Ten million people aged 60 and older live in England and Wales. Langman et al estimated that in this population 10000 episodes of ulcer bleeding and 2000 ulcer perforations occur each year.8 This yields an overall annual risk of bleeding of an ulcer of 1 in 1000 and of perforation of 1 in 5000; about a quarter of these episodes are associated with the use of nonsteroidal anti-inflammatory drugs.8 If the drugs in current use were replaced by those with the lowest relative risk then the number of episodes of upper gastrointestinal adverse events associated with the drugs would be halved. The incidence of adverse effects could be cut further if the lowest effective doses of non-steroidal anti-inflammatory drug were prescribed.8

The strategy of minimising the use of non-steroidal antiinflammatory drugs through rational prescribing contrasts with the implications of coprescribing antiulcer drugs. Two hundred deaths attributable to ulcers caused by non-steroidal anti-inflammatory drugs occur in Britain each year.<sup>11</sup> If the 20 million prescriptions for these drugs issued each year in Britain are each assumed to be for, on average, one month's treatment then the cost of coprescribing misoprostol or ranitidine would range from £200m (misoprostol 400 µg daily) to £600m (ranitidine 150 mg twice daily). Even if these drugs were totally effective in preventing deaths from nonsteroidal anti-inflammatory drugs (which they are not) the cost per life saved would be  $f_1$  1m to  $f_2$  3m.

What are the implications for managing elderly patients with chronic pain? Although pain in younger patients often has an inflammatory component, the contribution of acute inflammation to pain in elderly patients is unclear. Chronic pain is likely to be due principally to degenerative changes, and the inflammatory component is less important. The correct initial treatment for such patients is regular paracetamol or a standard compound analgesic such as co-codamol. The reluctance of some patients to take such treatment regularly is one factor that makes longer acting, but more toxic, non-steroidal anti-inflammatory drugs appear clinically more effective. In clinical trials non-steroidal antiinflammatory drugs seem to offer additional benefit to only a very small proportion of patients with chronic pain.<sup>13-15</sup> If non-steroidal anti-inflammatory drugs are indicated they

should be prescribed initially for short courses at the minimum effective dose, and low dose ibuprofen should be the first choice.

Publicity of the adverse effects of non-steroidal antiinflammatory drugs may be starting to influence prescribing: prescribing data from primary care in England and Wales show little or no growth in the prescription of these drugs since 1992, although overall prescribing rates are rising at over 4% a year.1 Further reducing and rationalising the prescription of non-steroidal anti-inflammatory drugs to elderly patients is an important public health target for primary care as we approach the millennium.

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## **Queues for cure?**

Let's add appropriateness to the equation

If waiting were a disease it would be one of the commonest and least studied diseases in England. There were 628800 people on an inpatient waiting list and 442 300 people on a day case waiting list in England on 30 September 1994.1 Of these, 7% and 4% respectively had waited more than one year. The first assumption made by politicians-irrespective of political colour<sup>2</sup>—and therefore inherited by managers is that being on a waiting list is a measure of need. One study even defined need in such terms.3 The second assumption concerns a doseresponse relation: the longer the wait the greater the need. Consequently, initiatives to reduce waiting lists tend to act as if it is the long wait itself that warrants treatment.

The patient's charter enshrines the right to admission for treatment within two years of being put on a waiting list. It does not distinguish between the different procedures for which people wait, although since 1986 separate targets have existed for hip and knee replacement and cataract operations. The NHS Executive acknowledged that patients for whom "delay in investigation or treatment would pose an unaccept-

able risk to life or risk of major morbidity" should be treated promptly.4 But no central guidance exists on how to resolve potential conflicts between clinical priority and considerations of cost effectiveness or benefits to populations as opposed to individual people. Still less are the opportunity costs of such policies discussed.

Money to facilitate reductions in waiting lists has, until now, been allocated by the Department of Health to help implement the patient's charter. The department has imposed penalties on regional health authorities that do not try to reduce waiting lists. The regions pass such fines on to district health authorities, which in turn pass them on to providers. Currently this may amount to up to £4000 per patient.5 Our own region, formerly North East Thames, had the highest number of patients who had waited a long time in 1993 and was fined £147000. In some cases performance related pay for managers may be linked to preferential clearance of such patients.

