

Patient Choice and Regulation: Outline of a Possible System

1. Suppose we wish to extend the role of patient choice in determining how, when, and by whom people receive healthcare. The objectives of this policy might be:
 - i. To ensure care is tailored to individual patients' circumstances and needs
 - ii. To provide incentives for providers to improve the quality of care
 - iii. To enlist patients as partners in their own care.
2. In this note I explore ways in which regulation might best support this policy given the broader goals of health policy, e.g. to improve the health of the nation, to cure disease, to redress inequalities, etc
3. The starting assumptions required to frame the discussion are as follows:
 - i. To mitigate fundamental health inequality, healthcare is allocated on the basis of need rather than ability to pay.
 - ii. The national healthcare budget is determined exogenously.
 - iii. The healthcare budget is allocated to local budget holders, People's Custodians of Taxfunds-for-healthcare (PCTs), who have the responsibility to provide and/or to commission healthcare for a designated local population (whose need determines the budget allocation to each PCT¹). The budget must be spent within the budgetary period.
 - iv. PCT decision-makers' preferences are determined by:
 - a. Disinterested desire to meet health needs of their population over time
 - b. Desire to satisfy wants of their current patient lists (reflecting patients' own preferences, even when these conflict with population need)
 - c. Desire to avoid political problems associated with provider instability.
 - v. Personal choice in the use of their notional share of the healthcare budget when need arises is to be paramount except in so far as it conflicts with social preferences. Overriding social preferences (referred to below as "**social overrides**") include the following:
 - a. Society operates a rescue principle that forces it to allocate funds to persons who have immediate health needs even if they have reached this predicament through their own previous choices. Hence current choices to forego future healthcare are ignored – and health promotion and prevention options are valued indirectly (as the present value of future benefits – not as willingness to pay for risk reduction).
 - b. Healthcare choices should reflect social rather than merely individual costs and benefits.

¹ The setting of PCT budgets should be informed by the availability of services of benefit to local populations. However, service availability will in turn be influenced by the use to which PCT budgets are put, as discussed below. Allocation formulae must therefore be provisional in a world in which PCTs are evolving.

- c. Healthcare choices should reflect social rather than individual time preference, and should include future generations, so as to give adequate value to the health of tomorrow's citizens.
 - vi. Clinical specialists have an information advantage with respect to the impact of different treatments on particular individuals; whilst patients themselves an information advantage regarding the private benefits and costs associated with these impacts.
4. The **challenge** is to determine how personal choice can be maximised whilst respecting the social overrides set out in paragraph 3.v. The key questions are these:

I – What healthcare services should be procured for individuals in different health conditions? (For any given service, this is equivalent to the question – What should determine which individuals receive this treatment?) The problem is to determine the appropriate mix of patient choice, PCT discretion and **Product Regulation**

II – From whom should services be procured? The problem is to determine the appropriate mix of patient choice, PCT discretion and **Provider Regulation**

III – How should prices of healthcare services be determined? Should prices be set by the interaction between providers and PCTs, or by **Price Regulation** (so as to increase the scope for patient choice, whilst mitigating PCT capture by providers). If Price Regulation is desirable, alternative rules for determining prices must be considered.

I – What healthcare services should be procured?

- 5. The range of healthcare provision that is available is over time determined by the spending preferences of the PCTs and by technology².
- 6. How should a PCT's budget optimally be allocated to the various services? The aim is to maximise net social benefit from its budget, where net social benefit includes primarily the present value of private benefits net of private costs of health interventions, whilst budgetary costs are calculated net of discounted future healthcare savings. This will be achieved (or reasonable assumptions) by **allocating a PCT's budget across services such that the marginal net social benefit less the cost of each service, per £, is equal.**
- 7. Ideally for each service, for each health-class of a PCT population, a cost benefit analysis would be carried out for each service. The PCT budget could then be distributed across different services to maximise the net benefit delivered.

² Ultimately, technological innovation in healthcare itself will be influenced by PCTs' use of their budgets, as the latter will influence research effort.

