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What constitutes good prescribing?

Nick Barber

Drugs are the mainstay of medical treatment, yet there are few reports on what constitutes "good prescribing." What is more, the existing guidance tends to imply that right answers exist, rather than recognising the complex trade offs that have to be made between conflicting aims. This paper proposes four aims that a prescriber should try to achieve, both on first prescribing a drug and on subsequently monitoring it. They are: to maximise effectiveness, minimise risks, minimise costs, and respect the patient's choices. This model of good prescribing brings together the traditional balancing of risks and benefits with the need to reduce costs and the right of the patient to make choices in treatment. The four aims are shown as a diagram plotting their commonest conflicts, which may be used as an aid to discussion and decision making.

In 1992 Britain spent £3·3bn on drugs and associated services, yet surprisingly little has been published on what constitutes good prescribing. The most common definition is from a far sighted paper by Parish in 1973—that it should be "appropriate, safe, effective and economic."[1] However, drugs, the NHS, and society have moved on since then, and my own experiences have led me to question whether this definition is still appropriate.

The stimulus came when I was chief pharmacist in a hospital and a doctor asked whether I would supply sleeping tablets that were on the NHS blacklist for a dying man. The patient had no family and had come into hospital to receive care in his last few days of life. He had been using the sleeping tablets for more than 10 years, buying them on private prescriptions because he thought they were better than any NHS alternatives. The question was considered against the definition of Parish. According to these criteria, temazepam was an equal or better drug than the one he was taking—appropriate, equally safe, equally effective, and more economic (temazepam was cheaper and was available on the ward). The patient was duly prescribed temazepam and, as expected, died a few days later. Though the decision was correct in the face of the criteria used, it felt wrong. I am now convinced that it was wrong and some years after the event published my misgivings.[2]

Need for new definition

Parish's definition seems no longer to stand up to the complexities of prescribing today. "Appropriate" implies that the treatment should suit the patient, but possibly because of the ambiguity of this term it seems to have been dropped from more recent definitions. "Safe" and "effective" imply achieving absolutes and are not sensitive enough to deal with the shades of difference that exist between drugs today. "Economic" is no longer sufficient; now that a range of techniques is being applied to the economic appraisal of drugs the term needs clarification. The whole definition suggests that good prescribing can be achieved simply by meeting the criteria and does not address the complex trade offs that affect practice.

Reports on the quality of prescribing were included in Bradley's review of decision making and prescribing patterns.[3] In those papers quality was implicitly assessed against the biomedical model, which sees disease as a physical disturbance that may be corrected by drugs. The authors were mostly academic clinical pharmacologists and based their work on "rational" prescribing, balancing evidence on the most effective way to treat a condition with the associated risks of drug treatments. Though this is an essential part of good prescribing, it is too narrow—for example, it sees the patient as a condition rather than as a person.

Rather than define what good prescribing is, I would define what a prescriber should be trying to achieve, both at the time of prescribing and in monitoring treatment thereafter. The prescriber should have four aims: to maximise effectiveness; to minimise risks; to minimise costs; to respect the patient's choices.

MAXIMISING EFFECTIVENESS

There is little doubt that maximising effectiveness should be an aim of good prescribing. Usually it is achieved by pharmacological manipulation of the body to improve or remove a condition. The definition of effect usually comes from the biomedical model of disease—for example, it often uses some objective, numerical measurement to assess effect, such as lowering diastolic blood pressure below a certain point. The aim is to achieve this as quickly and completely as possible.

MINIMISING RISKS

Safety is a level of risk that is acceptable to a culture, context, or individual. Because of the increasing recognition of the complexity of judging what is "safe" I have adopted a minimisation of risk approach. I define risk as the probability of an untoward happening resulting from drug treatment,[4] which may include transient and minor side effects, rather than an adverse drug reaction (noxious and unintended response[5]) or in the more rigorous sense of the probability of a hazard causing harm.[6] This ensures that effects that are more discomforting than debilitating, such as dry mouth, are included for consideration.

