'Payment by Results' for National Health Service Hospitals in England – Managers' Experience and Expectations

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1. Introduction

A major element of the health care reforms instigated in England by the Labour Government since 1997 is a fundamental change in the way that National Health Service hospitals are paid for the NHS-funded activity they undertake. Although the policy has been named 'Payment by Results' (PbR), it would more accurately be called 'activity based funding'. Under PbR, English NHS hospitals are paid according to the number of cases they treat: so many pounds per admission or attendance. The payment does not depend on the results of that treatment, nor on its quality.[1]

By introducing activity based funding of hospitals, the NHS in England is following a path pioneered in the US by the Medicare system (publicly funded healthcare for seniors, mainly) started down this route in the 1980s. US Medicare pays hospitals for activity according to DRGs – diagnosis related groups – with different prices applying to cases in different DRGs. Many other countries health care systems have also adopted DRG-based approaches to funding their hospitals, including Australia and numerous European states (Sussex and Street, 2004).

The Department of Health has commissioned a national evaluation of the impact and implementation of PbR. We report here some of the initial findings of the qualitative strand of the research being undertaken as part of that evaluation.[2] Quantitative analyses will be reported elsewhere. The evaluation covers both short-term operational issues concerned with

[1] This contrasts with the approach taken to reforming payment of primary care providers. Under the new General Medical Services contract, introduced on 1st April 2004 throughout the UK, GP practices receive around 15-20% of their income according to how many 'Quality and Outcome Framework' points they score.

[2] The PbR national evaluation research team is led by the Health Economics Research Unit at the University of Aberdeen, with assistance from the Office of Health Economics and the University of Dundee. The authors would like to thank Martin Chalkley for helping to shape the work reported here.

practical implementation of the policy and longer term, economic, impacts. This paper focuses on the latter.

The structure of the paper is as follows. Section 2 sets out key features of PbR, how it is structured and how it is being implemented. Section 3 describes the method of the qualitative analysis reported here. Section 4 presents preliminary findings and Section 5 concludes with a discussion of issues arising.

2. 'Payment by Results': Activity Based Funding for English NHS Hospitals

The Department of Health first outlined its plans to introduce a new, activity based system of financing hospitals in 2002 (Department of Health, 2002). The system has been implemented in England in stages since then. For the purposes of this paper the focus is on the 2004/05 financial year. From the start of that year, PbR applied to all NHS-funded, acute, non-psychiatric, inpatient, outpatient and Accident and Emergency (A&E) department activity at the small number of hospitals that became NHS Foundation Trusts during that year. It also applied to the elective inpatient and day case activity of all other, non-Foundation, NHS Trusts providing. Table 1 summarises the current and intended future coverage of PbR.

Under PbR, hospital admissions – inpatient and day case – are classified into approximately 600 Healthcare Resource Groups (HRGs), which are the English equivalent of the various DRGs used in the US, Australia, Germany and elsewhere. The Department of Health sets the price for each admission, which varies from HRG to HRG and can differ between elective and emergency admissions within the same HRG. This price is non-negotiable. The PbR tariff currently sets prices for 550 of the HRGs. The price for an HRG is based on the average NHS cost of admissions in that HRG two years previously (the most recent year of reference cost data available at the time the tariff is set each year) uplifted for inflation, minus an assumed efficiency improvement. Thus the tariff applying in 2005/06 is based on average NHS costs in each HRG that were recorded in 2003/04. Adjustments may be made to prices by the Department of Health, and in a very few cases have already been, to allow for NICE guidance that has been published in the last two years and significantly affects cost per case within an HRG.

Outpatient and A&E attendances also have a fixed tariff. Outpatient attendances are classified in 39 specialties, rather than 550 HRGs, and according to whether they are first or follow-up attendances, with a lower tariff for the latter. A&E attendances are not disaggregated.

To reflect 'unavoidable' local variations in costs of inputs a 'Market Forces Factor' (MFF) is used to uplift prices paid to Trusts in all but the lowest cost part of the country (west Cornwall). Whereas the national tariff price is paid by PCTs to Trusts that provide care to their patients, the MFF amount is paid directly to Trusts by the Department of Health. The reason for the separate funding streams is so that PCTs do not try and move patient care between providers simply to take advantage of 'unavoidable' geographical cost differences.

