



THE DOCTOR'S (ETHICAL
AND ECONOMIC) DILEMMA

Professor David L Sackett



Annual Lecture 1996

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*A description of the dilemmas faced by a
physician who tries to serve both individual
patients and society*



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FOREWORD

In this OHE lecture Professor Sackett sets out a compelling case for evidence-based medicine to be at the core of a comprehensive, tax-funded NHS that enjoys the confidence of the whole population. He also sets out his personal view as to how the conflict between a doctor's responsibilities to each individual patient and to society can be minimised and managed, but not eliminated.

Myths abound as to what evidence-based medicine is, and as to who will win and lose from its acceptance. Some myths take as a starting point the view that evidence-based medicine is an attack on the medical profession. Professor Sackett explains why this is not the case. He sets out very clearly that the practice of evidence-based medicine involves 'integrating individual clinical expertise with the best available external clinical evidence from systematic research'. He cites audits that show that good clinical teams are already providing evidence based care to the majority of their patients. It is not 'cook-book' medicine that threatens professional judgement. This is because individual clinical expertise 'decides whether the external evidence applies to the individual patient at all, and if so, how it should be integrated into a clinical decision'. It is not cost cutting – applying 'the most efficacious interventions to maximise the quality and quantity of life for individual patients' may 'raise rather than lower' the cost of their care.

We can therefore move on to confront another set of concerns that assume evidence-based medicine is part of a fight back by the medical profession against politicians, managers, economists and others who are seen as wanting to erode the power of the medical profession. Professor Sackett is clear that it is not a cover for complacency on the part of doctors. 'Without current best external evidence, practice risks becoming rapidly out of date'. Any thought that most doctors already practice evidence-based medicine 'falls before evidence of striking variations... in the rates with which we provide interventions' which cannot be justified by differences in patient characteristics.

He acknowledges that there will be conflicts between evidence-based medicine (which is about the 'conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients') and group objectives of making the best use of limited health care resources ('optimising the total cost-utility in that group'), noting that his offering 'of specific health care manoeuvres to my patient may contradict distributive justice (the fair, equitable, and appropriate distribution of benefits and burdens to everyone)'.

On this relationship between evidence-based medicine and issues of

cost effectiveness and rationing, Sackett is both thoughtful and thought provoking. He argues that he, as a doctor, recognises the need to ration care and society's right to do this. Indeed he has willingly participated in committees tasked to draw up restrictions, and argues for more information on the cost-utility of manoeuvres to inform these processes. He as a doctor will accept the resultant 'restrictions on access rules' if they are relevant to his patient and if they are ethical. However, as a doctor he must reserve the right to decide whether the rationing rules are ethical. In effect he is saying that the doctor cannot become merely a tool of society. Whilst we hope rationing in the NHS will be ethical, in other health care systems it may not be – the human rights of some groups may be denied. Society does not want its doctors to always do what they are told by the government, their professional ethics are part of our freedoms. Moreover, even if the 'rules' have been drawn up ethically, there will still be dilemmas that the doctor must have the right to resolve in favour of the patient.

This is an uncomfortable message for many health economists and managers who may fear that this approach can be hijacked by physicians who do not want their autonomy eroded by rationing decisions. However, it may well be that only by recognising and respecting the conflicts caused by the responsibility of the doctor to his or her patient, that consensus on approaches to rationing can be achieved. Indeed Professor Sackett sets out how these dilemmas can be minimised, notably by the generation and use of more information on effectiveness and cost-utility, to expand and restrict care, depending on evidence.

I believe that he is right. No sensible debate about the resourcing of the NHS, rationing (priority setting), or the cost-effectiveness of treatment can be conducted in the absence of a medical profession committed to the provision of evidence-based care. No discussion about restricting the availability of treatment can ignore the need to devise rules and processes that reconcile rationing with the commitment we expect of doctors to individual patients. As Professor Sackett concludes, an evidence based NHS that has rooted out ineffective treatments, and that is transparent about how conflicts between giving every patient the best treatment, and meeting society's overall health care needs are handled, is more likely to have both public confidence and public willingness to pay the taxes needed to fund it.

