example, in each state there is provision for the poor and elderly only.

Similarly health provision for mental health is very limited and not provided under any PPS system.

Approach to risk management

Risk Management is approached in two ways in the US. Firstly for Medicare and Medicaid - essentially the State funded health system - a large and complex rules based

approach to PPS is managed by the CMS. The CMS reimburses according its own pricing structure and annually updates the tariff and the rules. It carries out audits on claiming hospitals looking at clinical, financial and coding issues.

Secondly, hospital services are provided by a myriad of profit and not for profit organisations. Any organisation that cannot pay its way, or find a sponsor to pay its way for it, will ultimately go out of business. It is difficult to be precise about the extent to which this happens but in the US, where the provision of healthcare is nearly twice the UK level, there is a history of hospitals either closing down or being taken over. US colleagues estimate that nearly a third of hospitals may have either closed or been taken over in the last five years. Over a similar time period there has been a growth in day case or treatment centres.

Recent changes in approach

The growth in health spending has slowed in the 1990s compared to the unprecedented growth in the 1970s and 1980s. This may be attributable in part to PPS but also to the growth in HMOs.

14
Australia

General background

There are three tiers of government in Australia - the Commonwealth (National Government level); six States and two Territory governments; and local government. For health purposes it is the Commonwealth that collects taxes and the States/Territories that administer and deliver most health services.

70% of the cost of health services in Australia is publicly funded, the balance coming mostly from private health insurance. 43% of the population have private health insurance, which is state subsidised. Inpatient care is provided mostly by public hospitals although the pattern of provision is variable throughout the country. Those with private insurance may be admitted to either public or private hospitals and may choose their specialist.

As each of the States/Territories provides healthcare and reimburses in a slightly different way, we chose the state of Victoria to review, as its version of PPS is particularly interesting. Victoria is situated in the south-eastern part of Australia and has 4.4 million inhabitants looked after in 10 hospital groups. Its capital is Melbourne.

Calculation and application of the tariff

Casemix systems have been used by Victoria since 1993, and have been changed several times since then. However, the system was originally based on the American DRGs adapted to form the Australian National DRG classification (AN-DRG). The PPS system was introduced as a way of making a 10%-15% budget cut over a three-year period.

In Victoria total hospital activity is paid through the WIES formula (short for Weighted Inlier Equivalent Separation). Essentially hospitals are paid based on WIES points in the same way as they could be on DRG points - but WIES has been developed further. Each DRG is allocated a prescribed number of WIES points each year, and each year the value of each WIES point is determined by the State. This is similar in approach to the RVU system anticipated in England.

The key issue is that the national amount of WIES points to be spent each year is agreed prospectively and a payment per point fixed. Hospitals are then reimbursed on essentially a cost and volume contract basis recognising the fixed element of their cost structures, and the variable cost for treating additional payments. The WIES formula is adjusted each year to

account for the total amount of resources available for healthcare and a view of the cost structure of the Trusts that will receive funding. In this way local circumstances and the total quantum of funding available can be matched. At the year-end adjusting payments are made to ensure that anyone treating more or fewer patients is appropriately reimbursed, but within the fixed budget that has been set. The threshold for additional or reduced payments is set at a 2% tolerance of the total contract value - which diminishes as you reach the 2% threshold. Additionally in order to qualify for an additional payment - which is effectively to bid for a share of any additional resources available - the hospitals must have met a number of quality standards. Moreover, there are severe financial penalties involved in missing certain standards.

The Australian system has set a high priority on developing a reimbursement system for ambulatory care recognising the need to treat more patients and not to give incentives for hospitalisation. Ceilings are therefore agreed with hospitals for the level of inpatient activity they can provide. In Victoria the Victorian Ambulatory Classification System (VACS) has been used and adapted since 1996. Outpatient treatment covers seven groups including the type of fixed and variable payments seen in the WIES system.

The cost weights within the WIES system have been informed by patient level data from a sample of hospitals. There is a standard chart of accounts in all the hospitals in Victoria and a high level of understanding of the costing data used.

Use of PPS in non-acute care

There was no evidence of non-acute services being funded by a PPS. Mental health services in Victoria for example are funded by the State on a per diem basis.

Primary care is provided by General Practitioners on a self-employed basis. The Medicare Benefits Schedule sets out a schedule fee for medical services that the Commonwealth Government will pay. GPs can either invoice patients or accept an 85% reimbursement from the national government. Primary healthcare by nurses and allied health professionals is largely financed through private health insurance.

Approach to risk management

The major risk management process in the hospital system is the cost and volume approach

of the WIES system. It offers a degree of certainty to both the funder and the provider of healthcare. While the majority of funding is provided via the State/ Territories, the income level is well understood in advance and not likely to vary significantly year-on-year. However, there are cost incentives within a relatively sophisticated and managed approach.

