a fair chance of success. Cases for innovation should be eligible for discussion at policy making levels (such as board meetings of health authority management) only after the checklist has been satisfactorily completed. In consequence, propositions whose sole foundation is anecdotal evidence, appeals to "authority" or "clinical freedom," the charismatic personality of the initiator, and the games of academic bluff or managerial self advancement would more easily be exposed and challenged.

There remains the problem of that form of creeping innovation that is based on change in treatment that has been pioneered by using "soft" money. Such developments can too readily reach a point where they cannot—and from the clinical point of view sometimes should not—be stopped even though the initial support has run out. Obviously it is a managerial task to be aware of such possibilities and to modulate and incorporate inevitable innovatory change into the system we have described.

Discussion

Our model for the assessment of innovations and the relationships of clinicians, management, and advisory professionals may seem somewhat idealised. We believe that a move toward some minimum standard for the quality of the wholly rational element of the evaluation of innovation would, however, encourage more productive cooperation. The role of the reviewer would certainly be new in the health service but it could serve to sharpen everyone's thought processes. This might be a role predominantly though not exclusively for public health physicians as they are the only group currently to be found in all health districts who have some formal training in epidemiology, statistics, and management. They would, however, need help from those with the relevant technical knowledge in other specialties. They might act as reviewers for neighbouring health authorities rather than their own and be advisers to the proponents of innovation within their own authorities.

Our proposals offer the prospect of improving an important aspect of planning in the health service to the benefit of patients, health care professionals, managers, and policy makers. They would take the pressure off policy makers to respond hastily and perhaps inappropriately to orchestrated demands from powerful internal and external interest groups; all proposals no matter what their source would be subject to the same rigorous scrutiny and the grounds for implementation or rejection could be made explicit. Furthermore they could be fed back to those who want to innovate much as referee's comments on grant applications and papers submitted to journals are (sometimes) fed back to applicants and authors. Like all innovations our suggestions should be subject to debate, a pilot study, and evaluation. Ideally they should be tested in various units, districts, and regions throughout the country.

We are grateful to the members of the North Western Regional Health Authority Medical Committee and the members of the Regional Service Effectiveness Working Party for encouragement in this work.

Appendix

TEMPLATE FOR CHECKLIST

(1) Describe clearly and concisely the proposal, indicating how its development differs from and is likely to enhance current practice (what does it do, to whom, how, why, etc).

(2) What, in detail, is the proposal intended to achieve?

(*a*) beneficiaries, group number, etc

(*b*) demand—initial (numbers, cost); final (numbers, cost, containment of demand?)

(*c*) benefits (projected outcome)—quantification; monitoring, assessment (change in life expectancy, quality of life, morbidity, etc)

(*d*) problems/hazards.

(3) What, in detail, are the projected costs of the proposal?

(*a*) initial capital costs

(*b*) staffing implication

(*c*) anticipated marginal costs invoked on expansion

(*d*) if demand exceeds this present proposal what is the upper limit at which increased capital and staffing costs would occur?

(*e*) will other developments be lost or deferred or altered if this proposal is adopted?

(*f*) will any savings accrue?

(4) What is the evidence that the proposal will provide benefit?

(*a*) preliminary formal trial—was it randomised? Were the following aspects adequate? (design, size, conduct, analysis, interpretation); Was cost effectiveness or cost benefit assessed? Were the criteria of cost, benefit, and effectiveness appropriate to the presently envisaged realisation of the service? Do the findings of the trial justify the assertions under (2) above and can they be extrapolated to the kind of populations for whom this service is intended? If there have been several separate trials, are the findings reproducible and consistent? If not, how do the results affect the answers given under (2) above?

(*b*) experience of implementation elsewhere—Has the proposed innovation been practised elsewhere? Is there previously published or otherwise accessible work? What has been learned from this experience? What changes, if any, would be recommended for the present proposal? Was the demand for this practice contained? What costs were involved? Were the benefits consistent with those suggested under (2) above?

(*c*) If the answers to (*a*) and (*b*) are negative or equivocal—Should a formal study or trial be considered? Where should the study be done? How would such a study be funded? Should a decision on implementation be deferred until other people's findings are known?

(5) Are other developments, such as alternative methods of treatment or care, likely to overtake the current proposal? Should these be considered before any implementation?

(6) If the proposal is adopted how is it to be evaluated for

(*a*) Outcome

(*b*) Cost effectiveness

(*c*) Performance (relating to targets for continuation of expenditure).

If the service is being introduced on a pilot basis have criteria been agreed for the circumstances in which ultimately the service might be withdrawn?

1 Secretaries of State for Health, Wales, Northern Ireland, and Scotland. *Working for Patients*. London: HMSO, 1989. (Cmnd 555.)

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Correction

Sample size and power for comparing two or more treatment effects

In this paper by Mr Simon J Day and Dr David F Graham there is an authors' error in example 2, which describes using the nomogram for determining sample size requirements for two by two factorial experiments. The description for the main effects is correct but the error lies in the description for the interaction. Because the size of the interaction effect is determined by a contrast between four means and not two its variance is twice that of the difference between the overall treatment means. So after specifying the size of the clinically important interaction, proceed with using the nomogram as described for comparing two groups but note that the sample size indicated should now be *doubled* and this is the sample size required in each of the four subgroups.