

Prescribed drugs: A major cause of ill health

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Abstract

Harm caused by ill-effects of prescribed drugs is largely unrecognised, but when looked for has been found to be an important cause of ill health. Perhaps 6% of all hospital admissions and some 800 deaths a year are caused by prescribed medication in Australia. The elderly, especially those in institutions, are particularly prone to injury by drugs. Attempts to use visiting pharmacists to influence the prescribing habits of doctors have resulted in unspectacular success. It is suggested that prescribing habits may more effectively be changed by visiting from specially trained practising doctors.

An overview of the problem

Drug injury is still largely a hidden problem – hard to detect, grossly under-reported, and frequently impossible to verify (Medawar 1992, p 1).

Four billion dollars a year are spent on drugs in Australia, 11% of the total health budget (Hynes & Goss 1997, p 14). Harm caused by this mass of prescribed medication is greatly underestimated by those who prescribe it. Because such harm may be completely unrecognised and, when recognised, is usually unreported, measurement of its extent is difficult. However, some have tried. In Britain, it has been suggested that 1 in 230 people (240 000) are admitted to hospital every year with drug injury (Medawar 1992, p 3), 3% to 5% of hospital beds are occupied because of adverse drug reactions, and 10% to 20% of hospital patients may suffer some adverse drug reaction while in hospital (Rawlins 1981). In New Zealand, I found that 15% of admissions to the medical ward of a country hospital were caused by prescribed drugs (Mackay 1987). American studies give figures of between 3% and 25% (Grymonpre et al. 1988; Lazarou, Pomeranz & Corey 1998), and a recent Australian paper put the figure at 5.7%

of all admissions as being drug-related (Dartnell et al. 1996). Macklin (1992, pp 12, 36) suggests that 30 000 to 40 000 people are admitted to hospital every year because of adverse drug effects and that the cost of this drug-induced ill health may be about \$80 million. These Australian figures seem conservative when compared with estimates from elsewhere.

Death from drug-induced illness is not unusual. I have seen a number of easily recognisable examples: toxic blood digoxin levels leading to cardiac arrhythmias, non-steroid anti-inflammatory drugs causing gastrointestinal haemorrhages, fractured hips from falls shortly after taking sedatives, and – one that remains clearly in my memory – aplastic anaemia from phenylbutazone given for a rugby injury. Lazarou, Pomeranz and Corey (1998), in a meta-analysis of 39 studies, estimate that 106 000 Americans died from adverse drug reactions in 1994. If this is true, adverse drug reaction is the fourth leading cause of death after heart disease, cancer and stroke. In Australia, it has been suggested that 800 people die from ill effects of their drugs every year (Macklin 1992, p 12), though this figure is not much more than an educated guess.

Such deaths are rarely reported as being caused by drugs, unlike, for example, deaths from anaesthesia. There is no logical reason why death from anaesthetics is investigated, while death from other drugs is not, other than that the former is glaringly obvious to many, while the latter is obvious to few, is debatable, and readily obscured.

Because of the multiple drugs they are given, and their decreased ability to manage, metabolise and excrete them, together with poor ability to compensate for any physiologic or drug-induced derangement, the elderly are particularly susceptible to drug-related illness. An acute geriatric unit in North Sydney estimated that 21% of their admissions were caused by drugs (Atkin et al. 1994). It is in geriatric institutions that the ill-effects of drugs are seen at their worst. Personal experience in running a geriatric ward leads me to believe that these patients need little medication but are frequently given plenty. There seems to be an attitude that 'patients should be switched off with the lights' (Medawar 1992, p 141). There is evidence that sedation of the elderly leads to falls and fractures, particularly of the neck of femur (Ray et al. 1987); and that ceasing such medication decreases the incidence of falls. Howie (1986), despite skepticism by nurses (but support from doctors), was able to reduce then stop night sedation for residents of a nursing home. The result – incident reports (mainly falls) dropped from 12 per month to 1 per month.

Why is drug-induced disease not recognised and clearly labelled as such? Prescribers may have inadequate pharmacological knowledge to recognise it. Symptoms from drug-induced disease and other illnesses may be the same,

drug-induced disease may be associated with multifarious pathology, and the identification of illness as drug-induced may not be clearcut – it can be very much a matter of opinion; and it takes time to sort all this out. The consequences of unequivocally labelling an illness as drug-induced, both medico-legal and for the relationship with the patient, may lead to bias in favour of an alternative explanation. There is immense confusion in the minds of both doctors and patients as to just what drugs are being taken (Mackay 1987; Cochrane et al. 1992). Clearly, if a doctor is unaware of what the patient is taking, the diagnosis of drug-induced disease is likely to be missed. The recognition of such illness is important, as futile investigation is avoided, and treatment is often simple and rewarding.