The State administration systems are large and manage the market actively reviewing data and undertaking audits. Each hospital in Victoria, for example, has to complete a complex costing return to the State which feeds a large database of costing information to inform the next year's WIES points calculation. The method of costing is detailed and pre-determined. Within each hospital there would be a high level of understanding of cost structures and which part of the operation was contributing the most financially.

Although the PPS system in Australia was set up to deliver a budget cut, many hospitals did not close as a consequence, although many built up very large deficits. Rural hospitals were quickly withdrawn from the PPS system for fear that their existence would be threatened, although a move towards inpatient care being delivered in cities is being adopted for clinical and financial reasons.

Recent changes in approach

Cost containment has become a recent pre-occupation with the Australian health system as the level of health investment has grown at almost the same rate as the growth in dissatisfaction with the health service. Increasingly the PPS of the States/Territories is being used in an attempt to force down costs rather than keep pace with the growth in activity.

17
Scandinavia

General background

Norway and Sweden both have well established PPS. The two systems illustrate the different policy objectives that have been used as the rationale for introducing PPS. In Norway the system was introduced to increase productivity, while in Sweden it was introduced as a means of controlling and reducing healthcare expenditure.

Both Norway and Sweden are relatively small in population terms (Norway has 4.5 million and Sweden 9.0 million), and so constitute fairly small health systems in their own rights. The Norwegian and Swedish healthcare systems are both run by county councils. In Norway central government has been funding counties partly on a PPS basis for healthcare since 1997 (as part of a block grant). At least 11 out of 19 counties fund hospitals on the same basis. In Sweden healthcare is largely financed through local taxation and counties have individually made decisions about how hospitals will be funded, although 50% of the counties use PPS. So in both countries, there is not a comprehensive usage of PPS.

In both countries the state has the role of regulating the healthcare system and DRG based cost weights are developed at a national level.

Calculation and application of the tariff

Both countries use a Scandinavian version of DRGs called NordDRG to classify inpatient activity. Cost weights are developed separately in the two countries.

In Norway DRG creep has been controlled by a limit of 1% on the increase in DRG points per patient (calculated by dividing total DRG points by total inpatients and called the DRG system value index). This has historically been the average level of increase so has not had a significant impact.

Sweden started with a locally derived national DRG system but quickly moved to adopt the Australian DRG system. Hospitals are now funded on the basis of a cost per Relative Value Unit (RVU) with a 50% marginal rate being applied to variations from the agreed plan. This is similar in approach to the Australian WIES system, but reimburses at a lower level for variations from the plan. It is similar in effect to the old English cost and volume system, but using national tariffs. Additional payments are made for excess bed days.

18
Scandinavia

The cost weights in the calculation of the DRGs and RVUs in both countries are based largely on patient level data from a sample of hospitals.

In Sweden the hospitals are funded on the basis of a rate per RVU which has been uniquely calculated for each individual hospital or group of hospitals which are jointly managed taking its own circumstances and cost structures into account. Caps and collars are individually negotiated for each hospital and marginal rates paid for variations.

In Norway and Sweden PPS is not used for ambulatory care and outpatient services and both are paid for on the basis of a list of fixed prices. In addition, patients pay a relatively small user charge for outpatient treatment. In Norway fees for outpatients and day case treatment have been calculated so that payment is greater or equivalent to the payment for similar inpatient treatments.

Both countries have reduced the coverage of PPS since implementation and are currently reviewing the place of quality payments within the system.

Use in non-acute care

PPS is not used outside acute care. In Sweden psychiatric, elderly and emergency care are funded through global "grants". Certain complex and specialised treatments ("regional specialties") are funded through a separate process to PPS.

Recent change in approach

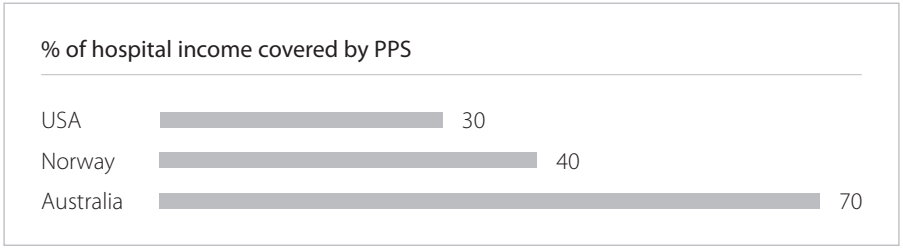
In Norway the percentage of state funding to counties linked to PPS has been amended over time with the proportion first increasing from 30% in 1997 to 60% in recent years but the proportion has recently been reduced to 40%.