Adrian Towse
Director, Office of Health Economics

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INTRODUCTION

I am thrilled and humbled once again to be following in the footsteps of Sir Douglas Black. Thirty years ago I aspired to become a nephrologist, and was inspired by both the content and style of his writings in that area. Tonight I aspire to talk to you about health economics from the perspective of a physician, a topic he addressed here two years ago¹. Once again, he said it all, and better! Nonetheless, here we are, and before we part I will attempt to provide some footnotes to the topic at hand.

I do so from the experiences and perspective of a physician who has spent time as a member and chair of groups who set guidelines, as a member and chair of groups who set restrictions on access to health manoeuvres*, and as a hospital physician who serves individual patients. And although I've drawn salaries from universities, governments, and now from the NHS, I've always considered my real employers (i.e., those with the highest call on my loyalty) to be my patients, my students, and the junior doctors on my clinical teams. As I pointed out to our hosts when they first approached me to give this address, I'm a student of neither ethics nor health economics, and my knowledge in these areas is mundane. I told them that I would not provide a prescription of how others should behave, but could offer a description of how one physician behaves, and why. That was good enough for them; we'll see whether it is good enough for you.

Although I will speak of 'principles that guide my decisions' throughout this paper, I rush to emphasise that they have arisen through an iterative process as I began to make these sorts of decisions, rather than emerged full-blown as a previously mastered body of knowledge and understanding the first time they were required. I'm a 'consequentialist' rather than a 'first principles' person. Similarly, the ethical principles described here are defined retrospectively (as terms for the concepts that provided the best matches I've been able to find for my values and the way that I weigh them) rather than prospectively

*In this paper, the term 'manoeuvre' refers to the diagnostic, therapeutic or other clinical actions that might be offered to patients or the public, and includes both 'watchful waiting' and non-intervention.

(as a starting point for determining my values and their weights). Accordingly, I've almost certainly used some of the wrong terms, in some wrong or conflicting ways[†].

For those not warned away to other pursuits by the foregoing, I'll begin by describing the principles that guide my group decisions, and the consequences that follow from their application. Then I will describe the slightly – but crucially – different principles that guide my decisions when dealing with individual patients. To give you a better sense of the latter, and these crucial differences, I'll provide brief descriptions, modified only to disguise their identities, of patients who, as I cared for them, exemplified the situations that often harmonise but sometimes conflict with the decisions I've made as a member of a group.

PRINCIPLES THAT GUIDE MY GROUP DECISIONS

These apply when I am working (typically, with others) as a decision-maker (for a hospital or a regional or national ministry of health) that is acting on behalf of groups of individuals (grouped by society as a whole or by country, county, town, hospital, hospital service [e.g., the medical in-patient unit], clinic, health state, or the like. (That is, these apply when I am NOT making one-on-one decisions with individual patients who have asked me to provide their personal health care). In contributing to decisions about offering clinical and other health care manoeuvres to a group of individuals, the over-riding objective that best describes my actions is that of optimising the total cost-utility in that group[★]. This objective is best met, for me, by integrating principles from three different disciplines: evidence-based medicine, ethics, and economics.

[†]Despite the attempts of some very helpful colleagues like Raanon Gillon to help me understand them better.

[★]Economists whom I respect and have taken time to understand me tell me that my notion of optimisation is not straightforward utility maximisation as it is often described. Rather, mine includes recognising the different characteristics (including needs) of individuals in the group (analogous to weighting 'quality-adjusted life years' or QALYs) and maximising them for whatever resources are available.

