Bad backs, good policy?

THE first major United Kingdom policy document on back I pain for 15 years was published in December 1994 by the Department of Health clinical standards advisory group. 1 The document adopts a biopsychosocial approach to back pain, which avoids the false polarity between organic and psychological pain. It is an old observation² that there is no anatomical diagnosis for most patients presenting with back pain in general practice,³ and the uncertain relationship between anatomy, pathology and symptoms remains true in the age of magnetic resonance imaging.4 Against a background of escalating health care and social security costs of back pain, the report emphasizes the pivotal role of primary care in the diagnosis and treatment of patients with back pain. The report provides guidelines for clinical management, as well as recommendations for service development. However, even if the report were fully implemented, it is not clear what the impact would be on the prevalence of disability associated with back pain.

Data from countries with diverse health care and social security provision suggest that there is an epidemic of disability associated with back pain. Population prevalence, 5,6 primary care consultation rates, 7-10 secondary care consultation rates, 11 sickness absence from work^{12,13} and compensation claims¹⁴ for back pain all show a rising trend. The clinical standards advisory group estimates that in Britain in 1993 approximately 16.5 million people experienced back pain (3-7 million of whom consulted their general practitioner) and 1.6 million people attended a hospital outpatient department with back pain (a fivefold increase in the previous decade). It is also estimated that, for back pain investigation and treatment, 1.5 million people received x-rays, one million attended National Health Service physiotherapy departments, 480 000 attended casualty departments, 100 000 were admitted to hospital, 30 000 were treated as hospital day patients and 24 000 had surgical operations.

Back pain represents a considerable cost to the individual, the employer, health services and society. The total NHS costs and non-NHS costs (private consultations, private physical therapy and non-prescription analgesics) in 1993 are estimated by the clinical standards advisory group at £481 million and £197 million, respectively. These are small compared with the costs of lost production and Department of Social Security benefits, estimated by the clinical standards advisory group at £3.8 billion and at £1.4 billion, respectively. The misery of back pain to the patient and the burden on families and friends of patients is incalculable.

Epidemics require public health measures based on a knowledge of aetiology. However, the causes of back pain are poorly understood. It has been estimated that the proportion of back pain attributable to physical risk factors such as lifting is less than 20%.¹⁵ Increasingly, people work in sedentary office jobs,¹⁶ yet there are few studies of back pain among office workers. Prospective studies are required to test the relative importance of clinicopathological, ergonomic and psychosocial factors in the onset, recurrence and chronicity of back pain.

Given the poor understanding of the causes of back pain, it is not surprising that there is little evidence to support preventive intervention. A recent review found only limited evidence that exercises to strengthen back and abdominal muscles and to improve overall fitness were effective in decreasing the incidence or duration of back pain episodes.¹⁷ This conclusion was based on four randomized trials with only 350 subjects in total.¹⁸⁻²¹ There is no evidence that screening tests can identify individuals

liable to develop back pain.²² However, despite an extensive epidemiological review (published as a separate document¹¹) the clinical standards advisory group largely sidesteps issues of aetiology and population prevention. Where it does make a recommendation on prevention, that employers might be 'encouraged to introduce programmes to reduce the loss of work from back pain', this is not based on any evidence of effectiveness.

The advisory group report provides a set of management guidelines for primary care that explicitly identify the minority of patients with back pain who need specialist treatment. It gives a clear framework for the management within primary care of the majority of patients who do not need referral. The report highlights unnecessary investigations (for example, lumbar spine x-rays for most patients with acute back pain) and inappropriate management (for example, bed rest for more than three days for most patients). The role of spinal manipulation in the treatment of acute back pain is recognized, although the lack of evidence for the effectiveness of physiotherapy exercises²³ is not sufficiently acknowledged. The report makes specific recommendations for service delivery, particularly in support of primary care management with physical therapy (defined to include physiotherapy, osteopathy and chiropractic), consultant led rehabilitation and an acute back pain service for patients who do not respond to primary care interventions. These recommendations fit well with the new spirit of primary care led commissioning. Among commissioners, interest in reorganizing back pain services might be stimulated by identifying costs of back pain across different clinical specialties. It is plausible that the organization of services for people with back pain could be substantially simplified and savings made by reducing inappropriate referral, investigation and treatment.

