data recorded in the United Kingdom, is available in the full version of the British Hypertension Society's guidelines or on the society's website (www.bhsoc. org).¹²) The theoretical benefit in reducing cerebrovascular disease is largest in this high risk population. Unfortunately, this is precisely the population in which the rate of control of hypertension is one of the lowest.

In any case, adherence of primary care physicians to the British guidelines is key to successfully treating their individual patients, thus improving the rate of control of hypertension and reducing cardiovascular events.

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- Wolf-Maier K, Cooper RS, Banegas JR, Giampaoli S, Hense HW, Joffres M, et al. Hypertension prevalence and blood pressure levels in 6 European countries, Canada, and the United States. *JAMA* 2003;289:2363-9.
 Wolf-Maier K, Cooper RS, Kramer H, Banegas JR, Giampaoli S, Joffres MR, et al. Hypertension treatment and control in five European countries, Canada, and the United States. *Hypertension* 2004;43:10-7.

- 3 Guidelines Sub-Committee. 1999 World Health Organization-International Society of Hypertension guidelines for the management of hypertension. J Hypertens 1999;17:151-83.
- The sixth report of the Joint National Committee on prevention, detection, evaluation, and treatment of high blood pressure. Arch Intern Med 1997;157:2413-46.
- 5 Guidelines Committee. 2003 European Society of Hypertension-European Society of Cardiology guidelines for the management of arte-rial hypertension. J Hypertens 2003;21:1011-53.
- Chobanian A, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL, et 6 al. The seventh report of the Joint National Committee on prevention, detection, evaluation, and treatment of high blood pressure. The INC7 report. JAMA 2003;289:2560-72.
- 7 Williams B, Poulter NR, Brown MJ, Davis M, McInnes GT, Potter JF, et al. British Hypertension Society guidelines for hypertension management 2004 (BHS-IV): summary. BMJ 2004;328:634-40.
- 8 Ramsay LE, Williams B, Johnston GD, MacGregor GA, Poston L, Potter JF, et al. British Hypertension Society guidelines for hypertension management 1999: summary. BMJ 1999;319:630-5.
- 9 Staessen JA, Wang JG, Thijs L. Cardiovascular prevention and blood pressure reduction: a quantitative overview updated until March 2003. J Hypertens 2003;21:1055-76.
- 10 Brown MJ. Better blood pressure control: how to combine drugs. J Hum Hypertens 2003;17:81-6.
- 11 Dickerson JE, Hingorani AD, Ashby MJ, Palmer CR, Brown MJ. Optimisation of antihypertensive treatment by crossover rotation of four major classes. Lancet 1999;353:2008-13.
- 12 Williams B. Poulter NR, Brown MJ, Davis M, McInnes GT, Potter JF, et al. Guidelines for management of hypertension: report of the fourth working party of the British Hypertension Society, 2004-BHS IV. J Hum Hyper-tens 2004;18:139-85.

Congenital heart disease

Monitoring interventions after Bristol

hildren in the United Kingdom with congenital heart disease undergo surgery and catheter based interventions with a very high probability of survival as counted at 30 days and one year, according to data from the United Kingdom's central cardiac audit database.1 The publication of these excellent results concerning a high profile area of practice prompts a reflection on the issues surrounding the collection and validation of clinical data and the methods used to evaluate outcomes.

To keep a tally of operations and their outcome, to have these results available for reflection, to be shared with colleagues, and for inspection by others, should be a simple matter and entirely appropriate.² Compared with, for example, the long term, multiple, and relatively subjective outcomes of cleft lip and palate correction, cardiac surgery is a readily countable activity-each operation is a major event, and death is an absolute and objective outcome. But doing this well has proved to be very difficult. When an audit was conducted in adult surgery of all cases operated on between April 1997 and March 1998 in 10 UK centres, 25% of essential data elements were missing.³ In this central cardiac audit database report 22% of deaths would have been unrecorded,¹ had they relied on hospitals' discharge data. The data were corrected by linkage through NHS numbers to death registration at the Office for National Statistics. If there is no traceable unique identifier it is impossible to check back for veracity of data or be confident whether the individuals are alive or dead, before even considering reliability of data for research purposes.⁴ But there is a substantial obstacle to retaining the identity of individuals in databases-a growing preoccupation with privacy and confidentiality. "The government has made it clear that informed consent is the fundamental principle governing the use of patient information by any part of the NHS or research community"5; otherwise no identifiable data can be used unless exemption is gained by specific application under section 60 of the Health and Social Welfare Act 2001. The requirements are exacting, and the intention is evidently to tighten not relax them.5

Conflicting pressures exist for and against keeping on computer record traceable information about individuals while respecting their privacy. Allegations of rape and child abuse against the child murderer Ian Huntley were deleted and with them went the alert that might have prevented his employment as a school caretaker. British Gas cut off the gas supply to an elderly couple: they both died of hypothermia, without social services knowing. Observance of the Data Protection Act 1998 was cited in explanation of both.⁶ Potential methods of protecting individuals' rights while collecting data to take better care of them are available⁷ and will be the future of clinical databases, but the implications in making "privacy" sacrosanct rather than considering the greater good are wide. Implementation of the national programme for information technology will be undermined unless a patient specific identifier (ideally the NHS number) is included. The greater good would seem to require it. After all, we already put on paper all of this information about our patients in an inherently less secure form-the paper notes.