8. How can this outcome best be approximated?
9. The optimisation problem is that of the PCT, yet the PCT (aside from incentive biases) does not have the information upon which to make the judgment. Direct Patient Choice is not possible, because patients have a direct interest in appropriating more healthcare resources for themselves.
10. More plausibly, the allocation might be shared between three agents who have or can most efficiently obtain the requisite information, as follows:
 - The **Product Regulator**, with the advantage of being disinterested, and of economies of scale in collecting information, should identify clearly the extent of benefit to different population groups of different interventions, where these are known. Cost benefit rather than cost-effectiveness analysis is required for this purpose, as monetised costs and benefits (e.g. from reduced time off work) must be considered alongside health benefits.
 - The **PCT** uses information from the Regulator together with information from Specialist Clinicians to determine which care to offer to which individual patients. (The PCT must mediate unless the Specialist Clinicians are disinterested.) To motivate PCTs appropriately, they might be monitored to see that their use of each intervention matches what would be expected given the demographics of their population. But they have discretion regarding each individual patient.
 - **Patients.** Where the Product Regulator indicates that the cost-effectiveness of a service or the superiority of one service over another for a particular class of patients depends upon the patient's private net benefits from the service, then the active involvement of the patient in choosing between treatment options should be facilitated. This might be accomplished by providing standard information for patients about the risks and likely outcomes of the different courses. However, a choice of a more expensive option need not be offered.
11. The role of Patient Choice in determining which healthcare services should be provided is thus limited to circumstances in which a range of services are all likely to be cost effective from a social welfare perspective. In such circumstances, personal information advantage with respect to private costs and benefits implies that patient choice should determine which intervention if any is appropriate.
12. The role of the Product Regulator is to support and to monitor the PCT in its job of allocating the local healthcare budget. Essentially it gathers, analyses and disseminates information. Were PCTs effectively motivated to maximise health gain from their budgets, they would be willing to pay the Regulator for its services – and ensure that the quantity and quality of services was optimal. (Indeed, private consortia of health economists could competitively supply these services.) However, public dissemination of appropriate information by a Product Regulator may be necessary to shift PCTs' objective functions towards the optimal.
13. **Product Taxonomy.** The Regulator must also specify the packages of care that are to be offered to patients and procured from providers. Specification of the packages and monitoring of outcomes can help to encourage prevention packages that might

otherwise be overlooked, and to mitigate the dangers of Supplier Induced Demand by giving providers budgetary responsibility for optimising care within a package.

14. In sum, the role of the Product Regulator involves:
 - i. Procuring and disseminating quantified information about the likely value of the excess of benefit over costs for different treatment packages on different condition groups. This is clearly a dynamic process, built upon outcomes monitoring, and with new treatments registered with interim appraisals, &c.
 - ii. Monitoring utilisation of different treatments for different population groups by PCT, and their outcomes, and disseminating the information against norms.
 - iii. Identifying those treatments or choices between treatments where patient choice should be facilitated, and providing accessible information to aid those choices.
 - iv. Taxonomy – specifying the packages of care which are to be offered to patients and procured from providers in such a way as to maximise scope for monitoring outcomes and to mitigate perverse incentives.

II – From whom should services be procured?

15. A range of service providers may be available to supply the service identified by the Product Regulator and the PCT as appropriate for an individual.
16. Ideally, the providers offering the best value for money in the provision of any particular service package will be chosen
17. Here too the conflict between the patient’s personal interest and the community’s prevents the choice of provider being given exclusively to the patient without regulation. The patient would not take adequate account of the cost imposed by her decisions upon the health budget, both immediately (in choosing a more expensive provider) or in the medium term (in choosing a provider for whatever reason whose treatment tended to require follow-up healthcare expenditure).
18. Yet if Price Regulation (as described below) could determine the appropriate price for each service, then the conflict between patient and community objectives would be mitigated. If price and the service package are determined, providers will differ only in the quality and outcomes of care provided. Patient choice can then be given freer rein.
19. For patients to make informed choices, they will need to have access to information about all the key aspects of providers’ clinical performance, and regarding patient experiences. **The Provider Regulator** could provide an information service exposing the clinical outcomes record of different providers, and other characteristics of the care provided. The information would have to be readily accessible to the patient population. Many patients would be willing to pay for this service. However, free provision would ensure equity and an adequate focus upon long term outcomes.

20. PCTs' commissioning role, once a patient has been approved for a particular service, then becomes merely to act as patients' bankers in arranging payment to the chosen provider.³

III – How should prices of healthcare services be determined?

21. In principle the array of prices of health services should be set so as to maximise the net social benefit arising from the health budget, bearing in mind both the elasticity of health benefit to changes of supply of each service, and the elasticity of supply to changes in price.
22. The result would be consistent with the PCTs' optimisation requirement mentioned above, that the marginal excess benefit from the marginal pound spent on each service should be the same, but now we no longer assume (as we did implicitly above) that supply is infinitely elastic at current prices. Nevertheless, in equilibrium, the price of each service (less the net present value of any healthcare savings arising from the service) would be set at or above a minimum discount to the net benefit provided by the service to the marginal patient or recipient. (The greater the global healthcare budget the lower would be the level of the minimum discount.)
23. How is this optimisation to be approximated by a system-wide **Price Regulator**?
24. **First Pricing Proposal.** The Price Regulator estimates the optimal array of prices by estimating for each service a benefit function and a supply function. The benefit functions would be derived by the **Product Regulator** from estimates of the net benefit (benefits net of private costs, such as discomfort of treatment, time off work etc) afforded by each treatment package for people in different health conditions. The **Provider Regulator** would give estimates of likely scale of supply at different prices for each service on the basis of estimates of economies of scale, the relevant labour supply curves etc. Account would have to be taken of the cross-elasticities between the different supply markets, *et cetera, et cetera*. The **Provider Regulator** would also be tasked with estimating the underlying efficiency costs of producing each service, perhaps by surveying overseas providers, in order to give a firm base for estimation of supply curves.
25. Given the uncertainty attaching to estimates of the underlying relationships, it is likely that the model's estimates of prices could shift significantly from year to year. The resulting instability could itself feed back into a required premium upon prices required to induce supply into the healthcare market. The initial setting of prices