However, the clinical standards advisory group report makes a bold claim that the provision of 'NHS services at the acute stage... will prevent chronic pain and disability'. This is not well supported by research evidence; it is not known if long-term disability is prevented by the strategy championed in this report. Although the report acknowledges that avoidance of sickness absence from work is the best, if imperfect, outcome measure for back pain management, it pays little attention to the constellation of factors outside the remit of the NHS that might influence sickness absence.²⁴ Appropriate primary care management, where this can be articulated from clinical trials, should improve patient care but may not reverse the epidemic of back pain.

Another weakness of the report is the failure to link the recommendations in its guidelines to the underlying research evidence, a missed opportunity to produce evidence-based, rather than consensus-based guidelines.²⁵ The clinical standards advisory group report, unlike the Agency for Health Care Policy and Research guidelines²⁶ on which it is partly based, does not make explicit the strength and sources of evidence that inform each recommendation. Recommendations based on strong evidence (such as avoidance of lumbar spine x-rays and of prolonged bed rest) might be expected to have a more lasting application than those based on weaker evidence, such as the recommendation not to use transcutaneous nerve stimulation. One of us (G F) has developed prototype guidelines (funded by the North Thames Regional Health Authority research and development directorate) that are a hybrid of the clinical standards advisory group guidelines and the Agency for Health Care Policy and Research guidelines. This has allowed the developers of local guidelines to consider the strength of evidence that underlies recommendations before implementing, altering or discarding them.

Would the implementation of the advisory group report increase NHS costs? It is envisaged that the service recommendations would be cost neutral, that is, the savings from inappropriate investigations and treatments would pay for the development of physical therapy, rehabilitation and acute pain services. However, in the absence of a back pain contract with its own budget, it is unlikely that resources could be redirected in this fashion. Furthermore, dedicated back pain services may induce demand as a clinical iceberg is exposed: a large proportion of the population experiencing low back pain do not present for medical care²⁷ but might start to present if effective treatment were available.

The report leaves untouched the challenge of dissemination and implementation of guidelines, neither does it make any suggestions for audit of primary care management. Nevertheless, the report offers a useful, if somewhat idealistic, contribution to the commissioning of back pain services and the local development of back pain guidelines. Local guidelines will need to grapple with the patchy provision of resources for spinal manipulation and rehabilitation and with the uncoordinated specialist services.

The Department of Health and Social Security working group on back pain concluded in 1979 that 'unfortunately there is insufficient basis at the moment for formulating advice that could be incorporated into health education directed at the prevention of back pain'.28 In 1995 this conclusion remains substantially unmodified, although we are now more confident about some aspects of acute back pain management. If the epidemic of back pain disability is to be reversed there is a genuine need for research into aetiology and population prevention, as well as research that informs clinical decision making.

HARRY HEMINGWAY

Lecturer, Department of Epidemiology and Public Health, University College London Medical School

GENE FEDER

Senior lecturer, Academic Department of General Practice, St Bartholomew's Medical College, London

References

- Department of Health clinical standards advisory group. Back pain. London: HMSO, 1994.
- Johnson G. A lecture on backache and the diagnosis of its various causes, with hints on treatment. BMJ 1881; 221-224. Deyo R, Rainville J, Kent D. What can the history and physical
- examination tell us about low back pain? JAMA 1992; 268: 760-765. Jensen MC, Brant-Zawadzki MN, Obuchowski N, et al. Magnetic
- resonance imaging of the lumbar spine in people without back pain. N Engl J Med 1994; 331: 69-73.
- Klaukka T, Sievers K, Takala J. Epidemiology of rheumatic diseases in Finland in 1964–76. Scand J Rheumatol 1982; 47 suppl: 5-13.
- Volinn E. Theories of back pain and health care utilisation. Neurosurg Clin N Am 1991; 2: 739-747.
- General register office. Morbidity statistics from general practice 1955/56 (volume1). Studies on medical and population subjects 14. London: HMSO, 1958.
- Office of Population Censuses and Surveys, Royal College of General Practitioners, and Department of Health and Social Security. Morbidity statistics from general practice. Second national study 1970-71. Studies on medical and population subjects 26. London: HMSO, 1974.
- Royal College of General Practitioners, Office of Population Censuses and Surveys, and Department of Health and Social Security. Morbidity statistics from general practice. Third national study 1981-82. London: HMSO, 1986.