EVIDENCE-BASED MEDICINE

Evidence-based medicine, whose philosophical origins extend back to mid-19th century Paris and earlier, is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients². The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical expertise I mean the proficiency and judgement that we individual clinicians acquire through clinical experience and clinical practice. Increased expertise is reflected in many ways, but especially in more effective and efficient diagnosis and in the more thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences in making clinical decisions about their care. By best available external clinical evidence I mean clinically relevant research, often from the basic sciences of medicine, but especially from patient centred clinical research into the accuracy and precision of diagnostic tests (including the clinical examination), the power of prognostic markers, and the efficacy and safety of therapeutic, rehabilitative, and preventive regimens. External clinical evidence often supports current practice but frequently both invalidates previously accepted diagnostic tests and treatments and replaces them with new ones that are more powerful, more accurate, more efficacious, more cost-effective, and safer.

Good doctors use both individual clinical expertise and the best available external evidence, and neither alone is enough. Without clinical expertise, practice risks becoming tyrannised by external evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient. Without current best external evidence, practice risks becoming rapidly out of date, to the detriment of patients.

This description of what evidence-based medicine is helps clarify what evidence-based medicine is not. Evidence-based medicine is neither old-hat nor impossible to practice. The argument that 'everyone already is doing it' falls before evidence of striking variations in both the integration of patient values into our clinical behaviour³ and in the rates with which we provide interventions to our patients. The argument that evidence-based medicine can be conducted only from ivory towers and armchairs is refuted by audits in the front lines of clinical care where at least some inpatient clinical

teams in general medicine⁴, psychiatry⁵, surgery (P McCulloch, personal communication) and general practice⁶ have provided evidence-based care to the vast majority of their patients. Such studies show that busy clinicians who devote their scarce reading time to selective, efficient, patient-driven searching, appraisal and incorporation of the best available evidence can practice evidence-based medicine.

Evidence-based medicine is not 'cook-book' medicine. Because it requires a bottom-up approach that integrates the best external evidence with individual clinical expertise and patient-choice, it cannot result in slavish, cook-book approaches to individual patient care. External clinical evidence can inform, but can never replace, individual clinical expertise, and it is this expertise that decides whether the external evidence applies to the individual patient at all and, if so, how it should be integrated into a clinical decision. Similarly, any external guideline must be integrated with individual clinical expertise in deciding whether and how it matches the patient's clinical state, predicament, and preferences, and thus whether it should be offered. Clinicians who fear top-down cook-books will find the advocates of evidence-based medicine joining them at the barricades.

Some fear that evidence-based medicine will be hijacked by purchasers and managers to cut the costs of health care. This would not only be a misuse of evidence-based medicine but suggests a fundamental misunderstanding of its financial consequences. Doctors practising evidence-based medicine will identify and apply the most efficacious interventions to maximise the quality and quantity of life for individual patients; this may raise rather than lower the cost of their care. As proposed in this paper, using the best evidence to determine resource allocation – evidence-based purchasing – is one essential prerequisite for optimising the cost-utility of health care for society. But that's not evidence-based medicine, and as we'll see toward the end of this paper, the two disciplines occasionally are in conflict.

Finally, evidence-based medicine is not restricted to randomised trials and meta-analyses⁵. It involves tracking down the best external evidence (from systematic reviews when they exist; otherwise from primary studies) with which to answer our clinical questions. To find out about the accuracy of a diagnostic test, we need to find proper

cross-sectional studies of patients clinically suspected of harbouring the relevant disorder, not a randomised trial. For a question about prognosis, we need proper follow-up studies of patients assembled at a uniform, early point in the clinical course of their disease. And sometimes the evidence we need will come from the basic sciences such as genetics or immunology. It is when asking questions about therapy that we should try to avoid the non-experimental approaches, since these routinely lead to false-positive conclusions about efficacy. Because the randomised trial, and especially the systematic review of several randomised trials, is so much more likely to inform us and so much less likely to mislead us, it has become the 'gold standard' for judging whether a treatment does more good than harm. However, some clinical decisions about therapy do not require randomised trials (successful interventions for otherwise fatal conditions) or cannot wait for the trials to be conducted. And if no randomised trial has been carried out for our patient's predicament, we follow the trail to the next best external evidence and work from there.