In Sweden the county of Stockholm appears to be the main advocate of a PPS system and is trying to develop a more competitive approach to delivering healthcare. The only private hospital in Sweden is in Stockholm and central government is unlikely to allow any further privatisation.

19

Lessons to be Learned for the English System

Only general lessons can be drawn from the international experience due to the particularities of each health system. Most countries that have introduced PPS have limited its impact by applying it to some rather than all income paid to hospitals. As a result, the risks due to variations in activity and costing have been attenuated. In each country the ways in which this has been achieved vary (US via a plurality of purchasers, Australia, Sweden and Norway by limiting its impact to around 70% of acute hospital income, as well as capping spending and activity). The English policy aim of complete reliance on activity based financing, not only for acute hospitals but for most health services implies higher levels of risk than elsewhere.For example in the three health systems reviewed, the typical level of coverage of a PPS system in hospitals in 2004/05 is as follows:



In a typical English Foundation Trust in England in 2004/05 the equivalent percentage may be as high as 85%.

Payment by results (PbR) in England should not, though, be seen as a policy in and of itself, rather a component of a wider set of policies. In England, the close linking of Choice, Plurality and PbR is unique internationally. In other countries the PPS have largely been introduced as cost or funding control mechanisms. None of the countries reviewed introduced the system alongside wholesale changes in the way patients access hospital services, or while significant investments were being made in the health service.

Our conclusions and recommendations can be grouped under four themes:

- Regulation of the PbR market
- Setting the tariff

20

Lessons to be Learned for the English System

- Risk including cost and volume contracts and volatility
- Information technology and data capture/quality.

Regulation of the PbR market

The PbR system, as currently defined, is a complex one. The Department of Health decided to stall the inclusion of emergency and outpatient activity for the wider NHS in 2005/06, leaving only NHS foundation trusts to continue operating with the full system. However, for 2005/06 full implementation of PbR involves the following:

- Recording and charging of hospital spells at an HRG level for most elective and emergency care, but also the inclusion of additional "top up" payments for specialised services, children, and excess bed days
- Separate tariffs for elective and emergency activity, plus a distinction in pricing between emergency spells that last for less than two days
- The inclusion of most outpatient attendances at a specialty level, with a "top up" for children, although there is some inconsistency about the treatment of consultant responsible clinics
- The inclusion of coronary care but not critical care services
- The inclusion of 3 levels of attendance at A & E and minor injuries units
- The exclusion of rehabilitation costs although the cost of the rest of the spell that is not the rehabilitation phase remains in PbR
- Some NICE drugs are included and some are not
- Most high cost low volume procedures are excluded but not all.

Additionally, the level of historic deficits which are not covered by the tariff adds to the potential financial imbalance once the new system is implemented.

The concept of "gaming" or coding drift has been noted in the literature of all the countries reviewed. It would be surprising given the complexity of PbR if the opportunity to maximise a PCT or Trust position has not already been taken by finance directors and their staff. Testament to this would be the alleged £1.5 billion difference between the costs of PbR eligible health services before and after PbR for 2005/06 was costed. Not all of this difference is attributable to gaming as there are also inconsistencies between the reference cost data

on which the price list for 2005/06 was based, and uncertainties surrounding which aspects of healthcare are in or out of PbR. An example of the inconsistency issue would be Medical Assessment Units (classified as Admitted Patient Care under PbR) which were either not very prevalent in 2003/04 when the reference costs were done, or classified as a type of A&E attendance by some trusts. Moreover, some improvements in the quality of clinical coding can both improve the quality of patient care and the Trust's income as uncoded activity is not re-imbursed under the current English system.

Clearly such a complex system, which is open to interpretation and manipulation, requires a significant amount of market management. So far a small team at the Department of Health has been leading the process and making recommendations to Ministers on the application of PbR. Strategic Health Authorities have been assisting in the co-ordination of the data collection but they too have a vested interest in maximising the financial position of the constituents of their local health economy. The consultation paper issued by the Department of Health in 2005 on a Code of Conduct for PbR is a useful recognition that the current arrangements are not in themselves strong enough to manage the system effectively.

It is suggested that a significant sized regulation body is set up to manage the implementation of PbR in England. In the USA Medicare have a network of offices throughout the country (often sub-contracted to health insurance companies like Blue Cross) to manage their contracts. These regional offices undertake detailed financial, clinical and coding audits; assist in the process of setting the tariff structure; make year-on-year changes to the way the PPS system operates on the ground. In Norway the health system is small enough to be managed centrally by the federal and national governments. In Australia the PPS is carefully managed at the state level because of the more devolved nature of government in Australia. All of the 3 systems that the study group looked at have invested significantly in an active regulatory body to manage the market.

