

the allocation of teaching time in the medical curriculum.

Arterial conditions treated by vascular specialists threaten life or limb; they encompass carotid, thoracic, renal, mesenteric, aortic, pelvic, and upper limb and lower limb occlusive and aneurysmal disease. Vascular disease, including of course its cardiac and cerebral components, is by a huge margin the commonest cause of death and disability in all developed countries—far exceeding all cancers put together. In recent years there has been a progressive increase in vascular workloads, reflecting the needs of an aging population.

In the past three years, consultant surgeon posts in the United Kingdom advertised as requiring a vascular interest have exceeded all other general surgical subspecialties added together. Such is the demand that many vascular consultants have recently been appointed some time before they have achieved accreditation.

The management of venous disease is undergoing fundamental changes. It has long been neglected: witness the frequency of recurrence of varicose veins and leg ulceration. Chronic venous disease costs the NHS more than £400m a year.<sup>1</sup> If venous disorders are to be managed successfully and efficiently the facilities of the vascular laboratory, vascular radiology, and leg ulcer nurse specialists and the attention of surgeons with a special interest are required.

The recent working party report on vascular services in Scotland has recommended that vascular services should be centralised.<sup>2</sup> There are several reasons why this makes sense, but perhaps the most compelling relates to resources. To meet the profound changes taking place in the management of vascular disease, reorientation is required on the part of clinicians and health care planners alike. How can vascular services be resourced or strategically planned or research funded if there is no clear perception of the scope and care of vascular disease? The term peripheral vascular disease is long past its "sell by" date.

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## Paternal irradiation and childhood leukaemia

EDITOR.—In 1990, Gardner *et al* reported that relatively high doses of ionising radiation measured by film badges worn by men while employed at the Sellafield nuclear installation before the conception of their children were statistically associated with the incidence of leukaemia among these children.<sup>1</sup> The authors suggested that this association was sufficient to account for the excess of childhood leukaemia in the village of Seascale, adjacent to Sellafield.

Since 1990 several other studies of paternal preconceptional irradiation have been reported.<sup>2,3</sup> We have analysed the results of these studies, and the table compares the relative risk coefficients derived from linear relative risk models based on these datasets. Full details are given elsewhere.<sup>3</sup>

The association reported by Gardner *et al* is confined to children of the Sellafield workforce born in Seascale, whereas over 90% of children of Sellafield fathers were born outside Seascale.<sup>4</sup> The relative risk coefficient for Seascale is statistically incompatible ( $P < 0.01$ ) with all the other coefficients, including that for the rest of West Cumbria.<sup>3</sup> The association is not found for doses due to internally deposited radionuclides or for external doses received shortly before conception,

*Leukaemia relative risks per 100 mSv of cumulative paternal preconceptional dose derived from various datasets using a linear relative risk model*

Dataset	Relative risk per 100 mSv (95% confidence interval)
Offspring of Sellafield workforce born in Seascale <sup>2</sup>	36.04 (14.34 to 73.01)
Offspring of Sellafield workforce born elsewhere in West Cumbria <sup>2</sup>	1.27 (0.51 to 3.36)
Offspring of Ontario radiation workforce <sup>3</sup>	0.63 (<0.27 to 3.40)
Offspring of Scottish radiation workforce <sup>3</sup>	<0.51 (<0.51 to 2.95)
Offspring of Hiroshima and Nagasaki A bomb survivors <sup>3</sup>	<0.98 (<0.98 to 1.10)

nor does the association extend to other childhood cancers.<sup>2</sup> Furthermore, Kinlen has indicated that the paternal dose association is not sufficient to account for the excess cases in Seascale.<sup>5</sup>

We conclude that a causal interpretation of the association between paternal preconceptional irradiation and childhood leukaemia is untenable.<sup>3</sup>

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## Preventing crime and violence

### A population approach is needed

EDITOR.—Violence continues to be a cause of substantial ill health and emerging debate.<sup>1,2</sup> The incidence of reported violent crime is increasing<sup>3</sup> and results not only in appreciable mortality and morbidity but also psychological and economic costs to the community.

The response to violent crime has traditionally been through the criminal justice system and has focused on retribution and rehabilitation.<sup>3</sup> More recently, violence has been recognised as a public health problem, and epidemiological techniques are being used in the development and implementation of preventive strategies.<sup>4</sup>

In addressing the problem of violence most effort has been focused on a small group of vulnerable people. This approach, termed the high risk approach, aims at reducing levels of violence in those at higher risk. Not only is it difficult to identify accurately those at highest risk, however, but most acts of violence will probably be committed by people outside these high risk groups.