ETHICS

The medical ethical principles that best describe what I am trying to apply here are group-directed beneficence (the moral obligation to act for the benefit of others), group-directed non-maleficence (the moral obligation to act so as not to harm others), distributive justice (the fair, equitable, and appropriate distribution of benefits and burdens), and group-directed respect for autonomy (group self-determination of utilities)⁷. It necessarily follows that patients and society at large must be part of any group exercising these principles in developing health policy.

⁷The randomised control trial is a study in which consenting patients are assigned, by a system analogous to tossing a coin, to receive different manoeuvres and then followed to compare the health effects of those manoeuvres. Such trials have established the health benefits of thousands of vaccines, medications, and operations, as well as the uselessness of others. A meta-analysis is a strategy for combining the results of several similar randomised trials into a single, more powerful estimate of the effects of the treatment of interest.

ECONOMICS

From the third discipline, health economics, the principle I apply is the 'opportunity cost' (or 'cost as sacrifice'). For me and my colleagues, this leads to the realisation that the real cost of offering manoeuvre A to patient B or Group C is not measured in money, but in the fact that we cannot offer that same or some other manoeuvre to some other patient or group (or to some non-health-related activity such as education). When all the medical beds at my hospital are already filled and I admit a patient to a surgical bed tonight, the opportunity cost for that admission includes the lost health benefits for the elective surgical patient whose admission and operation is cancelled tomorrow. Although all of us pay opportunity costs all the time (think of what else you could be doing with the time you're spending reading this paper!), in health matters my colleagues and I often behave as if we were ignorant of it or of how it should affect our decisions.

When valid data generate cost-utility analyses that are 'robust', (that is, their recommendations are not reversed by clinically- or economically-plausible variations in their components), I believe that it is appropriate to integrate them with information on patient characteristics and decide who should, and who should not, be offered the respective manoeuvres. Thus, I find it appropriate that restrictions be placed on access to the manoeuvres for all or some groups or individuals. However, I believe that such 'restrictions on access' should be established only by bodies that include patients and members of all the relevant fields of human values, patient choice, human biology, evaluative science, clinical and health care, decision analysis, health economics, health care management and financing, and the like.

Moreover, I recognise that valid data on efficacy, effectiveness, costs, and utilities may not be available, or may be of low validity or precision. When the required data are non-existent or otherwise unavailable, these analyses are impossible and the only rational policy is one directed toward generating the necessary evidence. There are lots of guidelines that should not be written! Moreover, when data are of low validity or precision, sensitivity analyses must take these deficiencies into account, and I should not be surprised to discover that these sensitivity analyses will show opposing policies and conflicting guidelines to be equally plausible. Because the 'absence of proof' of efficacy is not the 'proof of absence' of efficacy, the rational policy again becomes the one that leads to the generation of the necessary evidence.

Principles that guide my Individual Decisions when working one-on-one with individual patients:

When I *am* making one-on-one decisions with individual patients who have asked me to provide their personal health care, my decisions about offering and providing clinical and other health care manoeuvres begin by considering evidence of their effects on my individual patient's utility* (rather than on some group's total cost-utility). Thus, although the principles I apply from evidence-based medicine are the same as before, the set of ethical principles that best characterise my values and motives changes, and sometimes also my economic perspective (from that of the group to the individual). These different principles and perspectives may be in conflict, and this conflict leads to the doctor's dilemma.

The medical ethical principles that best fit my actions here are individually-directed beneficence (the moral obligation to act for the benefit of an individual patient), individually-directed non-maleficence (the moral obligation to act so as not to harm an individual patient), individually-directed respect for autonomy (individual self-determination of utilities) and my obligations to give my patient disclosure, privacy, and confidentiality. In doing so, I must recognise that individually-directed and group-directed beneficence and non-maleficence may be in conflict, and that my resultant offer of specific health care manoeuvres to my patient may contradict distributive justice (the fair, equitable, and appropriate distribution of benefits and burdens to everyone).