An organisation needs to be established quickly, in the way that Monitor has been set up for Foundation Trusts with authority and control over the system. Perhaps it would be sensible to extend the role of the NHS Bank to manage the payment of the Market Forces Factor; transitional support funding; arbitration on the application of the rules of PbR; close monitoring of the PbR market; and the setting of each year's tariff. The NHS Bank, at the moment, has significant resources at its disposal but little in the way of manpower, so

additional infrastructure would need to be added to make this proposal possible. An alternative would be the new SHA which will cover a wider geographical area. The disadvantage of using the SHAs would be the absence of a national approach. Perhaps even Monitor or the Audit Commission could undertake this task, although this role may prejudice their other responsibilities. The key issue is not who should undertake this role, but the acceptance that there is a significant national role here requiring a number of senior and technical staff to undertake the various activities. The current Department of Health PbR team cannot be expected to carry out all these roles. The other health systems that the study group reviewed have all recognised the need for this role and have invested accordingly in it.

Without a significant investment in market management and regulation early in 2005/06 PbR is in danger of destabilising the NHS through a "light touch" approach not seen in any of the other countries in this study. Whilst the proposal is not in keeping with the current requirement to save £250m in management costs, the absence of such a regulator could cost significantly more both politically and in management time.

Setting the tariff

Although setting and updating the tariff could be part of the regulation recommendation, it is of sufficient importance to be considered separately here.

The experience from other countries indicates that tariffs tend to move away from being based solely on average cost towards some system of relative values based on individual patient based data that then becomes a means of allocating planned healthcare funding to providers.

The rationale for this is that finance has to be targeted at other policy initiatives such as access and quality and cannot purely be allocated on the basis of activity times price. Setting limits on total spending is a necessity in all health systems - either privately or publicly funded. This requires a tariff that reflects relative apportionment of income based on activity or cost, rather than cost or activity alone. Such a methodology allows control of health spending and the distribution amongst the providers of care of the resources available. Such a calculation needs to be updated annually, which may involve changes in the relative weights.

23

Lessons to be Learned for the English System

While the first NHS tariffs have been based on cost, as collected from each hospital through the reference cost exercise, it is not clear that this is the best way to proceed in future.

An analysis of the reference costs from 1988 to 2004 by York University for 15 HRGs showed the very wide range of costs that trusts were reporting, and that the median position for each HRG was often very different from the mean. This implies that for many trusts a surplus or a deficit will be generated on many HRGs purely from continuing as things are.

The tariff based on reference costs alone reflects the full range of clinical practice - from efficient to poor - and reflects the current state of NHS capital where 40% of assets have been written down to zero as they are so old. Consequently the current tariffs are based on the average level of clinical practice, age and structure of health facilities, and over and underspending. The policy drive is to incentivise improvements in the quality and efficiency of clinical care - and in the quality of facilities that healthcare is provided in. The current PbR arrangements are not incentivising these changes sufficiently.

Moreover, concerns have been voiced within the NHS about the consistency between the 2003/04 reference costs and the tariff for 2005/06. There would appear to be a number of inconsistencies in the application of activity between the reference costs and the tariff - Medical Assessment Units, the costing of rehabilitative care and consultant responsible outpatient clinics to name just three. Furthermore, the short-stay emergency tariff has been calculated from the overall emergency tariff at a 40% average when clearly it will represent a different figure for each different HRG. The contention is that this method of calculating the tariff may not be the best one to use, and it may even be inconsistent with its source data.

In the USA the Medicare tariff was originally based on a basket of goods in the 1980s but this has been adjusted and adjusted to create incentives and disincentives ever since. In Australia the WIES system is based on patient-based costing information from the best hospitals in Australia. In Norway and Sweden they have adapted the Australian cost weights to reflect the individual cost structures of each hospital.

An alternative approach for England

An alternative approach in England would be to sample 30 or so trusts considered to be at the leading edge of medical practice and cost effectiveness to determine the costs of

undertaking certain procedures against agreed protocols. This would require a more detailed prescriptive costing methodology than reference costs which follows the clinical journey more carefully and apportions costs in a consistent way. This would have the added advantage of giving back to the service a cost template against which the cost of local service provision could be benchmarked. At the moment it is not possible to tell how the component parts of the price of a hip operation breaks down between the different cost groups or clinical processes.

This piece of work should not be underestimated in terms of its complexity and size. However, the study group believes that to proceed with the current system based on reference costs from two years ago is too risky.

The place of the Market Forces Factor in the tariff should also be reviewed. There are currently provisions in the English tariff to recognise variations in pay and other costs - and also for the additional costs of significant new capital schemes. It is anticipated that these allocations will be made directly to providers. Each of the countries reviewed by the study group did account in some way for variations in local prices. However, none of them made a provider based payment to alleviate the impact, and so in this respect the English system is unique. This is not to say the proposed English system is wrong - just different.