PbR operates in the context of several other major reforms to the NHS in England, which are not the subject of the analysis described in this paper but which make it difficult to isolate the impact of PbR specifically. Prominent among these 'confounding' reforms are:

- the introduction and expansion of patient choice of provider of elective hospital care;
- the creation of 'foundation trusts' and support of independent sector provision of hospital services to NHS patients. Together these two reforms are referred to in policy circles with the euphemism 'plurality' of provision;
- practice based commissioning, i.e. giving all GP practices budgets from which to buy health care for their registered patients.

Within this context, numerous objectives have been attributed to PbR by the Department of Health, but in essence they are to:

1. stimulate provider efficiency;
2. stimulate Primary Care Trusts (PCTs) – and in future practice based commissioners too – to plan for and manage demand better;
3. enable patient choice, by rewarding hospitals that treat more patients and penalising those to which patients choose not to go.

A fourth major objective asserted by the Department of Health to be linked to PbR is improving the quality of hospital service provision. However, PbR involves paying hospitals

a fixed amount per case regardless of the quality or outcome of care, which means that improving quality can at best only be an indirect objective of the policy. The mechanism by which PbR is intended to improve quality is by stimulating quality-based competition between hospitals trying to increase revenue by attracting patients away from their rivals. Patients are assumed to be informed about, and sensitive to, differences in quality between hospitals. This is a crucial assumption. If patients have a low 'quality elasticity of demand' then PbR implies that hospitals have an incentive to reduce quality of care to save cost. The net effect on quality of these two opposing incentives remains to be seen.

The financial incentive PbR gives Trusts results from their being permitted to retain any financial surplus they make to reinvest in the Trust's NHS health care activities. As the PbR tariff approximates to a national average cost price, the marginal revenue to a Trust from seeing an extra patient generally exceeds the short-run marginal cost, up to the limits of the Trust's total capacity. Thus, within that capacity Trusts have an incentive to increase patient activity. Where significant further investment is required in staff and/or capital, the margin between tariff and (long run) marginal cost will be smaller or non-existent. But at least Trusts can make the capacity-increasing investment knowing that if the patient demand is there they will get paid (the national tariff price for) meeting it, which was not necessarily the case with pre-PbR block funding arrangements. Thus, a priori, it might be hypothesised that with PbR NHS hospital trusts have an incentive to increase activity, at least in the short run.

Hospital Trusts also have an incentive to reduce cost per unit of activity in order to increase they surplus they earn from the national tariff. If a Trust's costs are above national average levels (as adjusted by the MFF) then they will make a financial loss under PbR, which is something they are not statutorily permitted to do (over a three year period). Running persistent deficits is a sacking offence so, for Trust management at least, the incentives to reduce unit costs are clear. If a Trust's costs are below national average levels further unit cost reductions will free up resources which the Trust can use at its discretion. So there continues to be a cost-reducing incentive under PbR even for lower cost providers.

There is, however, more than one way of reducing unit costs: greater efficiency; increased volumes of activity (so spreading fixed costs more thinly); or skimping on service quality where this is unlikely to be detected or where the quality elasticity of patient demand is low.

3. Method

The national evaluation of PbR is planned to include three rounds of interview-based qualitative investigation. The aim of the first round of qualitative analysis, conducted in mid-2005 and reported below, was to elicit information from people responsible for implementing PbR within the NHS to identify the range of ways in which the policy is viewed and is being implemented in practice and the range of expectations about the impact of PbR. The purpose was not to interview a 'representative' sample and quantify the frequency with which different issues were raised. The objective was, instead, to interview a sufficiently wide range of experienced, knowledgeable people to be confident of picking up all major issues concerning the implementation and expected impact of PbR. We gathered information on the expectations of a group of people responsible for carrying the policy out in practice, and their self-reported experiences at early stages of implementation.

We sought interviews with managers at:

- four "first wave" NHS Foundation Trusts;
- four non-Foundation NHS Trusts;
- Primary Care Trusts (PCTs) commissioning services from those eight Trusts; and
- Strategic Health Authorities (SHAs) covering those PCTs and Trusts.

For the most part, in order to help keep the amount of (time intensive) interviewing within bounds while obtaining a fair geographical range of organisations, the non-Foundation trusts were selected to be within the same SHA areas as the Foundation Trusts to be interviewed. The managers interviewed were mostly senior and came from a range of disciplinary backgrounds: financial, medical and general management.

