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This paper is work in progress

Examining alternatives for the remuneration of community pharmacy.

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Abstract

The remuneration of community pharmacy has changed little since 1948, and has not kept up with the many other reforms to service delivery in the NHS. The recently published policy document, 'The Right Medicine: a strategy for pharmaceutical care in Scotland' describes new roles for community pharmacy and indicates that there will be a new remuneration system to support these. The paper will summarise the nature of the current remuneration system; summarise current theoretical and empirical knowledge of the effects of different remuneration systems, and; describe the main elements of a study being conducted in Scotland that is examining alternatives to the current remuneration system. The study is i) examining the 'Right Medicine' to identify the key aspects which will affect community pharmacy, ii) estimating the likely costs of implementing these new services, and iii) considering alternative remuneration systems that will help deliver these new services. The paper will conclude with some tentative options for a new remuneration system.

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Introduction

By the end of 2004, the remuneration systems for all NHS staff will have changed. This represents a major policy intervention that will have long-term consequences on behaviour, on the quality of clinical care, on costs, and on recruitment and retention. To ensure that the major increases in NHS expenditure have an impact on productivity, it is important to ensure that these new remuneration systems, to which the majority of this expenditure will be devoted, help deliver these increases in productivity.

Community pharmacy has the potential to play an increasingly important role in NHS service delivery. Changes in the roles and responsibilities of community pharmacists in the NHS are now underway. Policy documents within the UK have set out an ambitious programme of reform including fundamental changes to the way community pharmacies work (Scottish Executive Health Department, 2002; Department of Health, 2000). In Scotland, the 'Right Medicine' includes 59 'actions', each of which sets out new roles for pharmacists. This is to be accompanied by a new remuneration system for community pharmacy that has yet to be negotiated.

There have been a number of reasons for reform. These include changes in the role of community pharmacists. The traditional scientific role of the apothecary, who were more concerned with the composition and make up of pharmaceuticals is now outdated given improvements in the manufacturing of pharmaceuticals. More recently, community pharmacy's main role has been to dispense drugs at the behest of General Practitioners, and this is the basis of the current remuneration system.

However, new roles for community pharmacists emphasise their place as a key primary care provider with specialist knowledge of the effectiveness of pharmaceuticals. As a primary care provider, it is argued that their roles should include first point of contact for minor ailments, health promotion advice and counselling. As specialists in the effectiveness of pharmaceuticals, it is argued that community pharmacists are better placed than GPs to advise patients (and GPs) on prescribing the most cost-effective drugs through chronic disease management, medication review, and repeat prescribing. Community pharmacists are therefore

seen as a key element in both managing demand in primary care, and promoting more cost-effective prescribing that may help slow the growth of NHS expenditure on pharmaceuticals.

This has created an increase in demand for community pharmacists from the NHS, and new roles are emerging, as evidenced by the many pilot schemes and evaluations that aim to extend these roles (Bond et al., 2003). However, as with many parts of the NHS, it is difficult to reflect this increased demand through higher prices (remuneration) since remuneration is centrally determined and based mostly on fee-per-item dispensed. Some funding has been devolved to local NHS organisations (through model schemes and funding attached to the Right Medicine) to help encourage these new roles. However, this funding is short term and varies geographically, and so may not encourage the long run increase in supply that is required. If the remuneration system does not change, there is a risk that community pharmacy will become overworked, leading to low morale and recruitment and retention problems (Hassell et al., 2002).

The aim of this paper is to examine the options for a new remuneration system for community pharmacy. The paper will summarise the nature of the current remuneration system; summarise current theoretical and empirical knowledge of the effects of different remuneration systems, and; describe the main elements of a study being conducted in Scotland that is examining alternatives to the current remuneration system. The paper will conclude with some tentative options for a new remuneration system.

The current remuneration system.

The current remuneration system focuses on the remuneration of dispensing activity through a fee-per-item (Forbes and Bond, 2001). Table 1 shows the pattern of NHS payments to community pharmacies in Scotland in 2002. Ninety per cent of payment is for reimbursement of the full costs of prescription drugs, less a national estimate of the discounts that pharmacists can negotiate with wholesalers. There are incentives here for pharmacists to negotiate larger discounts with wholesalers than is estimated at national level, although there are no data on these discounts or on the surplus made by individual pharmacies. Other reimbursements for costs include those for oxygen

equipment and stock orders (e.g. flu vaccine ordered by GPs for practice based administration).