The recent Abrams report states that the "public health

function underpins all NHS purchaser and provider activity" and that this requires "an assessment of the health needs of any given population to inform decision-making on aims and priorities so as to achieve appropriate and effective services leading to improved health and value for money."6 The most recent guidance from the former NHS Management Executive exhorts health authorities to purchase procedures specifically in relation to their effectiveness in conditions for which clearcut clinical guidelines are merited.7 Of course, patients on waiting lists have had their needs assessed by individual clinicians. Yet most health authorities-and to an even greater extent general practice fundholders-do not consider the needs of people on waiting lists as requiring further assessment. They are happy to accept the waiting list as reflecting an aggregate of unquestioned clinical decisions, which may be influenced by factors such as the visibility of waiting lists and the perverse incentives built into the NHS market rather than by evidence of effectiveness. The driving force behind this acceptance is the patient's charter.

The assumption that waiting lists reflect need (that is, ability to benefit) may be tested by considering the indications for various procedures. Increasingly, systematic reviews and techniques for identifying consensus have been used to set criteria of appropriateness for clinical procedures. There seems, however, to have been little interest in using this work to tackle waiting lists. The appropriateness of some procedures may be questioned regardless of the clinical indications (for example, dilatation and curettage in women under 40<sup>8</sup>), but for most procedures for which there is a waiting list, the situation is far more complex. The intended procedure, the precise indication for that procedure (the condition and its severity), and any comorbidity must be assessed. These factors could be used to generate an appropriateness rating.<sup>9</sup>

For example, in coronary artery bypass grafting the procedure has been judged inappropriate in patients with single vessel disease, moderate or severe myocardial ischaemia, and mild left ventricular dysfunction.<sup>10</sup> Yet such patients continue to be operated on. Furthermore, a recent study of a waiting list for tonsillectomy showed that nearly one third of patients had waited more than one year.<sup>11</sup> The natural course of recurrent throat infection, the main indication for tonsillectomy, may be one of improvement<sup>12</sup>; a prospective study to determine the morbidity caused by a delay in tonsil surgery found that a fifth of patients grew out of their condition and were spared surgery.13 This raises the possibility that, in certain circumstances, need may fall with longer waits.

Maximum waiting periods for procedures of accepted effectiveness have some appeal, although surgery may be inappropriate when judged against local guidelines or when resources are constrained.<sup>14</sup> Existing criteria for appropriateness may require refinement,<sup>15</sup> but they offer a reasonable tool, possibly with local modification, for examining waiting lists. The next stage is for commissioners to agree with general practitioners and providers the criteria for appropriateness for entry to and clearance from a waiting list. Such an approach should be widely debated in local community settings. Furthermore, the criteria for appropriateness should be linked with a commitment to audit. This would allow the standards given in the patient's charter to be achieved on the basis of need rather than political whim. For all those concerned with appropriateness, the time spent on waiting lists allows an opportunity to assess the costs and benefits of intended treatment.

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## Fish oils and cardiovascular disease

Beneficial effects on lipids and the haemostatic system

Oily fish contains large quantities of the long chain n-3 ( $\omega$ -3) polyunsaturated fatty acids (eicosapentaenoic acid (C20:5) and docosahexaenoic acid (C22:6)). Low rates of coronary heart disease in various populations with high intakes of fish suggested health preserving effects of these fatty acids. For example, mortality from coronary heart disease was found to be low among Greenland Inuits who ate large amounts of fish and whale meat (400-500 g/day, 14 g n-3 fatty acids/day)<sup>1</sup> and in Japanese fish eaters.<sup>2</sup> In the Netherlands 30 g of fish daily was associated with 50% fewer deaths from coronary heart disease.<sup>3</sup> In the multiple risk factor intervention trial cardiovascular mortality was inversely proportional to the intake of n-3 fatty acids over the 10.5 years of follow up.4 Not all investigators, however, have confirmed these findings.<sup>56</sup>

Suggested mechanisms for this cardioprotective effect focused first on serum lipids.7 In healthy subjects increased consumption of long chain n-3 fatty acids is associated with falls in serum concentrations of triglycerides and very low density lipoprotein<sup>8</sup><sup>9</sup>; cholesterol concentration is unchanged except at high doses (24 g/day), when concentrations of both low density lipoprotein cholesterol and apoprotein B fall. Postprandial lipoprotein concentrations also fall.10 Concentrations of high density lipoprotein cholesterol (principally high density liproprotein-2 cholesterol) increase with moderate supplementation with fish oil. In the various dyslipidaemias serum triglyceride concentrations tend to fall.