

appealing hypothesis that early postoperative luminal nutrition might have a beneficial effect on the function of the intestinal barrier in respect of permeability, bacterial translocation, and the subsequent development of septic complications has no supporting evidence at present.

What impact could the findings of this systematic review have on daily surgical practice? The review shows that there is no clinical benefit to starving patients in the early postoperative period after gastrointestinal resection. Further, the finding that postoperative infections can be reduced and hospital stay shortened by starting early postoperative enteral nutrition should challenge clinicians to consider this treatment. The findings pave the way for an appropriate multicentred trial to assess early enteral feeding in patients undergoing elective gastrointestinal resection. The patients recruited to such a trial should be stratified by nutritional status and type of surgical procedure. The outcome measures should include not just effects on wound infection, other infectious complications, and dehiscence of the anastomosis but also surgical fatigue, muscle function, quality of life after discharge from hospital, and cost effectiveness.

D B A Silk *consultant physician*

N Menzies Gow *consultant surgeon*

Department of Gastroenterology and Nutrition, Central Middlesex Hospital, London NW10 7NS

DBAS has been reimbursed by NUMICO to attend conferences and a recent symposium.

- 1 Lewis SJ, Egger M, Sylvester PA, Thomas S. Early enteral feeding versus "nil by mouth" after gastrointestinal surgery: systematic review and meta-analysis of controlled trials. *BMJ* 2001;323:773-6.
- 2 Schroeder D, Gillanders L, Mahr K, Hill GL. Effects of immediate post operative enteral nutrition on body composition, muscle function and wound healing. *J Parenter Enteral Nutr* 1991;15:376-83.
- 3 Haydock DA, Hill GA. Impaired wound healing in patients with varying degrees of malnutrition. *J Parenter Enteral Nutr* 1986;10:550-4.
- 4 Hill GL, Pickford I, Young GA, Schorah CJ, Blackett RC, Burkinshaw L. Malnutrition in surgical patients: an unrecognised problem. *Lancet* 1977;i:689-92.
- 5 Hulsewe KW, Von Meyenfeldt MF, Soeters PB. Nutrition support for the surgical patient. In: J Payne-James, G Grimble, D Silk, eds. *Artificial nutritional support in clinical practice*. London: Greenwich Medical; 605-16.
- 6 Elia M. Metabolic response to starvation, injury, sepsis. In: J Payne-James, G Grimble, D Silk, eds. *Artificial nutritional support in clinical practice*. London: Greenwich Medical; 1-24.
- 7 Keele AM, Bray MJ, Emery PW, Duncan HD, Silk DB. Two phase randomised controlled clinical trial of postoperative oral dietary supplements in surgical patients. *Gut* 1997;40:393-9.
- 8 Beier-Holgersen R, Boesby S. Influence of post operative enteral nutrition on post surgical infections. *Gut* 1996;39:833-5.
- 9 Silk DBA, Green CJ. Peri-operative nutrition: parenteral versus enteral. *Curr Opin Clin Nutr Metab Care* 1998;i:21-7.
- 10 Heslin MJ, Latkany L, Leung D, Brooks AD, Hochwalk SN, Pisters PWT, et al. A prospective randomised trial of early enteral feeding after resection of upper GI malignancy. *Ann Surg* 1997;226:567-80.
- 11 Watters JM, Kirkpatrick SM, Norris SB, Shamji FM, Wells GA. Immediate postoperative enteral feeding results in impaired respiratory mechanics and decreased mobility. *Ann Surg* 1997;226:367-80.
- 12 Reynolds JW, Kanwar S, Welsh FKS, Windsor ACJ, Murchan P, Barclay GR, et al. Does the route of feeding modify gut barrier function and clinical outcome in patients after major upper gastrointestinal surgery. *J Parent Ent Nutr* 1997;21:196-201.
- 13 O'Boyle CJ, MacFie J, Mitchell CJ, Johnson D, Sagar PM, Sedman PC. Microbiology of bacterial translocation in humans. *Gut* 1998;42:29-35.