The dispensing fee has historically been the main source of remuneration (currently 95.2p for each item). The professional allowance was introduced in 1992 and covers the setting aside of areas for the display of health education materials, to provide advice and counselling, participate in audit, and to keep patient records. The allowance depends on the number of items dispensed per month. This was the first time a payment was introduced to cover non-dispensing activities. There are also payments to help support pharmacies in rural and remote areas that help ensure access (Essential Small Pharmacies Scheme). There are no separate national payments for the new roles and responsibilities that are being encouraged in community pharmacy.

Table 1. Payments to 1210 community pharmacy contractors in Scotland, 2002 (£000s)[A]

	Total	Per cent of Gross Total	Mean per contractor	Min	Max	s.d.
1. Total Number of Items dispensed	66,023,475	-	54,565	18.00	219410	32773
2. Total cost of items minus estimated discount (Total Net Ingredient Cost)	714,390	86.7%	590.40	.46	2318	350
3. Total Oxygen Therapy equipment	2,801	0.03%	2.31	.00	124	6
4. Total stock orders	14,020	1.7%	11.59	.00	226	19
5. Total Dispensing Fees	73,486	8.9%	60.73	.02	242	35
6. Professional Allowance	20,305	2.5%	16.78	.00	19	4
7. Gross Total	824,239	-	681.19	.48	2598	391
8. Total Patient Charges[B]	38,348	4.7%	31.69	.00	175	24
9. Total Revenue from NHS (7-8)	785,890	-	649.50	.48	2499	374
10. Total Income from NHS (9 – (2+3+4)	54,680	6.6%	45.19	-70.42	261	30

Source: Information and Statistics Division, NHS Scotland.

Notes: A = excluding 30 contractors with zero items dispensed.

B = collected by community pharmacists and passed on to NHS.

Remuneration from dispensing fees, the professional allowance, and other fees is from the 'Global Sum' that is set each year in advance through negotiation between the government and pharmacy negotiating bodies.[1] There is a negotiated uplift each year, but the sum is fixed in the sense that over or under payments (for example if volumes rise) are taken into account when setting the next year's payment. Some locally negotiated fees are also taken from the Global Sum. These include oxygen services, out of hours services, rota payments to ensure access to a pharmacy outside of normal working hours, waste disposal, services to residential homes, and needle exchange and methadone services.

Community pharmacies are independent contractors to the NHS and so can earn income from other sources. The data in Table 1 do not include income from retail sales of over the counter (OTC) products, pharmacy only medicines (POMs) and other retail items (e.g. toiletries). Funding for new and expanded roles are also available locally. For example, pharmacists are being employed by Primary Care Trusts to provide advice to Local Health Care Co-operatives of GPs, and funding for implementing the Right Medicine is also available outwith the Global Sum.

Designing remuneration systems: theory

As a starting point it is instructive to highlight some theoretical issues in the design of payment systems. Principal-agent theory can be used to help structure the nature of the problem. This is where a principal (a third-party payer and patient) relies on an agent (the community pharmacist) to provide a good or service because of asymmetry of information. The agent has information (in our case about pharmaceuticals, including their composition, effectiveness, side effects, and contraindications) that the principal does not. The task of the principal is to provide incentives so that the agent helps to maximise the principal's objectives, subject to the remuneration the agent can obtain in alternative activities (the participation constraint). These models differ in the extent to which the agent's effort and output are observable. Applying this theory

[1] Pharmaceutical Services Negotiating Committee (PSNC) in England and Wales and Scottish Pharmaceutical General Council (SPGC) in Scotland.

to community pharmacy highlights a number of key issues that ought to be considered in designing a remuneration system.

The nature of output. In health care, we know that the nature of output is multidimensional and complex. At an aggregate level, the objectives of efficiency and equity are often quoted, but rarely quantified. What behaviours should a new remuneration system be trying to encourage? A key issue for community pharmacy are the objectives and preferences of customers and of government (third party payers) for community pharmacy services. Although dispensing is clearly valued, community pharmacists' new roles as primary care providers and specialists are also valued, but not yet remunerated. This new set of objectives have, to a degree, already been set out in the policy documents advocating the extension of these new roles.

Nevertheless, the extent to which new rewards are provided should be dependent on the effect on efficiency of these new roles. The empirical evidence on the changes in costs and benefits of the introduction of these new roles is growing but mixed (Bond et al., 2003) and the relative prices set for these new roles within a new remuneration system should reflect this where possible.

