Reviewing RAWP

Is the medical service increment for teaching (SIFT) adequate?

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Abstract

One issue of interest to the current review of the Resource Allocation Working Party (RAWP) formula is the extra service costs associated with medical teaching. RAWP intended the medical service increment for teaching (SIFT) to cover these costs. Although it is not possible to assess from the methods used to derive the SIFT rate whether it is or is not overgenerous for its intended purpose, the "excellence" elements of teaching hospitals tend to be protected. The financial problems of the teaching hospitals are more likely to be due to the relatively high use of services by local residents. But cutting services of London teaching hospitals to bring this use down to equitable levels may impair their capacity to train medical students.

Introduction

One of the issues identified by the National Health Service (NHS) Management Board in its current review of the Resource Allocation Working Party (RAWP) formula¹ is the extra service costs associated with medical teaching. Revenue allocations to regional health authorities include a service increment for teaching (SIFT) which is based on the rate per medical student derived by the Advisory Group on Resource Allocation (AGRA)² and revalued for inflation. RAWP intended this increment to cover solely the additional service costs incurred by the NHS in providing for the clinical teaching of medical students. This paper outlines the way the SIFT rate is derived and discusses whether it is likely to be overgenerous.

Deriving SIFT: assumptions and problems

The four main steps in deriving the SIFT rate per medical student are: defining the teaching hospitals of each medical school; estimating the excess costs for each teaching hospital over its baseline service costs of treating patients; deriving for each medical school its excess cost per student; and setting the SIFT rate per student at 75% of the median excess cost per student by medical school. (A fuller account of the method is given elsewhere.⁴)

DEFINING TEACHING HOSPITALS

For deriving SIFT each medical school's teaching hospitals were identified by the proportion of total student time they accounted

for: RAWP chose 10% and AGRA 8%. RAWP's definition of teaching hospitals accounted for 70% of total medical student training in England,² AGRA's accounted for 80%.³ SIFT is allocated for 100% of student training. Both RAWP and AGRA² were concerned about training on a small scale in hospitals not recognised as teaching hospitals.

ESTIMATING EXCESS COSTS BY TEACHING HOSPITAL

For each teaching hospital the "baseline service costs" of its caseload were estimated using the costs of the 45 most modern hospitals in England and Wales (the 45 hospital sample formula⁴), which were about 5% higher than average unit costs of NHS acute hospitals. Each teaching hospital's excess costs were the difference between their "relevant costs" (actual costs less London weighting) and their baseline service costs.

DERIVING THE EXCESS COSTS PER STUDENT BY MEDICAL SCHOOL

For each medical school the excess costs of its teaching hospitals were summed and divided by the number of medical students two years later to give excess costs per student. At the time of AGRA's estimate medical schools used different numbers of teaching hospitals.⁴ We do not know how this affects costs of teaching.

SETTING THE SIFT RATE PER STUDENT

The excess costs per student were ranked by medical school. For RAWP the range was from £19 100 at the Westminster to £3300 at Newcastle (at 1973-4 prices). For AGRA² the range had widened to £31 000 at the Westminster to £2200 at Leeds (at 1977-8 prices).

As RAWP and AGRA had no confidence in these extreme values, "average" excess costs were derived by using the median costs by medical school (RAWP pointing out that this produced a larger sum than the median cost per student). These median costs were £9500 for RAWP and £14 900 for AGRA (allowing for inflation the AGRA figure is 5% more than RAWP's³). The medical schools around RAWP's median costs were the London Hospital Medical School and University College.² RAWP pointed out that these hospitals were "centres of excellence," that the "excellence" element could not be reliably identified, but that comparative unit costs suggested that much of this element might have been due to support rather than clinical services (such as catering, laundry, etc). The paragraph concluded as follows:

We are therefore forced to rely upon the evidence of the York Study⁵ . . . namely that nationally 75% of the observable additional costs in teaching hospitals may be attributable to the teaching commitment. We take the view that this proportion is likely to be valid at the median even though it would clearly be erroneous at the extremes. We believe again that its application would err on the side of generosity.

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Is SIFT overgenerous?

RAWP's use of the 75% figure and its justification by reference to the York study⁵ was criticised by Straf⁶ because the Department of Health and Social Security had naively accepted the results of a flawed piece of econometric analysis. But Straf's criticisms,⁶ and the rejoinder by Culyer *et al.*,⁷ overlook the more fundamental point: the data and the method used by the York study⁵ to estimate additional costs in teaching hospitals due to medical students are quite different from those used by RAWP (and AGRA) to estimate excess costs per medical student.