As we shall see, I don't ignore the group orientation to economic considerations, but strive to seek manoeuvres that serve both individual utility and group cost-utility. In doing so, however, I must identify and confront the situations in which maximising my individual patient's utility involves opportunity costs that dis-serve society's cost-utility.

Five sorts of clinical encounters place clinicians like me at the interface between individual and group considerations of economic and ethical principles. Three of them I can resolve (at least to my satisfaction); two of them I cannot.

Encounter #1: *A retired auto-worker developed a sudden, severe headache*

*That is, their quality of life, and the extent to which the manoeuvres I offer them match their goals and expectations.

and collapsed. He was brought to my hospital by ambulance and when I examined him he was lying perfectly still in bed, as if in a deep sleep, but could not be aroused. A quick check of his eyegrounds (retinal vein pulsation was absent) suggested increased pressure inside his skull, and a head scan confirmed a massive intracerebral haemorrhage with extension into his cerebrospinal fluid space. His chances for ever again being able to communicate or care for himself were near-zero, but we could have operated to relieve the pressure inside his head and we could have connected him to sophisticated technology that would breathe for him and maintain his life, at least for days and perhaps indefinitely. I cradled his head in my arms and talked to his family, not about the manoeuvres we could or might carry out, but about his prognosis and the goals of therapy they reckoned he would want us to try to achieve on his behalf (cure was not achievable, but we could strive to prolong his life, or we could focus on maximising his comfort and dignity as he died). They were unanimous that he would not wish to live in a dependent state and that he would request a comfortable, dignified death. I told them how this goal translated into our management (no tests, no blood pressure or temperature checks, no intravenous feeding or the like, but lots of gentle touching and attention to keeping him comfortable, his mouth moistened, and his family informed and provided with quick access to any of us on the team). He died peacefully 5 hours later, shortly after an out-of-town grand-daughter arrived and embraced him.

In this situation, the goals of the individual patient and society were identical, and in avoiding the opportunity costs of life-sustaining manoeuvres in order to achieve the goals of therapy I could act in a way that satisfied both sets of economic and ethical principles. Fortunately, this situation applies widely in clinical care, and not just in the withholding or withdrawal of expensive manoeuvres. Many manoeuvres do well (economically) while doing good (in health terms). For example, it has been estimated that UK society benefits to the tune of almost £2000 over 3 years^{**} every time a heart attack survivor is placed on a specific drug (a beta-blocker)⁸. Moreover, less expensive alternatives exist for many manoeuvres (generic drugs, day surgery, single-dose drug treatments, etc), and clinicians who are mindful of the opportunity costs of what they do seek and apply these alternatives.

^{**}These data do not inform us whether these benefits extend into later years. Moreover, if the cost of this drug is borne by the constrained drug budget of a GP, they may have to sacrifice alternative manoeuvres that produce more health gain.

Finally, the discontinuation of costly manoeuvres, when they are shown to be ineffective, frees up resources for other, better uses. For example, the performance of an expensive neurosurgical operation (extracranial-intracranial bypass) fell by more than 80 per cent within 18 months of the demonstration, in a randomised trial, that it was ineffective. Although the economic arguments for discontinuing useless medical manoeuvres are convincing, the compelling argument for their abandonment among clinicians is not that performing them is expensive, but that performing them is stupid.

In summary, in Encounter #1 when the consideration of how to maximise my individual patient's utility nominates manoeuvres that also optimise the total cost-utility in groups of patients, or comply with guidelines that optimise the total cost-utility in groups of patients, all is in harmony and I offer (or withhold) the manoeuvre straight-away.