- 10. Royal College of General Practitioners, Office of Population Censuses and Surveys, and Department of Health. Morbidity statistics from general practice. Fourth national study 1991-92. London: HMSO, 1995.

 11. Department of Health clinical standards advisory group.
- Epidemiology review: the epidemiology and cost of back pain. London: HMSO, 1994.
- Nachemson A. Newest knowledge of low back pain. Clin Orthop 1992; 279: 8-20.
- Waddell G. Biopsychosocial analysis of low back pain. Baillières Clin Rheumatol 1992; 6: 523-557.
- Deyo RA, Cherkin D, Conrad D, Volinn E. Cost, controversy and crisis: low back pain and the health of the public. *Annu Rev Public* Health 1991; 12: 141-156.
- Walsh K, Varnes N, Osmond C, et al. Occupational causes of low back pain. Scand J Work Environ Health 1989; 15: 54-59
- Organization for Economic Cooperation and Development. The OECD employment outlook. Paris, France: OECD, 1991.
 Lahad A, Malter AD, Berg AO, Deyo RA. The effectiveness of four
- interventions for the prevention of low back pain. JAMA 1994; 272: 1286-1291
- Linton SJ, Bradley LA, Jensen I, et al. The secondary prevention of low back pain. Pain 1989; 36: 197-207.
- Donchin M, Woolf O, Kaplan L, Floman Y. Secondary prevention of low back pain: a clinical trial. Spine 1990; 15: 1317-1320.
- Kellett KM, Kellett DA, Nordholm LA. Effects of an exercise programme on sick leave due to low back pain. Phys Ther 1991; 4:
- Gundewall B, Liljeqvist M, Hansson T. Primary prevention of back symptoms and absence from work. Spine 1993; 18: 587-594.

 MacDonald EB. Back pain: the risk factors and its prediction in
- MacDonald EB. Back pain: the risk factors and its prediction in working people. In: Brothwood J (ed). Occupational aspects of back disorders. London: Society of Occupational Medicine, 1984. Koes BW, Bouter LM, Beckerman H, et al. Physiotherapy exercises and back pain: a blinded review. BMJ 1991; 302: 1572-1576. North F, Syme SL, Feeney A, et al. Explaining socioeconomic differences in sickness absence: the Whitehall II study. BMJ 1993;
- **306:** 361-366.
- Effective Health Care. Implementing clinical guidelines: can guidelines be used to improve clinical practice? Bulletin 8. Leeds: University of Leeds, 1994.
- Agency for Health Care Policy and Research. Acute low back problems in adults. Clinical practice guideline 14. Rockville, MD:
- AHCPR, 1994.

 27. Deyo R, Tsui-Wu Y. Descriptive epidemiology of low back pain and its related medical care in the United States. *Spine* 1987; 12:
- Department of Health and Social Security working group. Report on back pain. London: HMSO, 1979.

Address for correspondence

Dr H Hemingway, Department of Epidemiology and Public Health, University College London Medical School, 1-19 Torrington Place, London WC1E 6BT.

Email: h.hemingway @public-health.ucl.ac.uk.

Food for thought...

'General practice based physiotherapy has become popular in recent years... It can substitute largely for hospital-based physiotherapy and can reduce referral rates to hospital outpatient departments of orthopaedics and rheumatology. However, it can result in an increase in use of a service which has not been shown to be effective.'

O'Cathain A, Froggett M and Taylor MP. General practice based physiotherapy: its use and effect on referrals to hospital orthopaedics and rheumatology outpatient departments. July Journal, p.352.