In England perhaps other differential cost factors also need to be recognised such as the historic allocation and distribution of health facilities. It appears to be too simplistic to suggest that a health economy needs to rationalise its capital stock when there are historic and demographic reasons for a cost ineffective pattern of health services to exist. Whilst not wishing to go as far as Sweden's unique cost per hospital RVU, perhaps a more considered approach to the additional building costs of health services in the new PPS could be taken. This could be more than a mathematical calculation of different labour and land costs as currently done in the Market Forces Factor. It could account more specifically for local variations and configurations of hospital facilities. A partial response to this has already been recognised by the Department of Health transitional funding for new capital schemes outlined in "NHS Bank Revenue Support For Capital Development From 2005/06", a DoH technical paper, produced in March 2005.

25

Lessons to be Learned for the English System

Risk

As noted above, there are a number of risks connected to the emerging English NHS PPS compared to the system in other countries. These are heightened by the major reliance of most hospitals on the NHS tariff as the source of revenue. In the US many hospitals have different revenue streams, not all tariff based. Moreover in the US there has been a high failure rate financially amongst hospitals. In Australia the WIES system agrees an activity and financial value for a contract in advance and then makes only limited additional or reduced payments based on activity and other quality standards. In Norway and Sweden the coverage of PPS has been reduced and hospital funding is based on a rate per RVU unique to each hospital, with individually negotiated caps and collars on activity and finance. The lack of caps on spending and activity, and the emphasis on cost per case contracting exaggerate this risk as they incentivise providers to treat patients, or at least count them better.

The English proposal to include so much of the health budget and the range of activity to be paid for using the PPS is without precedent in the countries the study group reviewed. The place of PbR amongst the key policy initiatives of Choice and Plurality presents a dilemma - the financial risk of PbR is exaggerated, yet something like PbR is needed in elective care to allow these policy initiatives to be implemented. It is suggested based on the evidence in the countries reviewed by the study group that PbR is not extended into emergency care in 2006/07 on a cost per case basis because to do so would place too much financial risk on the health system too quickly.

Moreover, in all of the other systems the use of RVUs and an allocation per RVU methodology has helped to control both costs and expectations. In such systems the total health resources available is divided by the total healthcare activity expected (expressed in Relative Value Units) and the plan is distributed amongst providers. Payments for variations compared to the plan are then made within explicit tolerances - often at rates below the full average cost. In the proposed English system there exists the possibility that the hospital sector could demand significant increases in income from PCTs if activity or counted activity rises sharply. In other countries this would not be possible to any large extent. The difficulty for the English system is that the Choice and Plurality agendas require a more variable cost per case PPS to be in operation. This would again suggest that elective care is subject to the existing PPS proposals but emergency care is paid for under a system that recognises the need for capacity more explicitly.

26

Lessons to be Learned for the English System

Proposed scope of PPS in England

The scope of PPS is also considerably greater in England than elsewhere. Day case and outpatient appointments elsewhere have only recently been added to the PPS regime (America) or are excluded (Scandinavia). In England we are attempting to introduce PPS for these patient care areas but also to A&E attendances and critical care in 2006/07.

It is clear that hospitals that cannot reduce their cost structure to fit within the national average will eventually go out of business. While superficially attractive from an economic viewpoint, this appears at odds with the Choice agenda that PbR is supporting. Do we really know enough about the relative cost structures of hospitals to determine that Trust A with 3 medium sized hospitals is less efficient than Trust B with one large hospital? History and local circumstances have probably determined the local pattern of service provision and they are very difficult to change locally. The previous Secretary of State for Health has accepted in public that there will be a failure regime for hospitals which patients choose not to go to - but what about those community hospitals much loved by the local community which economically are inefficient?

Equally difficult is a Trust's ability to save 3% per annum if it is currently high cost together with the 1.7% requirement in 2005/06 to meet the requirements of the Gershon report. A report by York University in 2003 indicated that most trusts had not been able to achieve a much smaller savings target over the past few years. It is difficult to see what is so different about the post PbR period that means trusts will be able to save significantly more than they have traditionally.

The counter-argument is that trusts will generate large surpluses from PbR. In 2005/06 a number of foundation trusts have received transitional support (or PbR gain) of over £20 million each. While this will be welcome to the trusts, it is money that their local PCTs will not benefit from to spend on services for local people. Where a Trust is already low cost, for whatever the reason, could the tariff be viewed as a maximum price so that local investment decisions could be made?

Given that PCTs hold the bulk of the capitation based purchasing budget, they seem the obvious candidates to manage the risks related to that activity and spending. However, they are currently small organisations in size and underdeveloped to be able to manage such

risks. Perhaps the latest PCT configuration proposals to reduce the number of PCTs by October 2006 will help here.