The York study⁵ used multiple regression with cost per case by hospital as a dependent variable and seven independent variables for each hospital (case complexity, available beds, occupancy rate, length of stay, throughput, London, and students per case). The researchers applied this model to 268 acute hospitals in England of more than 100 beds, which included 40 within teaching hospital groups, using data from 1969-70. AGRA used a sample of 91 teaching hospitals compared with 45 modern acute hospitals in England and Wales using data from 1976-7 and 1977-8.⁴ There is therefore no reason to suppose that these differently defined excess costs are the same. So even if the York method correctly estimated that medical students accounted for 75% of their teaching hospitals' excess costs, this has little direct bearing on the problems which faced both RAWP and AGRA.

For the reasons mentioned above RAWP rejected setting SIFT at 100% of the median excess costs per student. The question then was what lower rate could be justified. Under these circumstances what matters is finding a suitable round number.⁸ RAWP must have felt that 50% would not err on the side of generosity, but 75% would; and if the York results were presented in a certain way they could be used as supporting evidence (but how the 75% was derived has not been published). In revising the rate AGRA also used this figure of 75% in the absence of anything better. This is another example where RAWP's boldness of purpose produced something designed to be immediately acceptable but which the succeeding decade has failed to improve on: standardised mortality ratios and accounting for cross boundary flows are other examples.

Those who work in teaching hospitals often say that they are denied the 25% which ought rightfully to be allocated to them, so SIFT cannot be overgenerous. It is virtually impossible to assess from the way the rate was derived whether or not it is overgenerous: the York study has only marginal importance in setting the SIFT rate, and estimates of the excess costs of teaching were based on methods that did not take account of the different arrangements for medical teaching and allowed only for broad specialties in costing the case mix of teaching hospitals.

Perrin examined the feasibility of using accounting methods to identify the costs medical SIFT is intended to cover.⁹ This requires apportioning the teaching hospitals' costs to teaching medical students, training junior doctors and other staff, routine and specialised care, and research. He argued that such apportionments could only be arbitrary as usually more than one activity is done by the same people at the same time. Thus it is virtually impossible to know whether SIFT is overgenerous for the purpose RAWP intended. If, however, a teaching hospital is given the choice of either having medical students, their extra costs, and the corresponding SIFT or having no students, no extra costs, and no SIFT the hospital would almost certainly be better off having the students.

What is the main cause of teaching hospitals' financial problems?

SIFT was derived by both RAWP and AGRA on the assumption that teaching hospitals would be funded at 5% above national average costs for the patients they treat. One of the Department of Health and Social Security's performance indicators shows that actual expenditure on acute inpatient services by each London teaching hospital is usually within 5% of its expected costs¹⁰: expected costs are based on estimated national average costs for inpatient cases treated, with allowances for the costs associated with

London and teaching. This suggests that if these hospitals were funded on the assumption on which SIFT was based most hospitals would not have to cut spending on acute inpatient services.

Regional health authorities must, however, finance their teaching hospitals' acute services not by the cases they treat but by following RAWP principles of distributing resources to populations equitably.¹¹ For teaching hospitals there are important exceptions to that principle: as well as SIFT payments are made on the principle of estimated national average costs per case by specialty for patients from outside the hospital's district; and for regional (or multi-district) specialties it is common to base these on estimated actual costs. Although problems arise over estimating costs, the Department of Health and Social Security's performance indicators suggest that funding cases treated at even approximate costs would not cause serious problems for teaching hospitals. Thus teaching hospitals' problems seem to be caused by the fact that their target revenue fails to fund services fully because the volume of services is greater than average. The increased volume of services may be due partly to regional specialties, but the main source is likely to be the heavy use of acute inpatient services by local residents—as illustrated by the earlier case study in this series.¹² This suggests that the "excellence" elements of teaching hospitals tend to be adequately funded through the cost allowances for SIFT and referrals from other districts.

A conflict between service and teaching needs?

SIFT is intended to cover the additional service costs of medical students (including, for example, treatment style and infrastructure) but not to protect the volume of services necessary to train medical students. Thus the main question is the degree to which beds required for training medical students result in an inequitable distribution of services, which, under current policies, regional health authorities are not prepared to finance.

