

# This week in BMJ

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US second class postage paid at Rahway, NJ. Postmaster: send address changes to: BMJ, c/o Mercury Airfreight International Ltd Inc, 2323 Randolph Avenue, Avenel, NJ 07001, USA.  
US (direct) subscription \$180.00.

Published by the proprietors, the British Medical Association, Tavistock Square, London WC1H 9JR, telephone 071 387 4499 (editorial fax 071 383 6418).  
Printed by BPCC Business Magazines (Pulman) Ltd, Milton Keynes.  
Typesetting by Bedford Typesetters Ltd, Bedford. Registered as a newspaper.

## Risk factors for stroke

Stroke is the cause of one in eight deaths in the United Kingdom. About half of these deaths are in people aged 76 and over, but the factors predisposing to stroke may be present much earlier in life. On p 1111 Shaper *et al* present the findings from the British regional heart study on 7735 middle aged men followed up for eight years. They found that systolic blood pressure and cigarette smoking were the critical risk factors: hypertensive men who smoked cigarettes had 12 times the risk of stroke of normotensive non-smokers. Diastolic blood pressure provided no additional predictive information. Heavy alcohol intake produced an almost fourfold increase in the risk of stroke, probably because of its effect on blood pressure. Their findings suggest that a large proportion of strokes could be prevented by controlling blood pressure and stopping smoking.

## Changes in prevalence of asthma

Asthma is an important cause of childhood morbidity, and its prevalence in many countries is reportedly increasing. On p 1116 Robertson *et al* describe a study of asthma and wheeze in Melbourne schoolchildren and compare their results with those of a similar study in 1964. They report that the prevalence of asthma in 7 year olds has increased by 141% since 1964, although it is not known how much of the increase is due to changes in diagnostic labelling and heightened awareness of respiratory symptoms in the medical and general communities. About 20% of children aged 7, 12, and 15 were reported to have had at least one episode of wheeze in the past 12 months. More research is needed to establish the cause of this high prevalence.

## Cost effectiveness of cholesterol lowering

Coronary heart disease represents an important health problem, and lowering serum cholesterol concentrations will evidently reduce its incidence. Kristiansen *et al* (p 1119) examined three key strategies of the cholesterol lowering programme in Norwegian men aged 40-49 (population based promotion of better eating habits, individual dietary treatment, and dietary and drug treatment combined) and evaluated the costs per life year and per quality of life year (QALY) saved by stepwise implementation of the strategies. What is striking in their calculations is that, though the mass strategy is cheap in terms of both life years and QALYs, progressing to dietary treatment results in appreciably increased costs, which rise much further with the addition of drug treatment. The study is a telling example of the importance of marginal cost effectiveness analysis of incremental programmes for health care.

## Improving orthopaedic outpatient referrals

The new arrangements for health care will emphasise the value of hospital referrals. To identify aspects of the referrals system that might be improved Roland *et al* ascertained satisfaction with an existing system by a questionnaire survey of general practitioners, consultant orthopaedic surgeons, and patients referred to one orthopaedic clinic (p 1124). The commonest complaint of general practitioners and patients was long waiting lists, and consultants rated more than 40% of referrals as inappropriate. From the responses and subsequent feedback Roland *et al* drew up a 10 point plan of suggested changes within the existing resources covering four main areas: improved general practitioner skills in managing some orthopaedic problems; improved information to help them choose the most appropriate referral pathway; and better administration and communication. They conclude that the method has potential for areas of health care.

## New screening procedure for Down's syndrome

Screening for Down's syndrome based on maternal age has not been very successful, resulting in a less than 20% detection rate. On p 1133 Sheldon and Simpson evaluate the potential cost effectiveness of a new screening procedure, the "triple test," which is based on maternal serum concentrations of  $\alpha$  fetoprotein, unconjugated oestriol, and human chorionic gonadotrophin as well as maternal age. They show that this test is generally more cost effective than screening based only on maternal age and recommend its introduction nationally on a routine basis. They also recommend the use of decision analysis for individual women as part of the screening process.

## Appraising medical research articles

Getting to grips with the details of papers published in medical journals and conducting a critical appraisal of the research may be difficult for people who are not research experts and possibly have not had training in appraisal. On p 1136 Fowkes and Fulton offer six guidelines and a checklist for appraising medical articles, which they see as simple reminders of the important features that should be considered. These cover study designs, study samples, control groups, quality of measurements and outcomes, completeness, and distorting influences—deficiencies in any of which may or may not render the results of research of limited value. The authors believe that a critical appraisal should be concerned with assessing the hard facts of the research and have aimed their guidelines particularly at junior doctors who may be embarking on their first research towards a higher degree.