Foundation Trusts – Foundation Trust interview targets were selected to ensure coverage of issues raised by:

- specialised, tertiary, services as well as standard secondary specialties and services;
- trusts with a significant amount of health care income not covered by PbR;

- trusts with large sources of non-health care or non-NHS income from, for example research, teaching or private patients;
- areas containing many competitor trusts and those in areas with few;
- London.

Non-Foundation trusts – we selected non-Foundation acute hospital trusts to ensure coverage of the same issues as listed above. As an additional criterion we sought non-Foundation trusts which, taken as a group, demonstrated a range of costs as measured by their 2003 reference cost index score. The first wave of Foundation Trusts – i.e. those currently in existence – tend to have overall cost levels that are at or below national average levels, as higher cost trusts would be unlikely to meet the performance thresholds demanded of successful applicants for Foundation Trust status. PbR could have different consequences for a provider trust and the PCTs that purchase from it, according to whether the provider is high or low cost relative to national averages. Hence it was important to include above-national-average-cost providers in the non-Foundation trust sample.

At each of the four Foundation and four non-Foundation trusts we sought to interview both the Director of Finance and the Medical Director, or their nominees, implying a total of 16 interviews at trusts.

PCTs – for most of the provider trusts we approached the host PCTs for interview, i.e. the PCTs in whose geographical areas the headquarters of the provider trusts are located. We wrote to the chief executive and asked to be put in touch with the PCT's PbR lead. For trusts providing mainly tertiary specialist services, the host PCT is unlikely to be responsible for more than a small fraction of purchased activity. PCT views on the issues arising when purchasing from specialist trusts can, therefore, be just as well obtained by including these questions in the interviews at other PCTs. Therefore, we did not interview specifically the PCTs who happen geographically to host those of our target trusts that focus on tertiary specialties. Thus we attempted to obtain a total of six interviews at PCTs.

SHAs – we sought interviews at each of the five host SHAs, to pick up their perceptions of provider and purchaser issues arising in their regions. We wrote in each case to the chief

executive, asking to be put in touch with the SHA's PbR lead. Thus we attempted to obtain a total of five interviews at SHAs.

The total number of interviews sought in the first round was therefore 27. Letters requesting a confidential, face to face interview were sent to 27 individuals. These were followed up with telephone calls. Of the original 27 individuals connected, nine agreed to be interviewed themselves. Some suggested an alternative interviewee but others would not agree to an interview within the required timescale. Where this resulted in gaps in our coverage of professionals and organisational types, we made further requests by letter and follow-up telephone calls. The total number of interviewees was 19 from a target of 27 having approached a total of 44 people. Table 2 presents the sample of interviewees categorised by type of organisation and professional group. Two of the interviewees were seen together in one interview and one was conducted by telephone. Interview duration was between three quarters of an hour and an hour and a quarter.

A semi-structured interview schedule was developed around a series of questions relating to the implementation and early impact of PbR. The same core interview schedule was used for each group of stakeholders, to allow perceptions and key themes to be compared and contrasted. Interviewee-type-specific questions were then added to the core. Each schedule focused on the experiences of the interviewees and their organisations, seeking examples to illustrate the points made. One schedule was used for Finance Directors of NHS Trusts and Foundation Hospital Trusts. A second schedule was used for the Medical Directors of these organisations. A third schedule was used for the PCTs and a fourth for the SHAs. (Copies of the interview schedules are available from the authors.)

The development of the interview schedules was informed by the economics literature and by issues raised in professional journals, meetings and conferences. Draft interview schedules were piloted in February 2005 with managers of the range of types to be interviewed. Based on this feedback and experience, the instrument was adapted and streamlined for ease of use and several questions were added.

Interviews were undertaken in the period June-September 2005. Thus, at the time of interview the Foundation Trusts had a year or more of experience of operating PbR across the

full range of services, and non-Foundation trusts had a few months' experience of operating PbR across all elective admissions. In addition some trusts had been operating voluntarily on a 'shadow' PbR basis before they were obliged to do so.