Equity versus efficiency: a dilemma for the NHS

If the NHS is serious about equity it must offer guidance when principles conflict

Concerns about equitable provision and financing of health care have characterised the NHS since its foundation. Evidence of persisting and, in some cases, widening health inequalities, gathered since the publication of the Black report,¹ has progressively raised equity to a high rank among health policy objectives.² Though the general aim of reducing health inequalities appears uncontroversial, the practical notions of equity that should inform policy and the ways in which these should be implemented are far from clear. Even more importantly, there is no consensus on how to deal with policies that may cause a conflict between the goals of equity and efficiency—that is, those that may improve efficiency while increasing health inequalities or improve fairness while decreasing efficiency. The equity versus efficiency dilemma³ has been virtually ignored in the political debate, often leading to inconsistent judgments in the development of health policies.

In a report recently published by the NHS Health Technology Assessment programme⁴ we examined examples of the equity-efficiency dilemma that the NHS is facing. The analysis of three case studies—cervical cancer screening, renal transplantation, and neonatal screening for sickle cell disease—shows inconsistencies between NHS policies and a lack of guiding principles to support the pursuit of equity in health care.

The NHS policy on cervical cancer screening has been primarily aimed at maximising coverage by using powerful economic incentives to general practitioners. The issue of low participation by women at high risk⁵ (particularly those in disadvantaged socioeconomic groups⁶) has been less of a concern. The programme could have achieved the same cost effectiveness with less extensive but more even coverage. The number of cases of invasive cancer avoided in 1997 is likely to be 60-85% of the number of cases that might have been avoided if screening rates had increased uniformly in different social groups after the introduction of target payments to general practitioners.⁴ The equity principle underlying this NHS policy is one of equal access (rather than outcome) for all women, where access is defined purely from the perspective of the healthcare provider.

Renal transplantation consistently generates health improvements and economic savings, but kidneys are in short supply and priorities for access to this service must be set. The UK Donor Kidney Allocation Scheme⁷ provides an allocation algorithm in which the recipient's age plays an important part. Priority is given to recipients aged 0-17 over those 18 and older, and within the older group a decreasing priority is associated with increasing age. Younger recipients are favoured in the allocation of younger donors' kidneys, with greater survival benefits. These age priorities are not fully supported by evidence on effectiveness⁸ and

BMJ 2001;323:762-3

efficiency⁹ grounds, but—of more relevance for our purposes—not even on equity grounds, as some studies have shown that the public would rank older children over younger ones.^{10 11} Although explicitly formulated in some respects, this NHS policy again appears to lack a clear reference to a guiding equity principle.

Sickle cell disease disproportionately affects certain ethnic minority groups. The UK Standing Medical Advisory Committee recommended the use of universal, rather than selective, neonatal screening policies when ethnic minorities with a high risk comprise more than 15% of the population.¹² At this threshold the cost of universal screening is as high as £430 000 to £1m per life year saved (depending on the ethnic minority mix) compared with selective screening.³ The adoption of universal screening does not appear to be justified by concerns for equity across ethnic groups, as the benefits to the white northern European majority would still be very small. Rather, it aims at reducing the number of cases missed because of inaccuracies in the selection. This NHS policy may reflect an aspiration to equal access for equal need, but one pursued at a very high cost. Significant efficiency gains may be sacrificed for what seems to be an inappropriate conception of equity in this context.

More examples of inconsistency can be found among current NHS policies, and even greater variation could be unveiled. But is it realistic to expect health policymakers to develop sound and consistent policies in the absence of evidence about the distributional effects of healthcare provision? Is it realistic to expect them to address the equity versus efficiency dilemma? A systematic review of the literature on healthcare economic evaluations published in 1987-97⁴ shows a complete neglect of the equity dimension within the studies surveyed. Not only did these studies fail to incorporate equity measures in their cost effectiveness calculations, they did not even provide enough information for decision makers to make their own judgments about the distributional impact of

given policies—for example, on the characteristics of the population affected by the policy or on the policy's effectiveness and cost effectiveness in subgroups.