There are also a number of issues with regard to the measurement and monitoring of output. In health care, routine measurement and monitoring of health status is not possible (or at least very costly). The ability to directly link remuneration to outcome is therefore limited. Linking remuneration to observable processes, inputs or volumes is what is observed in practice, although the relationship between inputs and volume to outcomes is not always clear. Some monitoring and verification that new activities are being undertaken will be required. However, complexity of output and difficulty in monitoring may lead to subjective measures of performance being used by the principal.

The objectives of community pharmacists. Principal-agent theory assumes that agents are self-interested. However, in health care it is recognised that health care providers have patients' best interests as an argument in their utility function. This means that there is less need for high-powered incentive schemes, although this

depends on the relative weight placed on the various arguments in the utility function (Mooney and Ryan, 1993).

A further implication of principal-agent theory is that if the remuneration scheme does not offer a contract with similar levels of pay and conditions to other contracts on offer, then the agent will take up these other contracts. For community pharmacy, this may lead to the sale of businesses (and their NHS contract) to supermarkets or larger chains, early retirement, and recruitment problems that make it difficult for the NHS to achieve its objectives in this area.[2] Only recently has the NHS offered alternative contracts to community pharmacists as employees of primary care organisations, or in the Local Pharmaceutical Schemes in England where existing pharmacy businesses are remunerated by the NHS under a local 'block' contract with their primary care organisation to provide a specified range of services. Take up of these opportunities may increase if a national contract is perceived to offer lower rewards.

Other incentives. Incentives for effort can also be offered through the size and nature of rewards at different points in the career structure. Higher rewards at the top of the hierarchy may provide stronger incentives for those lower down the hierarchy. Competition to ascend the hierarchy, through promotion or through the external labour market, also provides incentives for effort that depend on relative rewards. The main issue here is that these incentives are quite general, i.e. they cannot be directed at a particular activity. Nevertheless, changes in the career structure can alter effort levels. For example, the advent of large pharmacy chains, including pharmacies in supermarkets, may mean that becoming an owner of a small pharmacy business is no longer a feasible career objective for many younger community pharmacists. However, it is unclear what alternative career structure is available, apart from being an employee pharmacy manager.

Designing remuneration systems: evidence

Huttin (1996) and MacKeigan (2001) provide an overview of the various payment systems available to community pharmacists and their likely effects (e.g. fee-for-service, capitation payment and mixed systems of payment). Huttin (1996) also

provides a useful overview of the experience of community pharmacy in the US, Canada, and the UK. Each of these countries has historically focused on the remuneration of dispensing activity, whilst attempting to move in the direction of remuneration for cognitive and other specific services.

However, there are few published evaluations of changes in remuneration systems for community pharmacists. MacKeigan (2001) reviews three experimental studies in the United States. Two studies demonstrated that extra fees for 'cognitive' services in addition to dispensing fees, increased the provision of these services. This corroborates other evidence from the physician payment literature and from the general economics literature, that fee-for-service payment leads to more services being provided. A third study found that capitation payment, including a system of patient registration, had no effect on pharmacists' behaviour overall. Although there were important sub-group effects, the lack of an overall effect was due to a relatively low level of capitation payment.

Evidence from evaluations of primary care physician payment systems also broadly confirm predictions about the effects of fee-for-service, capitation and salary payment (Gosden et al., 2001; Robinson, 2001). However, what many of these studies have in common is that they do not examine the effects of remuneration systems on health outcomes, and so an 'optimal' remuneration scheme is difficult to recommend. Furthermore, the effects of the changes in remuneration systems are often particular to the context and setting, and so are unlikely to be generalisable.

Designing a new remuneration system.

To make recommendations and help design a new remuneration system for community pharmacy in Scotland, a number of issues raised above have been considered and used in a study funded by the Scottish Pharmaceutical General Council.[3]

[2] A similar issue exists in dentistry when there was a large transfer of activity into private practice after the remuneration system was altered in the early 1990s.
[3] At the time of writing, results were still being analysed.

As well as using existing theory and evidence to help guide the design of a new remuneration system, a focus of this study has been on the specific new tasks required of community pharmacists as outlined in the 'Right Medicine' (RM). The RM contains a list of 59 actions (one of which is the development of a new remuneration system). These have been taken as statement of society's objectives for community pharmacy, and as those aspects of activity that a new remuneration system would attempt to encourage. The main question being asked in this study is: *what type of remuneration scheme would help deliver these services?*

The 59 actions have been examined in detail with respect to:

i) their relevance to community pharmacy;
ii) their likely effect on the workload of community pharmacy;
iii) demand and supply-side factors likely to influence the implementation of each action;
iv) the likely costs of delivering these new services.