All interviews were conducted by one or other of the authors, who maintained contact with one another throughout the project in order to ensure that similar techniques were used. Interviews were audiotape recorded and transcribed. All interviews but one were conducted face-to-face; the other was conducted by telephone. The data were analysed jointly by the two interviewers. The interview data were sorted by themes and key messages were identified within these themes. Where appropriate, differences between the respondents that may have been influenced by their role and geographical location were highlighted.

Qualitative research material provides a picture or representation of the field of study. The analysis develops this picture through putting together what is said by a range of individuals and where possible, placing an interpretative layer onto this. Sometimes a major insight is gained from a single sentence from one interviewee, which may bring to the fore much that has simply been alluded to by others. For this reason, we have resisted the temptation to quantify our data. Furthermore, not least because the nature of qualitative interviews means that often the researcher is obliged to tailor the questions to the time available and, therefore, the information contained in each interview may vary.

4. Preliminary Findings

Taken together, the 18 interviews in the first round of qualitative analysis provided a snapshot as at summer 2005 of the major operational issues raised and of the range of expectations held by NHS managers implementing PbR about its likely impact. The focus of this paper is on the expected impact of PbR. Reference to operational implementation issues will only be made where necessary to understand the expected impact.

The expected impact of PbR can be thought of under the following interlinked headings:

- volume and mix of hospital activity;
- cost and efficiency;

- competition;
- patient selection;
- quality of care;
- overview.

4.1 Volume and mix of activity

Volume

As a separate part of the national evaluation of PbR the research team will be undertaking quantitative analysis of activity data. However, as part of the initial qualitative analysis we asked interviewees their views on the impact of PbR on the volume of hospital activity locally. There was a variety of answers to the question whether PbR is increasing activity, as the designers of the policy intended, but no-one was sure that PbR was having such an impact.

Activity is generally increasing, but interviewees were reluctant to attribute this to the effect of the PbR policy. For example, a Foundation Trust respondent said that while activity was increasing they were not sure it was due to PbR. An interviewee at a non-Foundation trust noted that both emergency and elective activity are increasing although only the latter is currently covered by PbR for them. These findings are consistent with those of a study undertaken by the Audit Commission (2005).

A view expressed more than once, and at both Foundation and non-Foundation trusts, was that, as one medical director put it, the trust was operating at capacity already so there was no scope for increasing activity further in response to PbR.

A second reason – given not only by PCT managers as might be expected but also by some of their counterparts at hospital trusts – for a muted impact on activity, can be summed up as 'we are all in this together'. Trust managers did not see at as merely the PCT's problem to find the funding to pay for extra PbR-tariff activity. They recognised that if they caused or exacerbated financial problems for their local PCTs this could either rebound on them and their trusts through damage to previously good working relationships or by reduced funding for non-tariff activity; or could lead to other parts of the local health economy having their funding reduced to an extent that might not be in the best interests of the local population.

Several interviewees indicated that responsibility for the whole of the local health economy was, in their view, part of NHS culture, at least in their area of the country. For example, a Foundation Trust manager said they were not encouraging consultants to do more activity as the trust and local PCTs need to work through forward plans together. In another example, representatives from a PCT and a Foundation Trust in the same locality discussed a utilisation management tool which had recently been introduced locally, apparently successfully, to reduce avoidable admissions, even though the Foundation Trust was losing revenue as a result. A different Foundation Trust's medical director put it this way:

> "I think we are going to always want to be flexible in dealing with the PCTs so we're sensitive to their financial pressures and so, while we may have a contract with them that says they'll pay extra if we do extra work, I think there's always going to have to be some subtlety about that process that says that actually we have to take on board the needs of the PCTs because we do not want to alienate our PCTs."

A third reason that emerged for questioning the impact of PbR on volume of activity in the short term was the volatility of the tariff. Trust managers are unsure whether the price paid for activity X next year will be close to that paid for it this year. Volatility has been observed from year to year due to changes in the reference cost data upon which the tariff is based[3] and to recalculation of the MFF. The latter is seen, in some regions, at least as being particularly unpredictable from one year to the next. Where the future price is uncertain, managers are unwilling to make other than very short term adjustments to their hospital's activity.