Craig has reported results from a preliminary analysis for main English teaching hospitals of general medicine and general surgery.¹⁰ Teaching requirements were estimated by applying University Grants Committee bed requirements by specialty¹³ to the corresponding medical schools' annual student intake. An equitable distribution of beds was estimated by multiplying the national average provision of beds per 1000 people by the populations served by each teaching hospital. For London hospitals the number of beds required for teaching significantly exceeded those needed for the population alone. The next task is to get better estimates of actual teaching requirements by using university guidelines and data on students trained outside main teaching hospitals. If a severe conflict does exist it is important to find ways to resolve it. An approach to this has been suggested elsewhere.¹¹

Conclusions

RAWP's objective of solely protecting the additional service costs of medical education by SIFT raises a host of costing problems, including separating teaching from the other products of teaching hospitals, estimating the costs of case mix, and estimating the cost structure of teaching at main and peripheral teaching hospitals. The report by the NHS Management Board proposed a statistical approach for examining some of these costing problems now, with the hope that in two to three years' time better cost data would enable detailed analysis of costs. The main argument of this paper, however, is that even if these problems were resolved their resolution would contribute only to the less important part of the problems of English teaching hospitals. Knowing what an English teaching hospital ought to cost for the efficient delivery of its various products of measured quality does not necessarily enable its allocation to be decided; its services are not financed on these criteria alone, or even primarily. Indeed, the paradox is that RAWP emphasised that the dominant criterion should be that of equity. It is therefore encouraging that the report on the review of RAWP has

recognised "the need for consideration nationally of whether there is a conflict between teaching and service needs, and if so how it should be resolved."¹

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Medicolegal

Compulsory treatment in the community for the mentally ill?

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In recent years many psychiatric patients who would formerly have been detained in mental hospitals have been released into the community. At the same time more effective drug treatments to control acute psychotic disorders, particularly schizophrenia, have become available. Psychiatrists may give treatment without patients' consent if the patients are detained in hospital under the Mental Health Act 1983, but once patients have been released from hospital psychiatrists have no power to treat them without their consent. The result is a cycle in which patients are admitted to hospital and are released when their illness improves, only to relapse, often with great distress to those caring for them, and be admitted to hospital to be treated again.

"Long leash" treatment illegal

Under the 1959 act it was common practice with some long term mentally ill patients, usually with a history of violent or aggressive behaviour, who remained well on medication in the community but relapsed without it, to be put on a so called "long leash" treatment. This entailed admitting patients to hospital for a nominal period and releasing them on the maximum leave of absence of six months subject to conditions about treatment. Patients would then be recalled from leave to spend one night in hospital to allow a further six months' leave to be granted. This practice continued under the 1983 act despite its more restrictive wording. In 1985, however, the divisional court declared that the 1983 act gave no authority for the use of long leash treatment.¹ Mr Justice McCullough ruled that section 3 of the act could be used only to detain people who would be treated as inpatients, not as a means of attaching conditions to being an outpatient, and that section 20 could be used only to renew authority to detain patients whose mental condition was believed to require their detention as inpatients.

Last month the Royal College of Psychiatrists published a discussion document calling for a new power, the community treatment order, which would allow medical treatment outside hospital for mentally ill patients.² This document does not propose, however, that patients should actually be given treatment compulsorily outside hospital. It envisages that most patients will consent once an order is made. For those patients who will not admission to hospital will be the sanction after negotiation with the patient.

The Mental Health Act Commission, which oversees the operation of the act, has not been able to reach a collective view on whether patients who are not liable to be detained should be subject to compulsory treatment. It has, however, produced a discussion paper that sets out several possible options, including no change; greater use of the existing guardianship provisions of the act (which do not, however, empower the guardian to consent to treatment); the introduction of a community treatment order (different from that suggested by the Royal College of Psychiatrists and to be operated by social services departments); and an expanded form of guardianship for use in special cases, which would allow the guardian to require the patient to have treatment.³ The proposals of the royal college and the commission's discussion paper formed the basis for debate at a joint conference held by the commission and the National Association of Health Authorities on 29 September.

Legal questions

Setting the proposed changes in the existing legal framework, John Finch, senior lecturer in law at the University of Leicester and a mental health act commissioner, posed some questions about the operation of any new compulsory treatment order. What mental condition would be required for its operation? Would there have to be consultation, as there is at the moment under section 3 of the act, or would consultation be a substitute for the county court? What about the participation, as under the present act, of other professionals? What about the duty to communicate adequate information and the obligation to ensure the continuing understanding of all those affected? Whose job would that be? A proper system of risk

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