

the same scale as those that improve the quality of life? Furthermore, is it possible—or, indeed, useful—to apply QALY ratings derived from data on groups to individual patients? There is obviously variation within groups: as the report comparing the four treatments concedes, “the number of QALYs gained can vary considerably on the characteristics of the patients undergoing the treatment.” It follows that any health authority that diverted resources from one activity to another on the grounds that it bought more QALYs might well thereby prevent individual doctors from operating in cases with a higher yield than those in the favoured group. No wonder that one critic of the QALY approach has concluded that the exercise is “dependent on a wide range of assumptions for which little or no evidence is provided.”⁶

Using QALYs to illustrate the limitations of economics in health care is perhaps unfair because the technique is new. Even Professor Williams, in his reply to the York sociologists in the book, concedes that there are methodological difficulties and that much work remains to be done to develop the technique. He argues, however, that its use is justified by the lack of alternative tools of analysis: better to use a flawed technique that gives visibility to the criteria being used than to muddle through. But if the QALY approach were a new medical technology economists would probably be demanding stringent assessment before it was used in the NHS. And the York sociologists show that economic analysis is generally much messier in practice than it purports to be in theory.

This is not to decry health economics, and the York

sociologists do not aim at a demolition job. Rather they show that economics, like other disciplines that claim to be scientific, is much less tidy than the textbooks imply; that science is a process of argument rather than revelation. Within the NHS economics has introduced conceptual tools and forced everyone to think in terms of opportunity costs and the relation between inputs and outcomes. Economists should, however, have only a supporting role—Rosencrantz, not Hamlet. There are many kinds of rationality, of which the economic variety is only one. The challenge for the 1990s is to ensure that the framework of decision making in the NHS allows dialogue among these various kinds of rationality. Ironically, it has been argued that the best model of public policy making is provided not by economics but by medicine.⁷ The process should be based on experiential knowledge; cautious experimentation; and incremental decisions, informed but not dictated by science.

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Ignorance about listeria

Rational advice on control must await better evidence

The recent report from the House of Commons social services committee on listeria and food poisoning received far more press attention than most of the committee's reports.¹ Listeria is the “bug of the moment,” and reports in both the press and the *BMJ*² concentrated on the statement that the Department of Health had been slow to warn pregnant women of the dangers of listeria. Much was made of the department having asked the Royal College of Obstetricians and Gynaecologists to alert its members to the hazards of listeria in 1987. The committee did criticise the department for giving information on food safety in “dribs and drabs,” but it also acknowledged the dilemmas inherent in giving guidance to the public. Few of the press reports mentioned these dilemmas. In the United States the authorities generally present the information and let the public make up its own mind, whereas in Britain the tradition is to give guidance. It might be that the British authorities would do better to follow the American practice. But whatever the problems of giving guidance to the public, the chief medical officer's letter on listeriosis sent to all doctors on 16 February this year was timely, clear, and useful.

The Social Services Committee acknowledged the upward trend in food poisoning in Britain and learnt of the substantial underreporting of this condition.¹ Not all affected patients go to their doctor, and specimens of faeces, the most inconvenient of samples to collect, are not always submitted for investigation. Notification by doctors of food poisoning, although statutory, is far from complete. Confidential reporting to the Public Health Laboratory Service Communicable Disease Surveillance Centre is voluntary and is more conscientiously

performed by laboratories that are part of the service—they produce half of the reports but account for only 15% of microbiological laboratories in England and Wales.³ Privatising laboratories would be unlikely to improve matters. Thus, although available figures probably reflect trends adequately, the size of the problem is still a matter for speculation. If public awareness encourages more patients with diarrhoea and vomiting to see their doctor there must also be a greater willingness by doctors to investigate and notify infection and by laboratories to report positive results to the Communicable Disease Surveillance Centre.

The report recommended that the government should take the lead on food safety and ensure that its policies are coordinated.¹ The Committee on the Microbiological Safety of Food chaired by Sir Mark Richmond will undoubtedly play a key part in advising the government in many ways, particularly in preparing the proposed food bill. Some developments, such as the recent change in legislation to permit some irradiation of food, are already occurring. Conflicts may, however, arise between green interests and perceived consumer demand. How, for example, do we reconcile the requirement for food with a long shelf or refrigerator life with the request from some members of the public to reduce food preservatives? Such questions must be resolved by the government and its health advisers, the food industry, equipment manufacturers, and consumer representatives if we are to move beyond our current diet of food scares in the media.