Mix and care setting

The first issue being investigated under this heading is whether hospitals will be attracted to providing more of those services with the highest price-cost margins to the extent of cutting back on lower-margin activities (Chalkley, 2006). Such re-balancing of the portfolio of activity could increase the net revenue while keeping the hospital within overall resource constraints that might be imposed either by the sense of responsibility to the local health economy, referred to above, or by unavailability, at least in the short-term, of additional key

[3] More than one finance manager interviewed made the observation that previously they and their colleagues had not put much effort into the accuracy of their reference cost returns as they had not been used for anything. But now that they knew that reference costs would drive future tariffs they were being much more careful about their reference cost returns to the Department of Health.

types of labour or capital. Given the explicit budget constraint associated with this publicly funded system, such re-balancing to achieve the optimum net revenue generating portfolio might be more of a feature in the English activity-based funding system than in others where there is less of a constraint.

One PCT feared that one of the Foundation Trusts from which it commissions is working out the margins associated with different types of care and may act on that information in the future – though it does not appear to have done so yet. The responses from hospital trusts were more reserved with respect to such activity. One hospital trust interviewee said that they would not respond to such price cost-margins as PbR tariff prices are too volatile to rely on. There would be little point making disruptive changes within the hospital when tariff changes next year or the year after could nullify the financial benefit of doing so. Another hospital respondent said that they would not be reducing low margin work to do high margin, because their cost data are not reliable or sophisticated enough to base such decisions on.

Others, including medical directors, emphasised that the PbR tariff price did not seem to match the costs of what clinicians were actually doing: "No-one believes tariff is equal to true cost". This damages the credibility of the tariff in the eyes of clinicians and makes the tariff inappropriate to use as a basis for setting clinical budgets within hospitals. It also means that medical and other managers are unwilling to base resource allocation decisions within hospitals upon apparent differences in financial surpluses achievable with different kinds of activity. If they do not believe the differences are 'real' they will not use them to drive decisions which have real consequences for patients and staff.

The second kind of 'mix' issue concerns changing the care setting of activity to improve the quality of patient care, or efficiency, or both. Whatever the rationale for changing care setting, PbR may have an impact on the extent to which it happens. Under the PbR tariff the same price is paid for an elective admission within an HRG regardless of whether the patient is treated as an inpatient or a day case. This is to avoid perverse incentives to admit as inpatients rather than day cases (separate tariffs for a given HRG based on average costs would give a higher price for inpatient activity and arguably a greater absolute margin between price and marginal cost). However, some procedures and treatments delivered as day cases are also capable of being provided on an outpatient basis. Here the PbR tariff

introduces the potential for a perverse disincentive to change care setting from day case to outpatient attendance. The same treatment undertaken in outpatients will attract a lower price than if done as an admitted day case. Some interviewees viewed this potentially perverse incentive as a weakness in the tariff that needed to be overcome, while not identifying actual examples of it being done.

The PbR tariff provides a similar disincentive to release work from the hospital setting. This was seen by one Medical Director as "a retrograde step for chronic disease management".

Increased volume through service developments

A view expressed by both hospital trust and PCT interviewees was that PbR makes it easier to develop a new service because it is easier to present a business case as a result of the greater clarity about future revenue flows. One respondent was more confident about their trust expanding as a result of future known income streams. Some respondents, although in agreement with these views, emphasised that they would still only develop services with the PCT's agreement. From a PCT perspective it was noted that PbR also makes it easier for them to disinvest as they are able to capture full-cost savings when they do.

However, another PCT manager thought that PbR made service developments more difficult. A comment from a hospital trust manager was that the use of fixed price tariffs might mean not investing in a development that both the Trust and the PCT wanted, i.e. the PCT would be willing to pay the above-tariff cost of the service in order to get it, but is prevented by PbR rules from doing so. In this way the autonomy of local commissioners and providers was challenged by PbR.

Upcoding and validation

Even if actual hospital activity remains unchanged, measured activity may grow. This could be due to more comprehensive recording of activity now that it is paid for – ensuring that no work done gets dumped into unclassified, unpaid codes. It could also result from 'HRG creep/drift', where activity is shifted from lower priced to higher priced HRGs in hospitals' records as more diagnosis/procedure codes are recorded for each admission. An example of this kind of 'upcoding' is recording as 'with complications' a patient who previously by

default would have been labelled as 'without complications' simply because the complications had not been formally noted when there was no financial incentive to do so.