Encounter #2. *A salesclerk was admitted for her third episode of chest pain. We discovered that her symptoms could be precipitated by asking her to take several rapid, deep breaths (hyperventilation) and could be relieved by having her breathe into a paper bag. We diagnosed a somatoform disorder (panic attack). From her age and symptoms, the probability that she had serious coronary heart disease was so low (about 1 per cent) that further diagnostic testing was both unnecessary and, in the case of an exercise test, uninformative even if positive. Nonetheless, she requested a 'full investigation' of her complaint. I accepted her symptoms, explained my evaluation of their cause, outlined an approach to preventing or minimising them, and refused to carry out further testing. She disagreed with my decision, and considered my offer to link her to another physician, but decided against it.*

In this second situation, when a patient in my care requests a manoeuvre in the mistaken belief that it would maximise their individual utility, but sound external evidence shows that it would not, I believe that I am not obligated* to provide that manoeuvre (but should aid the patient who disagrees with my decision to obtain the services of another physician). This is another example in which evidence, in the form of sound information about the accuracy of diagnostic tests and prognostic markers, can support clinical practice that is both effective and efficient.

*In doing so, I must recognise that my position here contradicts at least some formulations of 'Patient Choice'.

But when the manoeuvres that would maximise my patient's utility have opportunity costs that conflict with guidelines or would otherwise impair the achievement of optimal cost-utility for groups (that is, they would conflict with distributive justice and group-directed beneficence and non-maleficence) I face the dilemma that I cannot fully serve both my patient and society. I have confronted this dilemma in the final three encounters:

Encounter #3. A retired banker with stable angina pectoris and stenosis of a single, non-critical coronary artery was on the waiting list for coronary bypass surgery (sound external evidence has shown that surgery would improve his symptoms but not prolong his life). After a dispute with his spouse, he stopped taking his anti-angina medications and his chest pain became both more frequent and more severe. Admitted to our service, his symptoms quickly reverted to their previous level and he was placed back in his former spot on the waiting list. He protested that he wanted his surgery now rather than in turn. Because I agreed with the validity of the wait-list policy for patients with non-critical coronary stenosis, I told him that I would not support his request, but offered to link him to another physician. Two weeks later he bought his operation in the private sector.

In this third type of encounter, if I judge a clinical policy or guideline to be both valid (for my patient) and ethical (for the target groups), I comply with the relevant 'restrictions on access' rules and inform the patient of my concordance with this restriction (aiding the patient who disagrees with my decision to obtain the services of another physician). In doing so I must recognise that I am placing the needs of society above those of my patient (in this case, although he would not lose any quantity of life by staying on the waiting list, he would lose quality), and I believe that patients must be informed of these restrictions when they apply to them.

These 'restrictions on access' are sensitive to a number of influences. For example, they must increase when resources are fixed and new research presents us with sound evidence on better (but costlier) alternative ways of improving patients' individual utilities, or when the numbers of individuals who could benefit from a manoeuvre increase (as with the ageing of a national population). Alternatively, they can fall if society decides to devote a greater portion of its wealth to health, or when new research presents us with sound evidence on manoeuvres that are both effective and less expensive than those they replace.

Encounter #4. A previously healthy man suddenly developed crushing

chest pain and was rushed to our hospital by ambulance. Our team quickly established that he was having a heart attack and deserved 'clot-busting' treatment. At our hospital, the policy was to treat such patients (for their first heart attacks) with a specific, well-proven, relatively inexpensive drug (streptokinase) despite evidence that a more expensive alternative drug (tPA) was superior (such that for every 100 patients treated with tPA, an additional life would be saved). When we examined our patient's electrocardiogram, we determined that he belonged to a subgroup of heart attack victims in which the more expensive drug was very much more effective than the cheaper drug in terms of saving lives, and gave him the more expensive drug.