Information about these issues will help to answer questions about the preferences of pharmacists and of the general public on the services proposed in the RM. It is also necessary to examine the current provision (and costs) of providing these services, and other factors influencing implementation and remuneration. A number of methods have been used to help obtain the information in (i) to (iv) above. This has included focus groups of pharmacists and interviews of key opinion leaders, literature reviews, questionnaires to a random sample of the public, and questionnaires to all community pharmacy contractors in Scotland.

Forty eight actions were thought to be relevant to community pharmacy, and of these only 38 were expected to have a direct impact on workload and daily activities of community pharmacists. Many of these actions are not independent, and so were reduced to a list of 12 'core' activities' (Table 2). As analysis proceeds it is likely that these will be further aggregated as there is still some overlap. These are:

Repeat dispensing	Emergency Hormonal Contraception
Medication Review	Pharmacist prescribing
Clinical Monitoring	Domiciliary visits
Chronic disease management	Pharmaceutical care for older people

Needle exchange	Schemes supporting carers
Methadone supervision	Health promotion activities.

For each of these, the information in (ii) to (iv) will be gathered from literature reviews and from the questionnaires. The questionnaire to all community pharmacy contractors in Scotland asks about their current provision of the above services, the resources used to provide each of these services, whether training has been received, and the current utilisation of these services by patients. This will give information on the current 'status quo' and enable the calculation of the costs of providing these services in Scotland. Deterministic costing models will be constructed to estimate the likely changes in costs if these services were to be expanded, under a number of scenarios. To do this, information is also being collected on the reasons why these services are not being provided by some community pharmacies. The unit costs of pharmacists' time will initially be calculated on the basis of the current Global Sum payments. A number of these services have also been included as attributes in a discrete choice experiment included in the pharmacists' questionnaire. This will also be used to calculate implicit prices for these services, which will be used as a basis for determining the level of remuneration. Other questions include their workload, income, job satisfaction, and information about the place they work.

Current and future demand for these services is being examined through a questionnaire sent to a random sample of 1600 people registered to vote. Their current utilisation of community pharmacies, and of the above specific services, is being sought. Questions about whether they would use these services in the future are being used to provide an upper limit on the extent to which these services could be expanded, and will be included in the costing models. Data on factors that influence utilisation, such as access, health status, and other demographic information, are also being collected.

Tentative options for a new remuneration system

The detail of any new system will be informed by the results of the above analysis. This section sets out some initial options for a new remuneration system. One of the main aspects of a new remuneration system will be to change the relative prices of dispensing and the new activities discussed above (currently priced at zero). This

would reduce the dominance of dispensing as the basis for remuneration. The question of whether the Global Sum should increase is a matter for negotiation with the Scottish Executive and not the subject of this study. Against the various options to be discussed below, there are also a number of workforce implications in attempting to encourage pharmacists to undertake these new roles. The main issue is that it is a legal requirement that pharmacists be present when prescription items are dispensed. Although there is increasing use of dispensing technicians, who actually make up the prescription, the legal requirement remains. Any expansion of the activities of community pharmacists that require the pharmacist to be out of the premises (e.g. medication review, domiciliary visits) would rely on relaxing this capacity constraint through the increased recruitment of community pharmacists, or changes in the interpretation of the supervisory regulation.

Fee-per-item of service

There are a number of options within a fee-per-item system that could encourage the provision of the new services. Each option depends on the extent to which the services are bundled within a single fee (MacKeigan, 2001). One option is provide new fees for each of the 12 core activities. Within the Global Sum, this would imply a lower dispensing fee. A further option is to rebalance dispensing fees and include higher fees for certain items or groups of items, perhaps related to specific NHS clinical priorities (eg CHD, cancer, mental health). Prescriptions dispensed for CHD would therefore attract a higher fee. This would provide an incentive for pharmacists to engage in those activities (e.g. medication review, clinical monitoring, domiciliary visits) that provide them with an opportunity to alter prescribing in favour of the remunerated items. However, there may be an incentive to recommend drugs when not necessary or maintain drug therapy when not necessary. However, the use of clinical guidelines, audit and training may help reduce this.