Generally, interview respondents expected the accuracy of coding to increase over time. This would increase recorded activity levels and casemix. One respondent thought that their coding had been rather "slapdash" in the past but that it was improving, made possible by increasing the number of coders, and they expected to increase income as a result. An SHA respondent said they had found no evidence of deliberate 'up-coding'. An early analysis of Hospital Episode Statistics for first wave Foundation Trusts by Rogers et al. (2005), comparing six months of 2004 activity data with the equivalent period in 2003, also found no evidence of PbR incentivising increases in the proportions of activity coded to (higher-priced) HRGs for cases with complicating conditions.

Most respondents said they did not 'game' on casemix giving reasons relating to NHS culture and mature relationships between Trusts and PCTs along the lines of 'we are in this together'. Two respondents gave other reasons why it was not possible for them to 'game'. The first was that coders are too busy to game on casemix and for a clinician to do so would be effectively falsifying notes, so it does not happen. The second was that trust management systems are not good enough to enable gaming.

The amount of effort expended by PCTs on trying to validate the activity they were being expected to pay for, was variable. An interviewee from a hospital trust said that their PCT does not validate their coding, but one PCT interviewee described how they are paying GP practices to validate all activity before the hospital is paid.

4.2 Cost and efficiency

Perhaps surprisingly, there were few substantive comments by interviewees about whether and how PbR might have an effect on the efficiency of current activities. The general view is that existing pressures for efficiency are already great. In an environment of cash limits, growing demand and full capacity, one respondent thought that there are already strong incentives to be efficient, regardless of PbR. Similarly, a second interviewee considered that their trust was already operating efficiently and that PbR exerted no incentive beyond those

that already existed. In this context it is relevant to recall Jacobs and Dawson's findings that efficiency improvements in NHS hospital trusts are unrelated to the published specific efficiency ('cost improvement') targets they are set (Jacobs and Dawson, 2003).

Where cost reduction and/or improved quality of care would require a variation to the prevailing patient pathway, PbR and its associated tariff can represent a barrier, rather than an incentive, to efficiency. An example might be reducing long stays by some patients in high-cost acute hospitals by transferring them for the latter part of their inpatient care to a lower-cost intermediate care facility. With current PbR arrangements this may not happen if the latter facility is run by a trust other than that which runs the acute hospital. The step-down facility is currently dependent on the acute hospital passing on some of its PbR payment, which it cannot be forced to do. One solution would be for the PbR tariff to be formally 'unbundled' with separate payments for the different stages of care.

4.3 Competition

A number of issues were raised in the interviews with respect to the impact of PbR on competition between secondary care providers. Overall, respondents did not observe a more competitive environment developing as a consequence of PbR, but some recognised the possibility of this happening in future. One respondent thought that PbR policy would have no effect on competition. Others thought there was little scope for competition in their local health economy anyway. Another response was that while trusts were protective of their current services and would fight to hold onto them, there was limited competition to expand into new areas. In general, the interviews revealed a much greater emphasis on cooperation within local health economies rather than competition.

Various reasons were given to support these statements. One respondent considered that demand for services is growing so fast that there is no need to compete with other providers. In other words there is no spare capacity with which to compete against rivals. This was particularly important where increasing the size of the patient base would damage the trust's ability to meet other targets such as waiting times. In the words of another interviewee:

> "we have not aggressively marketed ourselves as a provider because there are very few specialties where we've got that comfort zone, where we've got the capacity".

Competition is also constrained by the geographical location of hospitals: large distances, and poor public transport, discourage a competitive environment. However, geography was not the full story, as even the London-based interviewees were not expecting much competition between trusts, not even between Foundation Trusts.

Concerns were expressed with respect to the activities of the independent health care sector. Trusts feel vulnerable to private providers 'cherry picking' the low cost end of the caseload within HRGs. However, respondents did not have evidence of such activities. In response to this perceived threat, and as part of their monitoring role, an SHA manager highlighted the issue of whether PCTs are allowed to purchase care from independent providers that offer prices below tariff (they are, indeed, encouraged to do so) and, if so, could an NHS provider enter into price based competition in response (at present they may not)?

4.4 Patient selection

A mixed response was elicited with respect to whether Trusts would focus on the low cost patients and avoid the more complex patients within an HRG, who can be expected to entail costs greater than the tariff price. One respondent thought such behaviour would not happen, as it would be considered 'counter-cultural' in the NHS:

> "…. it's difficult to envisage that the whole NHS would go through a rapid cultural change whereby they could persuade all the important clinicians to do things on the basis of what was a market leader and what wasn't. I just can't see us doing it."

