haemophilia data that cannot establish correlation or cause. Duesberg has argued against these data and against mistaking correlation for causality,^{2 3} but this review fails to mention these arguments and makes no effort to convey the breadth and depth of the reviews collected in the book.

Finally, I agree with Derbyshire: Duesberg has been mistreated. What Peter Duesberg has been arguing for—more research on substances known or suspected to be immunosuppressive—should not be controversial, it should be welcomed. If true, then Duesberg should be taken seriously and not, as Derbyshire suggests, placed “peripheral to the mainstream AIDS debate ... as a maverick rather than as a heretic.” That debate would be impoverished or non-existent were it not for Duesberg’s persistent scientific criticisms over 10 years. Derbyshire cannot have it both ways where a serious critic with something constructive to offer is also marginalised and mistreated by our AIDS leadership.

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- 1 Derbyshire SWG. Infectious AIDS: have we been misled? *BMJ* 1996;312:1236. (11 May.)
- 2 Duesberg P. Is HIV the cause of AIDS? *Lancet* 1995;346:1371.
- 3 Sabin CA, Pasi K, Phillips AN, Lilley P, Boffill M, Lee CA. Comparison of immunodeficiency and AIDS defining conditions in HIV negative and HIV positive men with haemophilia A. *BMJ* 1996;312:207-12. [With commentary by P Duesberg and response by CA Sabin, AN Phillips, and CA Lee.]

Objective tests exist to aid diagnosis of hand-arm vibration syndrome

EDITOR,—We were pleased that the hand-arm vibration syndrome is included in the ABC of Work Related Disorders but would like to point out some of the more recent developments in the diagnosis of this syndrome.¹ C M Jones rightly states that there is no single diagnostic test. The role of laboratory diagnostics such as cold provocation testing, measurement of vibrotactile and thermal thresholds, and aesthesiometry was extensively reviewed in a workshop held in Stockholm in 1994.²

Jones refers to attempts at inducing vasospasm by cooling the hand. A report by a working party of the Faculty of Occupational Medicine stated that simple cold provocation by immersion of the hands in cold water in an uncontrolled fashion followed by visual inspection of skin colour is of negligible value: it gives a high number of false negative results and should be abandoned.³ For acceptable cold provocation testing, minimum criteria for standard acclimatisation and standard challenge conditions should be fulfilled, an end point defined, and the sensitivity and specificity reported. Measurement of finger skin temperature with thermistors, thermocouples, or thermal imaging was considered to be a satisfactory technique, along with measurement of finger systolic blood pressure. Temperatures of $\leq 10^{\circ}\text{C}$ can lead to vasodilatation, making it difficult to interpret the results.

There is also evidence that multiple objective tests of the sensorineural component of the syndrome can improve accuracy when the condition is being staged according to the Stockholm scale.⁴ The Health and Safety Executive and subcommittees of the International Standard Organisation are currently attempting to standardise tests for both the vascular and sensorineural components of the syndrome.

It is true that there is still no gold standard, but the move to objectivity combined with a good

occupational history should replace total reliance on the history, which may vary on different occasions.

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- 1 Jones CM. ABC of work related disorders: occupational hearing loss and vibration induced disorders. *BMJ* 1996;33:223-6. (27 July.)
- 2 Gemne G, Brammer AJ, Hagberg M, Lundström R, Nilsson T, eds. *Proceedings of the Stockholm workshop 94. Hand-arm vibration syndrome: diagnostics and quantitative relationships to exposure, May 25-28, 1994.* Solna: Arbete och Hälsa, 1995:187-194.
- 3 Working Party of the Faculty of Occupational Medicine of the Royal College of Physicians. *Hand-transmitted vibration: clinical effects and pathophysiology.* Part 1. London: Royal College of Physicians, 1993.
- 4 McGeoch KL, Harper Gilmour W, Taylor W. Sensorineural objective tests in the assessment of hand-arm vibration syndrome. *Occup Environ Med* 1994;51:57-61.