Therefore different risk management strategies over and above those used in other countries will be required by PCTs and trusts.

PPS supporting other agendas

It is recognised that the cost per case nature of PbR is partly based on the supporting place it plays in the Choice and Plurality agendas. It would be difficult to adopt a cost and volume contract arrangement under PbR while allowing Choice and the Independent Sector Treatment Centre (ISTC) programme for example to flourish. However, it is sensible to recognise the capacity that is required to meet patient care in the longer term. The ISTC programme has benefited from a contract structure which guaranteed 95% of the anticipated contract income whether or not the patients agree to be treated in their establishments. This promoted both good planning by the NHS but also a certainty of income that would have been a requirement of the ISTC's bankers.

As previously suggested an alternative proposal for PbR would be to separate the reimbursement systems for elective and emergency care. The existing system could be retained for elective care where the Choice agenda requires income to "follow patients". However, for most hospitals emergency care represents between 60%-70% of their NHS patient care income. In order to maintain some stability in this part of the system - which will continue to be provided by the NHS in the long term - perhaps either capacity or cost and volume contracts could be developed. These could either operate at a national tariff for variations from the agreed baseline, or could reflect the unique nature of local cost structures, possibly with availability payments linked to number of beds rather than patient numbers. This may give purchasers and providers a stake in the reconfiguration of hospital facilities where these would be more economically provided. Perhaps a hybrid of these proposals could be introduced where the fixed element of the contract is calculated on a high percentage of the fixed and semi-variable costs of providing emergency care for a population, whilst HRGs are retained to calculate the variable element. If realistic plans with tolerances were agreed at the start of the year both PCTs and trusts would be granted a measure of financial stability in this area. Planned changes in emergency care by developing community facilities and services could then be jointly agreed by all parties.

If this approach were adopted, a recognition of a care pathway or therapeutic approach to emergency care may be more possible in the medium term. In has been noted that for ambulance services, for example, the strict application of the diagnostic HRG approach rather than the therapeutic care approach may result in patients being taken immediately to A&E rather than being treated by paramedics or nurses, because of the way these services are reimbursed.

Information technology and data capture/quality

Any market oriented system demands high quality information - this is particularly true of the healthcare system. However, the diversity of services and patient groups makes this a particularly challenging issue. Most countries that have introduced PPS had some experience with information capture and quality assurance of that data, mainly due to some pre-existing level of purchaser-provider contracting. This is particularly so in the US but also to varying extents in Australia, Sweden and Norway.

Although the NHS is engaged in a major investment in information technology, the system is still relatively immature. Delays have already caused problems such as with e-booking, a key element of choice (as the National Audit Office Report in 2005 highlighted). Existing data systems are of insufficient quality to meet the purposes of payment by activity. This is particularly true for the Hospital Episodes Statistics (HES). Despite major improvements in recent years, the provision of this data on time and appropriately coded remains weak. Costing of HRGs, the currency of PbR, despite detailed guidance in the NHS Costing Manual, remains a mix of apportionment and "guesstimates". Outpatient data quality and casemix classifications remain weak and untested. And beyond acute hospitals, data is even poorer and casemix classifications generally absent.

Data requires analysis and audit. Most systems using PPS have developed both of these aspects. Analysis is important to identify emerging trends including 'gaming'. Audit is essential to ensure data quality is high and not being compromised. In the US several thousand clerks are devoted to checking bills. In Australia hospitals submit downloads from hospital computers and have random audits of notes. English policy is silent to date as to how these issues might be dealt with.

29

Conclusions and Recommendations

While the study group is broadly supportive of the aims of PbR it is concerned that the pace of change is too rapid and the risks of a largely cost per case system too great.

- The Scandinavian and Australian systems use much better patient based data than is currently available in England
- The speed of implementation in England significantly outstrips what has happened elsewhere
- The coverage of PPS in England is greater than elsewhere.

The timetable has already been revised several times - first by the exclusion of community and mental health services until after 2008, then later by the exclusion of emergency and outpatient services in 2005/06 for all organisations except foundation trusts. However, the timetable for the years 2005 to 2008 remains ambitious.

The study group's preference is for a number of changes to be made to the system for 2006/07 to allow for the risks to be managed more carefully.

These changes would include:

- Managing the implementation more closely through the establishment of a regulatory body in the same way that Monitor was created for foundation trusts
- Moving to an alternative PPS approach where emergency and elective activity are treated differently. Elective activity should continue to be paid for on a cost per case PPS. Consideration should be given to changing the payment for emergency activity to a more planned cost and volume basis with tolerances - where the fixed costs of providing emergency capacity are recognised within the payment structure
- A different way of calculating the tariff based on best practice and a consistent costing methodology rather than purely on the average of historic data updated for known changes.