Thus if efforts are restricted to the minority, most violent crime will not be prevented.

An alternative approach, the "population strategy," recognises that extreme violence reflects the range of behaviour and circumstances of society as a whole.<sup>5</sup> This approach suggests that there is not a clear demarcation between those who will commit violence and those who will not but a continuum within a society that tends to follow a normal distribution. The extreme tail of the distribution is therefore a function of the society as a whole, and if that society could be shifted to the left the number of extreme incidents would diminish. Conceptualising violence in these terms suggests that societal measures aimed at reducing important influences such as poverty, alcohol consumption, access to weapons, and television violence are likely to reduce these acts.

It would be valuable to develop a measure that would help us describe the distributions of the nature and form of violent behaviour in populations. This would help in exploring the causes of violence, comparing societies, and measuring the success of interventions.

High risk approaches will continue to be necessary to help the most vulnerable people in our society, but to establish enduring change in the culture of violence in societies a broader, population based approach will be needed.

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### Includes victims of domestic violence

EDITOR.—In the light of the increased awareness of violence as an important public health issue,<sup>1</sup> we wish to draw attention to the problem of domestic violence. This is a problem that doctors in Britain have been slow to address. In 1991 an estimated 530 000 incidents of domestic violence occurred in England and Wales; victims of domestic violence are more likely to sustain injuries than those involved in other violent incidents.<sup>2</sup>

Studies undertaken in the United States show that between 22% and 35% of women presenting in emergency departments are suffering from injuries or symptoms due to continuing abuse.<sup>3</sup> In recognition of the seriousness of the problem the American Medical Association particularly focused on it in 1992, issuing diagnostic and treatment guidelines on domestic violence.<sup>4</sup>

Domestic violence and its consequences tend to continue over long periods. Early identification of victims is a key part of prevention, allowing appropriate advice and intervention to be offered, which may shorten the period over which abuse recurs. We should recognise that general practitioners and other members of the primary health care team, as well as staff of accident and emergency departments, have a particular responsibility to identify victims: guidelines may help in this, and their use has been shown to increase the numbers of women identified as victims.<sup>5</sup>

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## Emergency delays

EDITOR,—Luisa Dillner reports that one of the reasons for delay in admitting patients seen as emergencies in the accident and emergency department is that doctors from the teams on take are in theatre or outpatient clinics.<sup>1</sup> This situation could be improved if accident and emergency medical staff rather than ward doctors were responsible for deciding which patients should be admitted. In addition, emergency treatment could then be started by the accident and emergency staff.

The perceived advantages of ward doctors going to the accident and emergency department are that they prevent inappropriate admissions and that diagnostic accuracy is increased. A recent study of 1200 patients in Belfast compared admitting practice in two accident and emergency departments with similar staff, number of patients, and catchment population. In one department patients were seen and admitted by the accident and emergency doctors; in the other the decision to admit was taken by the team on take. There were no significant differences in rate of diagnostic error or inappropriate admissions between the two departments. A survey of 153 consultant led accident and emergency departments throughout the United Kingdom showed that the decision to admit was the responsibility of the accident and emergency doctors in only 6%. Clearly, detaining medical and surgical patients in the accident and emergency department for assessment by the ward doctor has no benefit to either the hospital or the patient, and the accident and emergency doctors should be given admitting rights.

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## Antenatal screening for cystic fibrosis

EDITOR,—Zosia H Miedzybrodzka and colleagues' claim that stepwise screening for cystic fibrosis is better than couple screening is unjustified.<sup>1</sup> Antenatal screening for cystic fibrosis should minimise the number of women identified as being at high risk for a given proportion of affected pregnancies detected and should ensure that a diagnostic test is available for everyone defined as being at high risk. Stepwise screening fails on both counts.<sup>2</sup> It identifies about 30 times more women as being positive on screening without increasing detection and therefore necessitates more counselling to cope with the associated anxiety. About 3% of screened women will be identified as carriers, but their partners will not have a detectable cystic fibrosis mutation. These women are told they are at risk but cannot be offered a definitive diagnostic test.