MINIMISING COSTS

The economic assessment of drug treatment has undergone sudden, rapid growth to the extent that it has produced a neologism—"pharmacoeconomics"—and its own journals. There are several ways of relating costs and outcomes, but any aim of good prescribing should be accessible to a typical prescriber. Hence I have adopted the simple concept of cost

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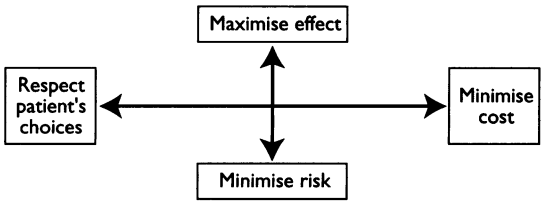
minimisation as a pragmatic solution. In the absence of an appropriate economic analysis it seems sensible just to take immediate costs into account, such as those of the drug and its dispensing. Significant associated costs should also be included, such as those of monitoring plasma concentrations or needing a nurse to give the drug.



Aims of good prescribing—and their commonest conflicts

Costs should be taken from the perspective of the NHS. This is funded by public money, and reducing costs frees money for more health care—both facts providing moral justification for including cost minimisation. Assessing the benefits of drug treatment in financial terms is more difficult and questionable, best avoided by most prescribers until methodological issues are better refined.

RESPECTING PATIENT CHOICES

There are many ethical and practical reasons why the patient's choices, particularly informed choices, must be part of good prescribing. In one crucial sense the patient's choice predominates, as after the consultation it is the patient who chooses whether to have the prescription dispensed, whether to take the drugs, and how to take them.

Ironically, complying with the patient's choice of treatment has been highlighted as a characteristic of doctors classified as poor prescribers,[7] yet this need not be so. There is a clear moral case for patients to be able to specify what they want from treatment, whether in terms of taste, route, effectiveness, side effects, frequency, or whether drug treatment should be used at all. In order to respect patients' choices the prescriber has an incentive, firstly, to listen and, secondly, to ensure that patients are informed so they can make or review their choices. This is no more than good practice. Patients are more satisfied if doctors listen to their views, and negotiating the details of drug treatment may improve compliance. In some cases even complying with a patient's choice of a drug that is pharmacologically inappropriate (but which the doctor knows to be cheap and fairly harmless) may be morally correct and restore wellbeing better than any alternative course of action. Costs to the patient must also be taken into account.

There are clearly cases in which a patient's views would be unacceptable ethically or legally or may be unobtainable. Examples are patients wishing euthanasia or requesting drugs of abuse, and patients with diminished responsibility such as those with Altzheimer's disease or Down's syndrome. In some cases a carer might act as proxy on the patient's behalf.

RESOLVING CONFLICTING AIMS

In some consultations all four aims will be achieved. Nevertheless, conflicts will often occur, the commonest being between effectiveness and risk. Prescribers try to achieve clinical benefit with the minimum risk of harm, perhaps starting with moderately effective but very safe drugs, and then increasing effectiveness but often simultaneously increasing risk. An example would be the shift from first line to second line treatments for arthritis.

Balancing patients' choices and cost minimisation can also lead to conflicts. Family health services authority advisers are increasingly pressing general practitioners to reduce prescribing costs, which may discourage the prescriber from seeking the patient's view if it is not volunteered. For example, a frail old lady may find it hard to swallow large tablets, and may not know that a (more expensive) liquid formulation is available. Because of pressure to reduce costs the doctor may not volunteer the information. On the other hand, a patient may press the prescriber for treatment that is hard to justify pharmacologically, such as demanding a branded rather than an equivalent generic product, or for an antibiotic when suffering from a viral infection. Discussion within and outside the profession will help lead to a consensus on good practice, and training could be given in ways to handle what was thought to be unreasonable pressure by patients or to help prescribers resolve conflicting wants.

These two conflicts have resulted in longstanding debates and have no easy solution. The first, between risk and benefit, was set out by Hippocrates. The second is well recognised as a philosophical problem that rests on the conflict between utilitarianism and the freedom of the individual. Resolving these conflicts is at the heart of judging the quality of prescribing; however, only the first conflict is addressed in much of the published work.

Assessing good prescribing

Whereas consensus may be gained within medicine on how to balance effectiveness, risk, and cost of drug treatment for a condition, including the patient makes judgment on the quality of prescribing difficult to conduct at a distance. In contrast, drug and therapeutics committees, pharmacists, medical advisers, and commissioning agencies are increasingly making judgments on the acceptability of prescribing. These approaches need not be mutually exclusive. The model of good prescribing proposed in this paper can be integrated with the proscriptive, protocol driven approach currently gaining favour—for example, by setting a standard that 80% of prescribing meets the protocol. The level at which the standard is set must come from debate among prescribers, patients, and commissioning agencies.