Listeriosis is difficult to study because the disease is rare,

whereas *Listeria monocytogenes* is commonly found in the environment and in food. Nevertheless, the aetiology of listeriosis will not be properly understood until we have better information on the incidence, levels of contamination, and conditions for survival and destruction of listeria in a wide variety of foods. With very few exceptions,^{4,5} sporadic cases of listeriosis have not been linked with the consumption of any particular food. Foods implicated in the outbreaks of listeriosis, such as raw vegetables,⁶ coleslaw,⁷ milk,⁸ and soft cheeses,⁹ have generally been eaten without further heating. Meat paté is the latest, but surely not the last, casualty in the hunt for listeria in food.

Although cook-chill catering has been the subject of concern, adequate reheating of cook-chill meals will substantially, though not completely,^{10,11} reduce the risk of consuming micro-organisms that may have multiplied during chill storage. The Department of Health's revised and recently published guidelines on cook-chill and cook-freeze catering systems¹² include the requirements that *L. monocytogenes* should not be detectable in 25 g of food at the end of chill storage; that reheating should achieve a core temperature of at least 70°C for two minutes; and that the food should be served as soon as possible and in any case within 15 minutes of reheating.

More research into the safety of cook-chill and other modern forms of food provision is urgently needed. The recommendation from the Social Services Committee that the government should review its policy to withdraw funding from agricultural and food research for the "public good" and should continue to support such research actively even when it falls into the category of "near market" research is to be

applauded.¹ There is, however, an even more pressing need for national case-control studies to address the many unanswered questions in the epidemiology of listeriosis. Such a study was started recently by the Communicable Diseases (Scotland) Unit, and a pilot study by the Communicable Diseases Surveillance Centre is now under way in England and Wales. Until better information is available we lack a sound basis for rational decisions about the control of listeriosis and "listeria hysteria" will continue to flourish.

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The Bamako initiative

Financing health in Africa by selling drugs

To treat a child with pneumonia for \$2.50 may seem a bargain, but in Mozambique this might be more than a tenth of a family's monthly income.¹ This is an example of one of the dilemmas facing the United Nations Children's Fund (Unicef) through its proposal to sell drugs at a profit to help fund primary health care in the countries of subSaharan Africa.² The Bamako initiative—so called because it was introduced at a meeting of African health ministers in Bamako, Mali—is poised to start: Unicef will provide free drugs to participating countries for the first few years; the drugs will be sold to patients; and communities will control the finances. The aims are to establish a revolving drug fund to pay for future drug supplies and to use money left over to maintain and improve primary health care services.

The initiative arose in response to the increasing poverty and reducing resources for health care in Africa caused by falling commodity prices and the strain of loan repayments. There is simply not enough money for health. The Bamako initiative is a fresh strategy to finance health services and prevent them collapsing completely. Though new ideas are desperately needed, organisations and staff working in Africa are concerned that selling donated drugs may not be the answer.^{3,4}

Equity is at risk: charging users may reduce utilisation by the poor. Unicef maintains that people are willing to pay, but the real issues are whether they are able to and at what cost to themselves and their families. Although Unicef agrees

that provision of free service for "indigents" is necessary,⁵ identifying these people presents problems. Discretionary powers are likely to rest with health staff, who will come under strong pressure to provide free services to friends, family, and others to whom they are obliged. The penniless may stay away from fear of being asked for money. Others may wish to avoid the humiliation of being labelled indigent.

The innovative idea of community financing will be difficult to implement.¹ Rural populations are expected to manage the money collected from drug sales and decide how it will be spent in improving and extending primary health care services. In many countries managerial skills are rare and local supervision poor; administration is thus likely to be chaotic. Misappropriation and mismanagement of funds could easily occur. In a scheme in Ghana fees collected were not even reaching the fund; they were being kept by the doctor.⁶

Whether the initiative can be sustained is also in doubt: Unicef initially proposed large mark ups on the basic cost of the drugs; now partial recovery of the cost is proposed, although how charges will be set is unclear. Revenue will be in local currency and thus will buy few replacement drugs from overseas. What will happen when the free drugs stop? The Bamako initiative could inadvertently result in health service financing being dependent on a continuous supply of drugs from donors. In fact many countries could make substantial savings without charging by introducing an essential drugs policy along the lines advocated by the World Health