Another said their hospital trust would not stop providing a loss-making service. Instead they would discuss with the commissioner(s) about how to resolve the issue. This is another side of the 'we are all in this together' culture already mentioned. However, the same respondent said that if an issue such as how to fund complex revisions was reviewed, the hospital trust might decide to stop doing them with the result that patients of these kinds would have to go to a tertiary referral centre some distance away.

A PCT representative said that although trusts were threatening to select easier patients and reject the more costly ones within HRGs, there was no evidence that this was happening.

4.5 Quality of care

Interviewees' expectations about the effect of PbR on service quality were quite varied, ranging from no impact to fear of negative impact. No respondent expected that, by stimulating quality based competition or for any other reason, PbR would cause an improvement in quality. In the words of one:

> "I don't really link PbR with quality improvements at all. I think most clinicians I would rely on to do the best they can for their patients to the best of their ability and I don't really think the financial system is going to change the way they think about that."

Moving towards the negative end of the range of views expressed, another respondent thought that quality improvements may slow or even stop with the introduction of PbR, if they are not affordable within the tariff. Similarly, another interviewee stated that because PbR is based on average costs it will produce "average quality services". An SHA manager felt that PbR may lead to premature discharge of patients and a trust medical director worried that: "The trouble with Payment by Results is that it has a great potential for bad behaviour".

No interviewee considered that PbR was yet stimulating Trusts to compete on quality.

4.6 Overview of PbR

The dominant impression provided by the 19 interviewees' taken together, is of NHS bodies working in a largely co-operative way to resolve issues. Many of the interviewees, from all types of organisations, expressed good relations between the NHS organisations in a geographical locality, especially between trusts and PCTs. They spoke of mature and responsible relationships. Indeed, one trust and its main PCT 'customers' have signed a 'memorandum of understanding' not to game and to keep the various interested parties

informed. Bankruptcy of any party was seen as something to be avoided for the benefit of the local health economy.

More than one respondent thought that the introduction of PbR had simplified the relationship between trusts and PCTs, reducing the amount of negotiation required. An SHA manager thought that PbR would increase the pressure on PCT-Trust relations.

When asked their personal views on the desirability or otherwise of the PbR policy having been introduced, none of the interviewees expressed opposition to the policy and no one we interviewed wanted to halt the introduction of the policy. Some interviewees were resigned to it and had little enthusiasm. Some viewed PbR as just another in a continuous stream of new policies and changes to the NHS to which they would have to adjust.

More positively, PbR was viewed by a number of respondents as being good in principle. They were attracted to a policy that rewarded trusts for what they did. However, most of these comments were made with the proviso that, although in principle the policy was to be welcomed, there are many problems with the details and practicalities.

5. Discussion

The findings reported here are preliminary in two senses: they are emerging from initial analysis which will be refined and supplemented over coming months; and they represent the views of respondents who are at an early stage of experience of the impact of PbR. It should also be noted that many of the interviewees were responsible for the implementation of PbR locally and so are unlikely to be its greatest critics. They were, however, familiar with what they viewed as its negative as well as its positive aspects.

Part of the discussion with interviewees concerned operational matters, which are not reported here. Many issues with interesting economic aspects were raised; too many to cover within the space constraints of this paper, but we would like to highlight a selection of them.

The first concerns non-linear pricing. Some interviewees considered it a problem that every incremental or decremental unit of activity had to be priced at the full tariff level

(approximately equal to average cost). They would prefer a non-linear tariff, e.g. a capacity payment plus an activity related element, or a payment for a base amount of activity with lower than current tariff prices for additional activity beyond that. This would reduce the degree of financial risk to both PCT and provider. It would also provide more allocatively efficient price signals to providers, avoiding inefficient incentives to put more staff and other resources into an activity just because the gap between marginal costs and national average costs (i.e. the tariff price) happens to be greatest there. Non-linear pricing could also reflect the joint costs of providing capacity to meet emergency and non-emergency demand; pricing capacity separately from utilisation could reflect the 'option demand' for hospital capacity to be available in case it is needed as well as the demand to use its services.