When discussing good prescribing it may be useful to refer to my diagram, which shows the four aims opposite their respective commonest conflicts. Using the diagram can help clarify which of two or more

GRAY/FORMAT

Treatment is prescribed: But was it the patient's choice?

prescribing options offers the better quality. To achieve this all four aims would be considered as ordinal scales within a problem. When we use the example given at the start of this paper we see that the effectiveness and risk of both hypnotics were equal and so irrelevant to the decision. This clarifies that the trade off was between the cost saving resulting from using the cheaper treatment against respecting the choice of the patient. Had I been using the aims of good prescribing proposed in this paper I hope my decision would have been a better one.

I am grateful to Dr Alan Cribb, of the Centre for Educational Studies at King's College, London, who helped clarify my thinking throughout this work, particularly in refining the issue of patient choice.

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Rethinking Consultants

Alternative models of organisation are needed

Fiona Moss, Martin McNicol

This is the final article in a series on the changing role of hospital consultants

Anyone considering a fundamental rethink of the role of consultants risks exposing tensions in the medical profession that have characterised the development of medical practice since the 18th century. That tense story was one of beds and money, power and domination. Rethinking the role of consultants must now take into account the relationship between consultants and their specialist colleagues and general practitioners; examine the distribution of work between consultants and junior doctors; and relate the contribution of the consultant as specialist to that of other health professionals. After half a century of a national health service characterised by equity of access to care, we urgently need to debate the roles of those who work in it and in doing so to focus primarily on the needs of patients.

Consultants are the senior doctors in the hospital and community services of the NHS. We discuss here their role in clinical specialties in the hospital service. All patients seen in hospital are nominally looked after by a consultant. This is a consultant's primary role, but there are others. While training, all doctors work for a consultant. In theory, most consultants are trainers and educational supervisors. In the hospital a consultant often has organisational responsibilities ranging from that of managing a clinical firm to that of medical director. Many consultants—not just those with academic appointments—take part in research and teach undergraduates. Consultants have allegiances outwith their hospitals to royal colleges or specialty associations, and some have considerable responsibilities to these groups.

So rethinking the role of the consultant means unravelling the complex package that makes up a consultant's job. The central consideration in any change should be the needs of patients for the clinical services provided—and therefore the needs of the employing organisation. Here we consider only those parts of consultants' roles that relate to their clinical base—their roles as specialists, as trainers, and as managers. It is not that other functions are not important or not necessary, but care of patients must be the primary concern. Nevertheless, in rethinking the consultant's role endorsing this function of linking with outside agencies may be important.

Box 1—Changes in nature and delivery of health care

- Medicotechnological advances
- Place of treatment and care for many common conditions—for example, the shift to day care and increasing emphasis on outpatient and community management of many conditions
- Increased throughput and reduction in the average length of inpatient stay
- Changes in the relationship between doctors and other health care professionals, with, for example, the introduction of nurse practitioners
- The purchaser-provider split and new relations between primary and secondary care

The specialist role

WHY A RETHINK?

Despite much change in the nature and delivery of health care (box 1) old patterns of work remain. The clinical component of the timetables of many of today's consultants looks much like their predecessors': regular outpatient clinics, twice weekly ward rounds, operating lists, and clinical meetings. Audit meetings and, for some, outreach clinics may have been added.

The changes in medical technology are well known. But considerable change has occurred in the pace and place of the delivery of hospital care. Between 1982 and 1992 beds available for "general and acute care" fell from 199 000 to 153 000, yet the number of cases treated rose from 4 709 000 to 5 986 000. The resulting 65% increase in throughput (cases per bed increased from 23·7 to 39·1) was accompanied by an increase in day cases of 160%, from 685 000 to 1 785 000.[1] The implications of these changes in delivery of care alone warrant consideration of the roles and organisation of all health care professionals. But with the added implications of the Calman report on specialist medical training[2]—that fewer doctors in training grades will be available for delivering services—this review is needed urgently.

The role of a consultant as a specialist is not always a clear one. In some instances it is apparently distinct—for example, the technical contribution to surgical care, the specialist opinion, the planning of treatment programmes. But nurses and other non-medically trained health professionals now carry out some technical tasks previously regarded as exclusively

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