

## Rational prescribing in primary care—a new role for clinical pharmacology?

Prescribing, the practical use of drugs, accounts for about 10% of NHS costs. About 80% of prescribing is done by general practitioners, who issue a prescription in about 70% of all consultations [1]. Primary care prescribing has been criticised as sometimes wasteful and unnecessary [2, 3]. The Department of Health declared its intention to improve the quality of prescribing and ensure that the NHS obtains value in terms of improved patient health for the large drug expenditure, while containing the rise in costs [2]. To this end, the Department created the Indicative Prescribing Scheme, appointed medical and pharmaceutical advisers to Family Health Service Authorities (FHSA) and feeds back to general practitioners details of their prescribing and its costs by PACT (Prescribing Analysis and Cost) data.

Prescribing is a complex issue [4, 5, 6] and general practitioners may prescribe for reasons other than the pharmacological effects of a drug (to maintain patient contact, to satisfy a humane urge to give something to a distressed patient, to terminate a consultation, or because of perceived patient demand). Problems in general practice prescribing are often due to poor knowledge of drugs or understanding of the drug use process, a failure of education. Clinical pharmacologists who teach undergraduate students must share some blame for this. Undergraduate teaching, often didactic, has emphasised basic pharmacology rather than therapeutics, and prescribing with its attendant skills [4, 7] has featured little in any part of the undergraduate curriculum, either in the UK or overseas [8]. The result is that newly qualified doctors do not know how to prescribe rationally, or to cope with the pressures of commercial promotion, or where to seek help [9]. General Medical Council calls for the development of a core curriculum for medical students should focus the minds of academic clinical pharmacologists on the need to teach therapeutics with emphasis on problem solving and practical application (both in hospital and primary care), and in a manner which will develop the skills to enable and encourage the student to go on learning for the rest of his career. Urgent action is needed from academics to identify a core curriculum in clinical pharmacology, as in the United States [7]. This might also help the discipline to overcome threats within academia [10].

After qualification, the doctor faces the problem of keeping up to date in therapeutics. This is particularly difficult for the general practitioner, often relatively professionally isolated, who on arriving fresh to practice, finds that his previous training and experience have not prepared him for the new challenges of patient demand, 'minor' illnesses, repeat prescribing, and realisation of the resource implications of his prescribing. Furthermore, changes in drug therapy are rapid, so that knowledge rapidly becomes obsolete,

and there is no formal scheme of continuing post-graduate education to keep doctors up to date, although strategies have been proposed [11, 12].

This gap is only partially filled by independent drug bulletins, and most general practitioners still derive their information, especially about new drugs, from the pharmaceutical industry [13]. Doctors are often overwhelmed and confused by volume and content of pharmaceutical promotion and by the lack of comparative evidence to enable them to distinguish between similar drugs or between genuine advances and 'me too' drugs [14]. At their best, the efforts of the industry in GP education are excellent; at worst, they represent shabby commercialism designed only to promote their products [15], and harmful to the concept of rational prescribing.

How might clinical pharmacologists promote rational prescribing in primary care? In the 1970s, clinical pharmacology was taken enthusiastically to general practitioners, with effective educational approaches: open discussion, active participation and relevance to general practitioners and avoiding the standard didactic approach [16, 17, 18, 19]. Such initiatives have largely faded. Clinical pharmacologists are now sometimes criticised as being too concerned with a narrow range of topics [20, 21]. Despite its other achievements, clinical pharmacology in the UK has largely failed to develop a community oriented service role as in Sweden, where clinical pharmacologists provide drug related clinical information, aiming to reduce adverse drug reactions and inappropriate prescribing [22].

Clinical pharmacologists usually have a narrow hospital based perspective of drug use, and only understand the medical model of prescribing (i.e. prescribing for pharmacological effect) and not the many other reasons why general practitioners prescribe [4, 5, 6]. They may also be seen by the general practitioner (if he is even aware of their existence) as too remote from the realities of his everyday practice, and sometimes perhaps as too close to government and health service management [23], a source of potential hostility. Hence there is a great lack of understanding which has limited any influence of clinical pharmacologists on general practitioner prescribing.

Clinical pharmacologists have much to offer primary care. They can promote rational prescribing in its broadest sense, and act as a resource to general practitioners, not just for information about drugs, but in relating drugs to diagnosis and the problems of patients, and in facilitating learning in therapeutics. How this is done is important; the days of the consultant lecture with passive receipt of information are gone, and a more productive 'bottom up' approach is required, helping GPs to evaluate, question and audit their own prescribing, using peer review and problem based learning [24]. The dialogue must consider the whole

process of prescribing and not just drug choice, including compliance, monitoring, and adverse reactions among others, and putting prescribing into the context of total patient management [25]. Clinical pharmacologists may not have the skills to do this initially, and should seek collaboration with GP tutors and training course organisers.

The potential role for clinical pharmacologists in Regional Health authorities, FHSAs or in the new primary care purchasing commissions will be great, and some are already active in these areas [23]. FHSA medical and pharmaceutical advisers would welcome the support of clinical pharmacologists, who in turn need to understand the nature of general practitioners' prescribing and of the pressures under which they work, and of their desire to expand their understanding of practical therapeutics.

The benefits which they might bring to primary care will be at least equalled by the benefits to clinical pharmacologists from greater contact with general practitioners [26], both in understanding what happens with drugs and patients outside the confined trial or

hospital settings, and in research opportunities in primary care. These might include assessing whether the benefits seen in clinical trials can be replicated in general medical practice, or what the risk benefit ratio or cost effectiveness of drugs are in everyday use, where the indications for drugs and the way they are used may be less clear.

Clinical pharmacologists are well suited to meet the challenges of improving primary care prescribing in collaboration with general practitioners, but we must actively seek occasions to offer our services [27]. In the UK, with its well organised system of general practice and a core of well trained clinical pharmacologists, we have an opportunity to follow the Swedish model and go further to confirm our discipline, not only as an academic specialty, but in the forefront of medical practice.

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