In this case, we judged that the same body of evidence that supported an economically-determined policy for selecting a less expensive treatment for the average patient also supported offering a more expensive treatment to a subgroup of patients. In resolving this dilemma on the side of the individual patient, opportunity costs were incurred, and we breached a hospital policy. We reported the incident to our managerial superiors with the request that the policy be reviewed to take into account patients such as ours. But this was done in addition to, not instead of, treating the patient with the more expensive drug. In summary, when I judge a clinical policy, guideline, or restriction to access to be invalid for my patient (due either to low-quality evidence or because individual, unique features of my patient render the guideline inapplicable to them), I ignore it and strive to offer and provide the manoeuvre.

Encounter #5. An elderly home-maker was admitted late one Friday night, in shock after vomiting large amounts of blood. We immediately transfused her while seeking information about her past history, and learned from her family that she had not been told of a cancer diagnosed four months previously. Endoscopy confirmed that her cancer had spread to her upper bowel (duodenum) and had invaded a blood vessel in such a way that the bleeding could not be stopped. We could, however, keep her alive, conscious, and clear-headed as long as we maintained continuous transfusions of blood and clotting factors. When we told her of our findings and her prognosis (a few weeks at best if she wasn't bleeding) she became very angry and insisted that she wanted to be kept alive as long as possible. We recognised the substantial opportunity costs of transfusion (we were administering over 2 'pints' of blood products per hour) and discussed our possible courses of action, given this clear conflict between individual and societal goals. Her family thought she had suffered enough but wished to leave the decision about goals of therapy to her as long as she was conscious. We rejected half-way strategies (e.g., slowing the

transfusion until she lost consciousness) and decided on a 6 hour trial of transfusion and, if the patient wished, additional information about her illness and discussion about her wishes. A member of our team stayed with her through the night, responding to her questions and comments, and in the fifth hour, realising that it would mean stopping her transfusions, she requested that we change the goals of therapy to the pursuit of comfort and dignity (despite a relieving tube in her stomach, she now was passing large amounts of blood in her stool). She spoke briefly with her family and our team, the transfusions were stopped, and she died in 75 minutes. She had received 16 'pints' of blood products.

Our decision to use scarce resources to keep this patient alive while she came to grips with her terminal illness was a clear breach of societal goals. The blood products and other manoeuvres she received would better have been given to other patients. When I have described this encounter to other clinicians (and economists!), some have supported our actions and others have condemned them. I do not believe that there is a 'right' answer to this ethical dilemma, but make a plea that it be recognised as an inevitable consequence of the rationing of health care*.

Identifying specific encounters of this dilemma to my administrative superiors, in the hope that they can allocate resources to meet future, similar encounters, is part of my responsibility, but I do it in addition to, not instead of, carrying out what I judge to be my responsibility to my patient. If I judge the clinical policy, guideline, or restriction to access to be unethical, either for my patient or for the target group, I ignore it and strive to offer and provide the manoeuvre.

*The history of the debate about health care rationing is not central to this paper, so I have not traced the arguments on whether we are, or need to, ration health resources. To the extent that rationing exists whenever a health manoeuvre judged efficacious is withheld from anyone because of a scarcity of trained individuals, materials, or facilities, I reckon that health care rationing began shortly after the first stone age clinician used a trephine to open the skull of a schizophrenic. For a more recent discussion of rationing see three articles by Smith, Leneghan et al, and New in the BMJ of 22 June 1996 (Vol 312 pp1553-4, 1591-3, 1593-1601 respectively).

MINIMISING THE DOCTOR'S DILEMMA

Having identified what I and other clinicians experience as inevitable conflicts between our responsibilities to individual patients and our responsibilities to society, how might these conflicts be minimised? Six strategies are of actual or potential help here, and all of them call for the generation of more and better evidence³.