Our three case studies show the lack of a clear and consistent definition of equity and the failure to strike an acceptable balance between the policy goals of equity and efficiency when these conflict. In different ways researchers and policymakers share responsibility for the inconsistent pursuit of equity in the NHS.

Franco Sassi *lecturer in health policy*

(f.sassi@lse.ac.uk)

Julian Le Grand *Richard Titmuss professor of social policy*

Department of Social Policy and LSE Health and Social Care, London School of Economics and Political Science, London WC2A 2AE

Luke Archard *research fellow*

Health Policy Unit, Department of Public Health and Policy, London School of Hygiene and Tropical Medicine, London WC1E 7HT

- 1 Department of Health and Social Services. *Inequalities in health: the Black report*. London: DHSS, 1980.
- 2 Department of Health. *Saving lives: our healthier nation*. London: Stationery Office, 1999.
- 3 Wagstaff A. QALYs and the equity-efficiency trade-off. *J Health Econ* 1991;10:21-41.
- 4 Sassi F, Archard L, Le Grand J. Equity and the economic evaluation of health care. *Health Technol Assess* 2001;5(3).
- 5 National Audit Office. *The performance of the NHS cervical screening programme in England*. London: Stationery Office, 1998.
- 6 Brown J, Harding S, Bethune A, Rosato M. Incidence of Health of the Nation cancers by social class. *Population Trends* 1997;90:40-7.
- 7 United Kingdom Transplant Support Service Authority. *New kidney allocation scheme*. Bristol: UKTSSA, NHS Special Health Authority, 1999.
- 8 Wolfe R, Ashby V, Milford E, Ojo AO, Ettenger RE, Agodoa LY, et al. Comparison of mortality in all patients on dialysis, patients on dialysis awaiting transplantation, and recipients of a first cadaveric transplant. *N Engl J Med* 1999;341:1725-30.
- 9 Garner T, Dardis R. Cost-effectiveness analysis of end-stage renal disease treatments. *Med Care* 1987;25:25-34.
- 10 Buschbach JJV, Hessing DJ, de Charro FT. The utility of health at different stages in life: a quantitative approach. *Soc Sci Med* 1993;37:153-8.
- 11 Lewis PA, Charny M. Which of two individuals do you treat when only their ages are different and you can't treat both? *J Med Ethics* 1989;15:29-32.
- 12 Department of Health. *Report of a working party of the Standing Medical Advisory Committee on sickle cell, thalassaemia, and other haemoglobinopathies*. London: HMSO, 1993.

Screening for prostate cancer in the UK

Seems to be creeping in by the back door

Screening for prostate cancer is controversial. Findings from systematic and other reviews consistently conclude that there is insufficient evidence to recommend its introduction because of concerns that it may not improve survival or quality of life and may thus cause more harm than good.¹⁻³ Current government policy in the United Kingdom, expressed in the NHS prostate cancer programme, confirms this view, but adds that “any man considering a PSA [prostate specific antigen] test will be given detailed information to enable him to make an informed choice about whether to proceed with a test or not.”⁴ This implies that asymptomatic men may have the test if they want, so there is now ambiguity about whether screening is supported and confusion about what this policy means in practice.

The assumption may be that most men will not want to be tested once they are informed of the uncertainties. In the United States several studies have shown that informed choice can reduce prostate specific antigen testing in some groups by up to one half.⁵⁻⁷ But this may not apply in the United Kingdom. A systematic review of the use of decision aids has shown that though such aids result in higher levels of knowledge, they have variable effects on the decisions themselves, with reduced preferences for prostate specific antigen testing found in two studies but no effect in two others.⁸ Further, close inspection of the landmark study⁵ shows that though prostate specific antigen testing was reduced by half among scheduled clinic attenders who viewed a video, a parallel (rarely quoted) trial found that only 3 out of 206 men attending free prostate spe-