Causes of poor prescribing

Drugs are ‘overused and poorly prescribed’ (Medawar 1992, p 225). Doctors ‘prescribe potentially inappropriate medications for nearly a quarter of all older people ...’ (Willcox, Himmelstein & Woolhandler 1994). Prescribing is ‘irrational and inconsistent’ (Tonks 1994). To confirm this, one need look no further than the large bags of drugs clutched by the elderly arriving in casualty departments or the drug charts of the institutionalised. Why is this so? There is considerable pressure on doctors to prescribe. Patients expect it, and become disgruntled when told the truth – that time alone will cure their complaint; or that nothing will make any difference. Relatives demand that ‘something must be done’ when nothing can be done. Nurses exert a largely unrecognised pressure on doctors to prescribe, which can be as subtle as a phone call at 2.00 am for the crime of not prescribing a sleeping tablet. Fee-for-service medicine encourages short consultations which can quickly be brought to an end with a script. Many doctors have not the time, the inclination, nor the ability to deal with the often complex problems of their institutionalised patients. Antibiotics are used as an all-purpose panacea for everything from runny noses to heart failure, and we are about to reap a deadly harvest of disease from bacteria self-selected to survive in this sea of antibiotics (Murray 1994; Tomasz 1994). Drug company advertising produces unrealistic expectations about medication. Most patients (and some doctors) underestimate the importance of having a single doctor coordinating all their medical care.

The unfortunate patient who attends several specialists collects a poorly organised mishmash of medication from a number of sources. Few doctors seem skilled in stopping medication, and there is little in textbooks and

journals to help them (Mant & Saunders 1990). In the past, I have found it useful to admit patients to hospital for this purpose, where control of dispensing is taken away from both the patient (unfashionable but effective) and their doctor, and any need for resumption of medication is promptly recognised.

Towards a better approach

What can be done about this iatrogenic epidemic of drug-induced disease? There needs to be greater appreciation of the harm drugs can do; and of the way drug-induced disease presents (loss of balance, falls, confusion, incontinence, gastrointestinal upset, electrolyte disturbance, failure of major organs, addiction, overdose). Doctors need to be aware of the importance of taking a drug history, and of the considerable difficulties they will encounter in doing this. Most of all, there is a need to persuade doctors to prescribe rationally (Gilley 1994). The battle for rational prescribing will not be won easily or quickly – if at all. It will not be helped by allowing others such as nurses and pharmacists to prescribe drugs, or by making more drugs available without prescription – such actions will make the problem worse (Ferner 1994). Quality assurance, peer review, best practice, drug audits – all lovely words – but doctors responsible for this pharmacological mayhem do not have time to take part in these activities. They are too busy writing prescriptions. Auditing individual prescribing habits, with attention being directed to those outside the norm, will be insufficient, for it is the norm that needs to be changed. Those who wish to fight the battle for rational prescribing must understand much about doctors: how they think, how they react to advice and direction from others, who they will respond to and who they will not, what they will read and what they will not. They must understand disease and how it presents to doctors, and the circumstances that lead to drugs being prescribed. Such understanding is rare in those who have never practised medicine, and that, perhaps, is why the health bureaucracy is having difficulty in grappling with this problem.

There is a need to counterbalance the activities of drug company representatives. Most doctors welcome the opportunity to discuss medical matters with colleagues, but may be less welcoming to health department officials or pharmacists. Visiting by pharmacists has been shown to alter prescribing habits (Avorn & Soumerai 1983; Landgren et al. 1988; De Santis et al. 1994; Watson et al. 1997), although the results have not been spectacular – reductions in drug expenditure covered the costs of the programs. ‘The ideal prescribing visitor is a former general practitioner who has made pharmacology and therapeutics a second career’ (McGavock 1998). In the United Kingdom, each health authority

(serving populations between a quarter and one million people) has its own medical and pharmacist advisers, who can contact general practitioners to discuss individual computerised prescribing reports (Bateman 1998; McGavock 1998). Such activities have been credited with at least slowing the growth rate of pharmaceutical expenditure in England (Bateman 1998). Prescriber feedback in Australia began in 1994. The lesson of this so far is that the intentions of such feedback must be clear to the recipient if prescribing habits are to be changed (Parkes 1998). Perhaps each division of general practice should be assigned a former general practitioner who has had pharmacology and therapeutics training to provide the feedback, promote rational prescribing, and draw attention to irrational prescribing.

The 1997 federal Budget allocated \$22 million dollars to establish a national prescriber service. An aim of this service is to bring together doctors and others involved in health care, including pharmacists, the pharmaceutical industry, government, and consumers (Dowden 1998). Could the national prescriber service be persuaded to conduct advertising campaigns directed at doctors, discouraging the use of certain classes of drugs (anti-inflammatory drugs, benzodiazepines, and antibiotics to begin with), with emphasis on possible ill-effects, rather than the supposed benefits that drug company advertising usually highlights? Also desperately needed are measures to reduce medication given to the elderly in hostels, nursing homes and geriatric wards.

In summary, drug companies make good drugs which are prescribed in an irrational and irresponsible manner, leading to considerable ill health and mortality. The extent of this ill health and mortality is grossly underestimated by those who prescribe the drugs. The medical profession must be provided with the opportunity to rectify this. If it fails, attempts by others to do so may benefit neither doctors nor patients.

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