A third option (a variant of the first two options) is to have different dispensing fees for the same items or groups of items (e.g. prescriptions for CHD) to reflect different levels of service (e.g. basic dispensing, or basic plus enhanced services, such as repeat dispensing and chronic disease management). The actual provision of these activities could then be monitored periodically.

Options two and three would not directly relate to the 12 core activities identified in the Right Medicine since the actions were not defined by disease or therapeutic area. However, efficient prescribing for specific diseases, such as coronary heart disease, does imply the provision of a number of the 12 core activities, such repeat dispensing, clinical monitoring, and care of older people, and this could be written into a new contract and monitored periodically. This could be similar to the quality incentive payments in the new GP contract, which are paid across a number of disease areas. Points (and remuneration) are earned as higher levels of service provision are met.

Capitation

This is a fee-per-patient and implies some system of enrollment or patient registration. This could be useful for repeat dispensing and medication review, and other services provided to patients on a regular basis. This would encourage pharmacists to minimise their costs and encourage continuity of care. Patients could be asked to nominate/choose a pharmacy which implies competition amongst pharmacists for patients, if patients are allowed to change pharmacies easily. If this worked, it would be beneficial to patients and community pharmacy who would have an incentive to provide better services to attract patients. Although this would encourage continuity of care, it does not guarantee the provision of new activities, unless pharmacies were periodically monitored. One way that could overcome this would be for GPs to contract with community pharmacists (or groups of pharmacists) and agree the services to be provided by the pharmacist to their patients, in return for a capitation fee paid by the local primary care organisation. This could avoid the necessity of patients having to register with their pharmacist as well as their GP. This would also encourage competition amongst pharmacists for the business (patients) of GP practices.

Salary

This would be similar to hospital pharmacists where community pharmacists are employed by the NHS, or at least the main part of their income is paid this way. As employees of the NHS, it would be easier to direct their activities towards provision of the new services, which could be written into their contract and performance assessed during promotion or appraisal. This would also imply a better planned

career structure, which may also make community pharmacy more attractive as a career as so increase recruitment.

Mixed/blended system

A mixed system of payment is often seen as more flexible, as it ameliorates the incentives inherent within each single system. A salaried element is equivalent to an annual allowance, that would perhaps cover remuneration for either basic or the new services. Such a payment could increase depending on seniority (equivalent to the salaried element and providing career progression). A mixed system could also retain fees-per-item for dispensing, and also introduce fees for the new services, or for disease areas. An element of capitation payment could also be introduced to cover services for patients with chronic diseases or who are using the repeat dispensing service.

Opt-in and opt-out services. A feature of the new GP contract is the ability to opt in and out of services, where some of these services are contracted and priced locally, and some nationally. An element of this is occurring now in community pharmacy as funds and elements of the Global Sum are devolved to local primary care organisations. The 12 core 'activities' could therefore be contracted this way, depending on the potential demand for each activity within geographical areas.

Discussion.

This paper has highlighted a number of issues relevant to re-designing a remuneration system. A key issue is the objectives that a remuneration system is trying to achieve. In the case of community pharmacy, these have been initially defined by recent policy documents. Nevertheless, the empirical evidence supporting the new roles and responsibilities for community pharmacies is mixed. In addition to simply delivering more of these services, it is important to ensure that they represent a cost-effective use of resources.

The role of economic theory in the design of remuneration systems has also been highlighted. Where output is complex and difficult to observe and measure, fee-for-service systems have less of a role to play as they create incentives that encourage behaviour that is not necessarily compatible with the objectives trying to be achieved.

Empirical evidence on the effects of changes in remuneration systems is context specific and few studies have been conducted, although the better designed studies have confirmed behaviour that is consistent with theory.

It is also important to have information on the current activities of community pharmacists, and information on the preferences of community pharmacists and the general public about the specific changes in activities being proposed. This will help inform the detail of a new remuneration system in terms of examining the potential effects on workload and costs, and also the value of these new services to both pharmacists and the general public.

The options for a new remuneration system need to account for the current situation, both in terms of predicting the effects of a new remuneration system on behaviour, and in terms of the costs of implementing a new system. The current fee-per-item dispensed could be modified to reflect national priority areas, or the specific new roles and responsibilities. Capitation payment could be used to promote service provision for those with chronic illness. Salary payment could also be used, either to directly employ community pharmacists within primary care organisations, or as part of a mixed system of payment that would blend elements of all three-payment systems.

Ultimately, the system will be chosen by negotiation between professional bodies and the government and would hopefully reflect the preferences of both community pharmacists and society. The current study will help to inform this process.

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