30

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31

Source Material

Anonymous. Case-mix funding for acute hospital inpatient services in Australia. Medical Journal of Australia 169 Supplement:S17-S19, 1998.

Anonymous. Discussion of 'payment by results' in the NHS in England. In: Activity based funding for hospitals: English policy, international experience, Anonymous OHE, 2004.

K. M. Antioch and M. K. Walsh. The risk-adjusted vision beyond case-mix (DRG) funding in Australia: International lessons in high complexity and capitation. European Journal of Health Economics 5 (2):95-109, 2004.

J. Appleby, A. Harrison, and N Devlin. More choice in health care: is the price worth paying? London: King's Fund. 2005.

R. F Averill, M. H. A. Muldoon, J. C. Vertrees, and N. I. Goldfield. The evolution of case-mix measurement using DRGs. HIS report, 2005.

Danish Ministry of Health. Hospital funding and Case-mix. . Copenhagen: 1999.

D. Dawson and A. Street. Reference costs and the pursuit of efficiency in the then 'new' NHS. York: Centre for Health Economics. 2000.

Department of Health and Family Services. To case-mix in Australia - everything you need to know. 1996.

Deptartment of Health. Growing capacity. Independent Sector Diagnosis and Treatment Centre's. 2004.

F. Diderichsen. Market reforms in healthcare and sustainability of the welfare state: lessons from Sweden. Health Policy 32 (1):141-153, 1995.

A Dixon, J. Langenbrunner, and E. Mossialos. Facing the challenge of health care financing. A background paper for the USAID conference Washington DC, 2002.

32

Source Material

J Dixon. Payment by results-new financial flows in the NHS. British Medical Journal 328:969-970, 2004.

B. Dredge. Payment by results - changing financial flows. edited by J Sussex and A Street, London: OHE, 2004, p. 5-8.

S. Duckett. The Australian health care system, Melbourne: OUP, 2002.

R. B. Fetter. DRGs: their design and development, Michigan: Health Administration Press, 1991.

T. P. Hagen and O. M. Kaarboe. The Norwegian hospital reform of 2002: central government takes over ownership of public hospitals. 2004.

L. M. Kiviluoto. Management of an activity based funding system for hospitals- factors for success and challenges. Casemix 4 (1):11-13, 2002.

E. Kjerstadt. Prospective funding of general hospitals in Norway - incentives for higher production? Int.J Health Care Finance and Economics 3:231-251, 2003.

J. Orosz E Langenbrunner and JWiley M Kutzin. Purchasing and paying providers. In: Purchasing to improve health system performance, edited by J. Figueras, R. Robinson, and E. Jakubowski, Open University Press, 2004.

McGuire T.G. DRG based payment for hospital care: observations from the US experience. In: Activity based funding for hospitals: English policy, international experience, Anonymous London :OHE, 2004.

D Meltzer, J Chung, and A. Basu. Does competition under Medicare prospective payment selectively reduce expenditures on high cost patients? Rand Journal of Economics 33 (3):447-468, 2002.

J. Moss. Funding of South Australian hospitals. Australian Health Review 25 (1):156-171, 2002.

33

Source Material

J. Newhouse. Medicare. In: American Economic Policy in the 1990s, edited by J. A. Frankel and P. R. Orzag, MIT Press, 2002.

S. Nicholson and D Song. The incentive effects of the Medicare indirect education policy. Journal of Health Economics 20 (6):909-933, 2001.

L. B. Russell and C. L. Manning. The effects of prospective payments on Medicare expenditures. New England Journal of Medicine 16 (320(7)):439-444, 1989.

Sanderson H and J Raftery. Programme budgeting and case-mix. Health Benefit groups and healthcare resource groups. Case-mix 2 (4):142-150, 2000.

L Serden, R. Lindvist, and M Rosen. Have DRG based prospective payment systems influenced the number of secondary diagnoses in health care? Health Policy 5 (2):101-107, 2003.

Y Shen. The effect of financial pressure on the quality of care in hospitals. Journal of Health Economics 22 (2):243-269, 2003.

H Snaderson and L Moountney. The development of patient groupings for more effective management of healthcare. European Journal of Public Health 7:210-214, 1997.

N. Soderlund, I Czaba, A Gray, R. Milne, and J. Raftery. Impact of the NHS reforms on English hospital productivity: an analysis of the first three years. British Medical Journal 315:1126-1129, 1997.

A Street and K. Lowson. Do tariffs stack up? Health Service Journal:31, 2004.

A. Street and D. Dawson. Costing hospital activity: the experience with healthcare resource groups in England. European Journal of Health Economics 3 (1):3-9, 2002.

K Walshe. Suspended sentence. Health Service Journal:16-17, 2004.