The average anxiety score in women found to be positive was slightly higher after couple screening than after stepwise screening (35.4 v 32.1 compared with 34.2 v 32.7 respectively at recruitment). This is minor compared with the initial acute anxiety (average score 52.3) among the 3% of

women with positive results of stepwise screening. To dismiss their anxiety by saying that "this dissipated after receiving a negative result for their partners" is unreasonable.

The paper concludes that stepwise screening provides more "genetic information." Providing information is an advantage only if it leads to specific action that would not otherwise have been taken. Providing excess information can invite unsolicited interventions, such as tracing of relatives to determine their carrier status, with unpredictable medical and financial implications. It could be costly and upsetting while conferring little or no practical health benefit. Screening programmes should be as simple and economical as is necessary to achieve their intended aim in the population that has explicitly accepted the invitation for screening. Additional advantages should not be presumed. They should be made explicit and quantitatively assessed in both medical and financial terms.

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## Short stature and diabetic nephropathy

EDITOR,—Rossing and colleagues conclude that short stature is related to the development of diabetic nephropathy in men and speculate that influences in early life could account for their findings.<sup>1</sup> This interpretation is based on the assumption that adult height is determined solely by factors operating in utero or early life. But height is also related to parental social class<sup>2</sup> and has been used as a proxy for adult socioeconomic status.

We have also found a relation between height and albuminuric status in a European study of the complications of insulin dependent diabetes but place a different interpretation on these findings. Patients aged 15-60 with insulin dependent diabetes were recruited from 31 European centres.<sup>3</sup> Age at completion of education defined socioeconomic status in three groups:  $\leq 14$ , 15-18, and  $\geq 19$ . These analyses are restricted to people aged  $\geq 25$  to ensure that all those who would receive higher education had had an opportunity to start. Albumin excretion rate was calculated from a timed 24 hour urine collection. Macroalbuminuria was defined as a rate of  $\geq 200$   $\mu\text{g/ml/min}$  and microalbuminuria as a rate  $\geq 20$   $\mu\text{g/ml/min}$  but  $< 200$   $\mu\text{g/ml/min}$ .

Men with macroalbuminuria were significantly shorter than those without (table). This relation was present, but not significant, in women. The most educated men were also the tallest (171, 175, and 176 cm respectively,  $P=0.0001$  for trend). This trend was not found in women (161, 164, and 163 cm respectively,  $P=0.2$  for trend). When a term for educational status was included in the model the relation between height and

## Relation between albuminuric status and height (cm) in EURODIAB insulin dependent diabetes mellitus complications study

Albuminuric status	Men (n=1217)	Women (n=1170)
Adjusted for duration of diabetes:		
Normoalbuminuric	175	163
Microalbuminuric	175	163
Macroalbuminuric	173	161
P value for trend	0.03	0.8
Adjusted for duration of diabetes and educational status:		
Normoalbuminuric	174	163
Microalbuminuric	174	162
Macroalbuminuric	173	161
P value for trend	0.1	0.8

albuminuric status was considerably attenuated in men (table). Adjustment for centre did not alter these relations.

We showed that height was related to nephropathy in men and confirmed that height was also related to educational status, a proxy for social class in adults.<sup>2</sup> Educational status accounted for much of the relation between nephropathy and height. Longitudinal data are required before we can jump to hasty conclusions about influences in early life and diabetic nephropathy.<sup>4</sup>

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## Shared care in diabetes

EDITOR,—We agree with Amanda J Sowden and colleagues' conclusion that evaluation of shared care must take into account many factors that influence effectiveness and efficiency, but the authors do not address the reasons why current systems of care fail.<sup>1</sup> The main problem with traditional management of chronic conditions is that the provision of care is not matched to need. Some patients receive a lot of care, a lot of patients receive some care, while other patients receive little or no care.<sup>2</sup> Many patients are lost to follow up. A good system of shared care should rectify this imbalance by providing, efficiently, the best possible care with maximum coverage of the population at risk. Without such long term follow up schemes, determining what is best is not possible since data on outcomes are usually not available. In addition, to focus only on the clinical outcomes of those who are receiving care is to confuse assessment of the effectiveness of the delivery of care with that of the clinical care itself.

Two recent rigorous trials of similar models of shared care for diabetes<sup>3</sup> and hypertension<sup>4</sup> showed that shared care was associated with lower drop out rates and was more cost effective for the patient. Cost to the patient is likely to be an important determinant of continuity of care. The hypertension study and an earlier study of shared care for thyroid disease<sup>2</sup> showed cost effectiveness for the health service and a reduction in the number of patient-clinician contacts while the standard of