Living wills do have legal effect provided certain criteria are met

EDITOR,—I disagree with Tom Arie when he states that “in the United Kingdom ‘living wills’ have no legal force.”¹ Although it is true that there is no legislation governing the use of living wills (also known as advance directives), recent case law suggests that at common law, in England and Wales, an advance refusal of treatment will have legal effect provided it meets the elements necessary for validity as set out in *Re T*.² These elements are that (a) the person was an adult and mentally competent when he or she made the advance refusal, (b) the person knew the nature and consequences of the refusal at the time that he or she made it, (c) the person intended the refusal to apply in the circumstances that have subsequently arisen, (d) the person was not acting under undue influence when he or she made the decision, (e) the refusal has not been revoked, and (f) the person is now mentally incapable of making the decision.

In the more recent case of *Airedale Trust v Bland* three judges confirmed the legal effect of an advance refusal of treatment,³ and in *Re C* the High Court issued an injunction supporting an advance refusal of treatment.⁴

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- 1 Arie T. Caring for older people: some legal aspects of mental capacity. *BMJ* 1996;313:156-8. (20 July.)
- 2 *Re T* (adult: refusal of medical treatment) (1992) 4 All ER 649.
- 3 *Airedale NHS Trust v Bland* (1993) 1 All ER 821.
- 4 *Re C* (adult: refusal of treatment) (1994) 1 WLR 290.

GPs' responsibility for midwives' actions

GPs are not responsible if midwives are employed by a trust or are self employed

EDITOR,—Early this year I signed a joint statement with the Royal College of General Practitioners, which clearly states that midwives are at all times responsible and accountable for their actions. Thus I was dismayed to read P D Thomas’s letter, which is based on the mistaken assumption that doctors carry vicarious liability for acts and omissions of midwives.¹ This is not the case. If a general practitioner personally employs a midwife, a nurse, or anybody else then he or she is responsible, as the employer, for the acts and omissions of that

employee. Midwives who are employed by the health authority or are self employed are responsible and accountable for their own actions.

Thomas’s second mistaken assumption is that obstetric problems are more adequately dealt with by general practitioners than by paramedics. Paramedics are called specifically for their resuscitation skills and not for obstetric skills. When midwives need obstetric skills they will transfer the woman to hospital to a specialist obstetrician; they are unlikely to call a general practitioner. The days of doing forceps deliveries in the home have long gone, and modern roads and vehicles allow women to be transferred within an hour.

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- 1 Thomas PD. GMS’s advice on intrapartum care. *BMJ* 1996;313:305. (3 August.)

Author’s reply

EDITOR,—In reply to Caroline Flint’s comments, I would refer her to the NHS General Medical Services Regulations. Paragraph 20(2)(b) of schedule 2 confirms that the doctor with whom the patient is registered is responsible for the acts and omissions of all people acting on his or her behalf unless those people are doctors on any NHS medical list and themselves responsible for their own acts and omissions. I do not believe that the joint statement can negate this statute—as I have discovered to my cost—but Flint’s letter clearly highlights the recipe for conflict that can exist when both independent general practitioners and midwives employed by trusts offer intrapartum care.

At a midwife led home delivery an ambulance will usually be called for any intrapartum problem. The joint statement supposes that obstetric emergencies should more properly be managed by hospital obstetricians or neonatologists, but with the demise of obstetric flying squads it is quite possible that specialist intervention will be provided too late to be effective. Few hospital trusts have medical staff free to attend domiciliary emergencies. Indeed, my local hospital is now obliged to employ its consultants as locum obstetric registrars.

Most ambulance services can indeed effect transfer within an hour, but it can take far less than an hour for both a mother and her baby to die of an unexpected intrapartum catastrophe. While I do not believe that any general practitioner would attempt a domiciliary forceps delivery for simple delay in the second stage of labour, this manoeuvre and many other medical interventions can be life saving if there is extreme fetal distress or if other serious problems occur, such as massive postpartum haemorrhage. This is why I attend all confinements and try to keep my obstetric and resuscitation skills finely honed.

My local ambulance service grants ambulance staff a paramedic certificate after they have successfully completed a five week course. The certificate entitles the staff to use parenteral prescription only medicines on their own recognition only if a doctor is not available. It is not a superior qualification to that held by any registered medical practitioner.¹ If nine years of vocational training no longer equips doctors to manage obstetric emergencies more adequately than any midwife or paramedic then something is very wrong.²

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- 1 *The medicines (products other than veterinary drugs) (prescription only) amendment No 2 order 1992.* London: HMSO, 1992. (SI 1992 No 2937.)
- 2 Thomas PD. Emergency care in general practice. *BMJ* 1995;310:1268.