³ Two drawbacks with this system are:

- Care is purchased on a spot market, when patients require treatment, rather than under longer-term contracts. Relationship specific investment may therefore be depressed.
- Patients may prefer better hotel services even at the cost of somewhat less good outcomes, whereas the socially-optimal bias should be the reverse (because the justification for tax-funding relates to achieving equity in health not in creature comforts, and because more effective healthcare may reduce future calls on the service). Information dissemination could be tailored accordingly.

could also diverge dramatically from current healthcare costs. The result could be financial turmoil. Both these problems could be addressed, however, using transition arrangements and damping of proposed changes. The dynamic properties of different price pathways would ideally be fed back into the model itself, so as to take account both of the benefits of stability, and of the supply response time.

26. Estimating ideal prices on the basis of such a model would perhaps provide the best estimates of the optimal set of prices. However, the proposal suffers from a key drawback:
- **Lack of transparency.** The process of estimation would be very complex, and would require much judgment. As a consequence it would be subject to contest, particularly by provider groups who were prejudiced by a particular pricing proposal.
27. **Second Pricing Proposal.** Prices are set at current average costs of provision for each service. Costs could be assessed by collecting data from current providers who could be mandated to provide estimates of the cost for each service consistent with their accounts. As costs change over time, prices could be adjusted in line with new information collection.
28. Given the supply-driven history of resource allocation between treatments, and the historic lack of competition in provision, current costs may diverge greatly both from the underlying value of treatment and from efficiency costs. Hence, although this proposal meets the transparency and stability criteria, it is subject to other drawbacks, all relating to **inaccurate pricing**:
- **If prices are set too high:**
 - **Costs may be inflated** by technical inefficiencies.
 - **Supply may be excessive.** Note that in the presence of Supplier Induced Demand, excess supply may not be manifest in under utilised facilities or unemployed clinicians. Rather people will be receiving treatment from which they derive little benefit, or where the benefit falls short of the opportunity cost of treatment (resulting in persistent allocative inefficiency).
 - **If prices are set too low,** there will be a shortfall in supply. If demand reflects marginal benefits of treatment, the consequence will be waiting lists. In other cases, unmet need will be latent, depressed by waiting lists, or by the knowledge that supply is unavailable at current wage rates, etc.
29. **Slow convergence.** These problems are mitigated by the ability of the system to converge on accurate prices. If and when Product Regulation steers PCT commissioning towards treatments offering better value at the margin, demand for overproduced treatments will wane, and for better value treatments will rise. Average costs will gradually change in response. However, in the absence of competition and strong incentives to cut costs (as many providers are not-for-profit, and choice is price-insensitive), technical inefficiency could survive for some time.

30. **Third Pricing Proposal.** The starting point, as for the second proposal, would be the mandated collection of costs of provision from current providers of each service. However, to allow for technical inefficiency, the starting point would be lower quartile costs for each service. Thus services with a bigger spread of costs, would be given relatively lower prices.⁴ From this starting point adjustments are made:
- i. Prices are increased for those services that the *Product Regulator*, using waiting list data and estimates of marginal benefit relative to cost, assesses are under-supplied. Prices are lowered for those services that the Product Regulator, using estimates of marginal benefit relative to cost, assesses are over-supplied. An algorithm might link the scale of the price adjustment to the degree of under-/over- supply. The latter could be calibrated using the inter-quartile range, so as to minimise instability and to provide some link to supply elasticity.
 - ii. The whole schedule of prices is calibrated to ensure that the system is not expected to deliver unreasonable efficiency gains.
31. This proposal would be likely to ensure a faster convergence upon optimal pricing at the cost of greater instability and opacity. Nevertheless, allowing pricing explicitly to reflect waiting lists might add credibility to pricing regulation.

32. Issues for Discussion

- i. **The conflict between personal healthcare choices and socially optimal treatment choices. Particularly important is a systematic personal under-valuation of prevention, resulting from the clash between personal tolerance of healthcare risk on the one hand and the rescue principle on the other.**
- ii. **The system described generates a substantial regulatory burden in information gathering, analysis and dissemination in order to deliver Patient Choice of provider without serious misallocation of resources. Are there less onerous alternatives? How can these options best be assessed?**
- iii. **The price setting proposals have clear drawbacks. Is there a better proposal better balancing simplicity and accuracy?**
- iv. **Are the problems specified *sui generis* to the current NHS policy predicament? What research findings in healthcare or more generally can be brought to bear upon the issues raised?**

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⁴ A more sophisticated adjustment would involve some regression analysis to ensure that cost variance was not a factitious consequence of variation in other factors, for example intra-package casemix.