1. eliminate useless or harmful clinical manoeuvres:

As described under the first encounter, patient-centred research (especially randomised trials) sometimes identify clinical manoeuvres that are useless or harmful to patients. These represent 'lose-lose' situations, for their performance invokes only opportunity costs, but no (or even negative) health benefits. The discontinuation of costly manoeuvres, when they are shown to be ineffective, frees up resources for other, better uses. To benefit from this strategy, we need to expand the patient-centred research that identifies and systematically reviews the health consequences of preventive, diagnostic, therapeutic, and rehabilitative manoeuvres. The NHS Research & Development Programme's Technology Assessment initiative and the work of both the Cochrane Collaboration and the York Centre for Reviews and Dissemination are major contributors to this strategy.

2. expand effective, cost-saving clinical manoeuvres:

Some manoeuvres are 'win-win', leading to both health benefits and reduced costs, the latter usually as a result of preventing illnesses that are expensive to treat. Immunisations ('primary' prevention) lead this list, followed by some manoeuvres that detect diseases in their early, more easily and cheaply treated stages ('secondary' prevention), plus occasional manoeuvres that prevent expensive recurrent or progressive illnesses ('tertiary' prevention). The identification of 'win-win' manoeuvres requires both basic research (to nominate them) and patient-centred research (to confirm or reject them).

³Also important, but not for this paper, is evidence on how to identify and remove the barriers that prevent or impede changes in professional behaviour.

3. use equally effective but less expensive alternative clinical manoeuvres:

Prescribing cheaper but equally effective 'generic' drugs frees up resources for other use. So does providing equally effective clinical and other health care in less expensive settings or by less costly health professionals. The identification and dissemination of such alternatives deserves the high priority it is beginning to receive.

4. determine and apply the cost-utility properties of clinical manoeuvres:

Those who plan and pay for health services (including clinicians when acting in group roles) need more and better information about the cost-utility properties of existing as well as new clinical and health care manoeuvres. Valid, reliable evidence is scarce here, but setting group priorities is impossible without it. The quality and quantity of economic analyses are rising, and their performance and continuing evolution should be among the highest priorities in health research. Besides establishing, through appropriate research, solid evidence of even better, cheaper ways to care for patients, we can work, at the group level, to improve the identification of the benefits, risks and costs of current manoeuvres among clinically sensible subgroups of patients. When that process identifies subgroups of patients who deserve, on overall cost-utility grounds, to be exempted from generic restrictions to access to specific manoeuvres, the policies can be revised, ending that dilemma.

5. inform the public:

In addition to their roles as consumers the public, through governments and insurers, decide the amount of resource that goes to providing health services. To the extent that their determination is influenced by evidence of effectiveness, they deserve to be well-informed. The gloomy conventional wisdom that 'only about 15 per cent of medical interventions are supported by solid scientific evidence'⁹ has been challenged by more recent studies suggesting that more than 80 per cent of patients can be offered primary therapies that are evidence-based⁴⁻⁶. The public recognition of these more recent findings, augmented by a steady stream of reports on conclusive

randomised trials, might cause them to call for an absolute increase in health care spending.

6. be explicit about the presence and nature of conflicts:

To the extent that the foregoing strategies are successful, the pursuit of individual patients' utilities will be in harmony with the pursuit of total cost-utility for society. But even when all of them are successful, the pursuit of the former will continue to occasionally invoke opportunity costs that defeat the optimisation of the latter. When such conflicts occur, I suggest that they be confronted openly* in a problem-solving mode, avoiding win-lose posturing by both clinicians (who might rule them non-negotiable on the grounds of 'professional freedom') and managers (who might consider them soluble through the sacking of a handful of rogue clinicians). I don't believe that these conflicts will ever disappear, and we need to develop, evaluate and implement ways to resolve them.

In closing, I thank the Office of Health Economics for inviting me to give this talk, and my colleagues from the fields of ethics and economics who have helped me try to understand the dilemmas I face. I am confident that the actions and proposals I've described here are in only rough agreement with ethical and economic theory, and it will be up to the reader to decide how to apportion blame for this misfit between faults in the former and deficiencies in the latter.

*The rights of confidentiality should be preserved here; it is the facts and the evidence, not the participants, that should be exposed.

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