A second issue concerns quality incentives. On the whole, interviewees did not expect quality improvements were to result from PbR. This might be partly explained by NHS managers' current preoccupation with the impact of the tariff on their revenue flows and the imperative to record cost and activity better. Perhaps a more mature market using tariff-based funding will begin to look at the opportunities for increasing quality of care and thus increase customer base. However, it would be interesting to consider whether direct incentivisation of high quality care and outcomes, in the manner of the 'quality and outcomes framework' for GP practices (Department of Health, 2003), could be included in the tariff.

Where good practice requires the adoption of a cost-effective new health care technology such as a new device or medicine, a tariff based on average NHS costs across England two years ago is unhelpful. Where best practice is cost increasing, the PbR tariff disincentivises its adoption. Unbundling the tariff could help overcome this problem. For instance, if high cost devices and medicines were routinely excluded from the tariff and were instead an add-on, then that would allow advancements in the quality of treatment without the restrictions of the tariff. A few devices and medicines have indeed already been excluded in this way. An alternative way forward might be to set prices based on the costs of good practice, rather than average practice two years ago, in combination with measures to incentivise and audit that good practice is implemented.

Trusts have difficulty comparing costs with revenues. It is easy for trusts to make the calculation that their net revenue will increase if they switch patients from inpatient to day

case care: the revenue remains the same and the costs of providing care on a day case basis are certainly lower than for an overnight stay. But the effect on net revenue of a switch from day case to outpatient care is less clear-cut. Revenue will fall (for a given volume), but a more sophisticated knowledge of what will happen to costs and thus to the relative margins (between the outpatient tariff and outpatient costs and between day case tariff and day case costs) is needed than commonly exists. In market economics a firm that does not know its costs and as a result misjudges its activities is assumed to deserve to go out of business. But when fuzzy knowledge of the costs of individual activities is commonplace among its providers, a PCT cannot be so sanguine about losing a significant provider of hospital services.

Overall, the interviewees described a subdued response to the incentives of PbR, both intended and unintended. This is to be expected as key stakeholders take time to become familiar with the complex system, their own cost structures and the effect on these of responding to the incentives. An interesting question is how much greater impact, if any, the incentives may produce in the longer term.

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Table 1: Coverage of 'Payment by Results'

2ary Care	2004/05		2005/06		2006/07	
	Foundation Trusts	Other Trusts	Foundation Trusts	Other Trusts	Foundation Trusts	Other Trusts
Elective admissions	✓	(See note) ✖	✓	✓	✓	✓
Emergency admissions	✓	✖	✓	✖	✓	✓
Outpatient attendances	✓	✖	✓	✖	✓	✓
A&E attendances	✓	✖	✓	✖	✓	✓
Mental health/ learning disability	✖	✖	✖	✖	Not in 2006/07 but maybe eventually	
Community health	✖	✖	✖	✖		
Ambulance	✖	✖	✖	✖		

Note: Non-Foundation Trusts in 2004/05 had increments and decrements of elective admissions for 33 HRGs relative to (i.e. marginal variations from) contracted levels reimbursed at PbR tariff levels, but this affected only a very small part of their total revenues. Apart from that the PbR tariff applied only to Foundation Trusts in 2004/05.

Table 2: Interview sample by organisation type and professional group

Number of Interviewees (Approaches)	Professional Group				
Organisation Type:	**Chief executive**	**Finance director**	**Medical director**	**Other**	**Total**
London Foundation Trust		1 (2)	0 (1)	1 (1)	2 (4)
Non-London Foundation Trust		1 (3)	1 (3)	1 (1)	3 (7)
London non-Foundation Trust		1 (1)	0 (1)		1 (2)
Non-London non-Foundation Trust		2 (5)	1 (2)	0 (1)	3 (8)
London Specialist hospital trust					0 (0)
Non-London specialist hospital trust		0 (2)	0 (2)		0 (4)
London PCT	1 (2)	1 (1)			2 (3)
Non-London PCT	1 (4)	2 (2)		1 (1)	4 (7)
London SHA	1* (2)	1*			2 (2)
Non-London SHA	1 (3)	0 (3)		1 (1)	2 (7)
Total	***4 (11)***	***8 (19)***	***2 (9)***	***4 (5)***	***19 (44)***
Grand total (target total)					***19 (27)***

* Seen together in one interview