M Wiley. Hospital financing reform and case-mix measurement: an international review. Health Care Financing Review 13 (4):119-133, 1992.

34

Source Material

M Wiley. Experience with DRG based hospital funding in Western Europe. In: Activity based funding for hospitals: English policy, international experience, Anonymous London:OHE, 2004,

National Audit Office- Patient Choice at the Point of GP Referral 2005

Attachment 1: Comparison of Health Systems

	English NHS	Sweden	Australia (Victoria)	USA
PPS Implemented	Gradual from 2003/04. Foundation Trusts full implementation from 2004/05.	1992	1993/4	1983
Population	50 million.	9 million.	4 million.	295 million.
Role of GPs and patient choice	GPs act as gatekeeper and refer patients to providers. Increased role in assisting patients in making informed choice between (ultimately) most providers.	GPs do not act as gatekeepers.	Patients can go to any GP or several GPs, and go direct to hospitals. GP only acts as gatekeeper for specialist care.	Some use of medical practitioners in health maintenance organisations (HMOs).
Funding	Mostly State funded through taxation. Free at the point of delivery. Some charging for primary care prescriptions and dental and optical services.	Local authorities fund healthcare (through local taxation - 66%), state grants (7-11%), compulsory national social insurance (21-25%) and charges (2%).	State acts as funder but there is a large insurance market. Around 40% of population have state subsidised private insurance, and around 30% of admissions are private.	Mostly funded privately through health insurance. About 30% of the provision funded from Medicare and Medicaid - federal and state funded schemes for the elderly and poor.
Original policy objectives	Plurality and Choice	Limit costs and increase output.	To introduce budget cuts (10-15%) over 3 years in a "rational" way.	Social policy for the old and needy.
Coverage of PPS	All acute providers - about 90% of the value of services provided including elective care; emergency care; A&E; outpatients and critical care in 2006/07.	About 50% of councils; rest use historic budgets.	Full coverage, although limited to major (not rural) hospitals	About 30% - coverage differential dependent upon catchment area and arrangements with HMOs. County Hospitals likely to have higher level of PPS funding.

Attachment 1: Comparison of Health Systems

	English NHS	Sweden	Australia (Victoria)	USA
Activity included	Foundation trusts (elective, non-elective, outpatients and A&E). Other providers limited to elective in 2005-06.	Admissions and outpatients but emergency, elderly and highly specialised services are often funded through capitation or global budgets. Mental health and community activity excluded.	All admissions and outpatients. Mental health and community activity excluded.	Prescribed in detail in the Medicare and Medicaid eligibility and entitlements.
Derivation of tariff	Average costs across all providers by HRG, uplifted by estimated cost increases.	Planned expenditure divided by planned activity (measured in DRG points e.g. a hip replacement would have more points than an arthroscopy) equals rate per DRG point. Rate per DRG point has moved from an average to being hospital specific.	Planned expenditure divided by planned activity (measured in DRG points e.g. a hip replacement would have more points than an arthroscopy) equals rate per DRG point. Called Weighted Inlier Equivalent Separations (WIES).	Each DRG priced centrally by CMS within budgetary constraints set by federal government and states. Additional payment for exceptional circumstances - e.g length of stay or extra costs.
Cost weights	Based on previous HRG development work, largely using length of stay as a proxy for cost. Next version of cost weights (HRG version 4) to be informed by cost data from a sample of hospitals with "good" data.	Informed by patient level data from a sample of hospitals.	Informed by patient level data from hospitals. Hospitals use a common chart of accounts that aids comparison.	Informed by detailed cost returns from hospitals.
Contracts	All activity and variances at full tariff. No limit on activity other than demand management by PCTs.	Planned activity agreed (and rate per DRG point). 50% marginal rate for under/over performance to capped level then no extra funding.	Planned activity agreed. Up to target hospitals receive full tariff. Above tariff a marginal rate of 50% applies. Beyond a cap there is no extra funding. Private admissions are not included in capped activity. Access to funding for over-performance is not automatic (called Additional Throughput Pool (ATP)) and is linked to waiting targets.	Cost per case for PPS.

Attachment 1: Comparison of Health Systems

	English NHS	Sweden	Australia	USA
Coding creep	No mechanism to limit.	Coding audit. Caps on over-performance.	Coding audit. Caps on over-performance.	Coding audit
Other		Move to introduce "quality" payments. State acts as regulator, setting cost weights etc. In the late 1990s numbers of purchaser and provider organisations reduced and greater cooperation was encouraged. In 1999 a Stockholm hospital was sold to a private health care company by the local council. The government has banned further transfers.	"Fines" for failure to treat "urgent" waiting list patients that significantly exceed tariffs. Bonuses for maintaining emergency access (avoiding A&E diversions). Small number of hospital groups (10).	

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