One of the benefits of computer storage and retrieval of data that has been slow in coming is to save work rather than add to it. Rather than replicate over and over the task of data collection, more use should be made of data collected nationally (in England, for

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example, hospital episode statistics) for which Section 60 of the Health and Social Care Act 2001 creates special exemption. Powerful arguments exist for specialty and disease specific databases for research purposes,⁴ but there is evidence that hospital episode statistics was quite capable of revealing Bristol as an outlier in the period 1991-5.8 Compared with the 22% missing deaths in the central cardiac audit database, hospital episode statistics missed only 9% in 1991-5.1

Meanwhile we have to learn from the data we have. What is the purpose of a central cardiac audit database for congenital heart interventions, and how well is it achieved? In large part it was a response to an imperative to monitor for safety and so it reports comparative death rates for the 13 tertiary referral centres for paediatric heart disease in the United Kingdom. An approach adopted increasingly is to include all cases in risk adjusted trend plots,^{9 10} which are now widely accepted and being further developed internationally in cardiac surgery.¹¹ To risk stratify for such complexity as found in congenital heart disease is not easy, but the authors have made no attempt to do so.

In the report from the central cardiac audit database, cardiological interventions are considered separately from surgical operations, which are in turn subset into those performed with and without cardiopulmonary bypass. Three age bands are used-neonates, infants, and children, separated at 1 month and 1 year. The report contains data for six surgical and three cardiological benchmark procedures with the residue (a 10th set) not reported. "You can't compare apples and oranges" is the usual defence for creating ever smaller subsets, but this data set is cut so fine that it's more like fruit salad. Recognising the statistical problem created by the now large number of subsets, Gibbs et al broadened the confidence intervals to 99% to avoid false positives, which puts the emphasis on proof of difference rather than an alert for safety purposes-which was where we started. This is a problem. Apparently insignificant sporadic deaths dispersed among these sets (or classified as "other" in that

10th set) cannot be seen as a pattern. That is exactly the purpose of the methods of trend monitoring that are currently available.11

One final concern is raised by the central cardiac audit database report. In the 1980s a drive prevailed to reduce the number of paediatric surgery units in the United Kingdom¹²-there were then nine. A steer towards centralisation is enshrined in the Bristol inquiry,13 and yet we have 13 units reporting cases performed by 104 operators in the report from the central cardiac audit database.

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- Gibbs J, Monro JL, Cunningham D, Rickards A. Survival after surgery or therapeutic catheterisation for congenital heart disease in children in the 1 United Kingdom: analysis of the central cardiac audit database for 2000-1. BMJ 2004;328:611-5.
- Hey Groves EW. A plea for a uniform registration of operation results. BMJ 1908;ii:1008-9.
- Fine LG, Keogh BE, Cretin S, Orlando M, Gould MM. How to evaluate and improve the quality and credibility of an outcomes database: valida-tion and feedback study on the UK cardiac surgery experience. BMJ 2003;326:25-8.
- Black N. Secondary use of personal data for health and health services research: why identifiable data are essential. *J Health Serv Res Policy* 2003;8(suppl 1):S1-40.
- Department of Health. Proposal to revise regulations made under section 60 of the Health and Social Care Act 2001. www.info.doh.gov.uk/doh/ point.nsf/0/afc9f0aad683806780256ddc003042d6/\$FILE/ nhs_databases_consultation_paper.pdf (accessed 23 Jan 2004). Data guidelines set for review after blunders. *Times* 2003 December 24:4.
- Lowrance WW. Learning from experience: privacy and the secondary use of
- data in health research. London: Nuffield Trust, 2002. Aylin P, Alves B, Best N, Cook A, Elliott P, Evans SJ, et al. Comparison of UK paediatric cardiac surgical performance by analysis of routinely col-lected data 1984-96: was Bristol an outlier? *Lancet* 2001;358:181-7.
- Lovegrove J, Valencia O, Treasure T, Sherlaw-Johnson C, Gallivan S. Monitoring the results of cardiac surgery by variable life-adjusted display. Lancet 1997;350:1128-30.
- Lancet 1997;350:1128-30.
 Tekkis PP, McCulloch P, Steger AC, Benjamin IS, Poloniecki JD. Mortality control charts for comparing performance of surgical units: validation study using hospital mortality data. *BMJ* 2003;326:786-8.
 Grunkemeier GL, Wu YX, Furnary AP. Cumulative sum techniques for assessing surgical results. *Am Thorac Surg* 2003;76:663-7.
 Treasure T. Rational decision making about paediatric cardiac surgery. *Least* 900:0252-000.
- Lancet 2000;355:948.
- 13 Pritchard L. Anger as DoH shuns heart surgery advice. BMA News 2004 January 3:2.

Intimate partner violence

Doctors should offer referral to existing interventions, while better evidence is awaited

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ntimate partner violence is a major public health and human rights issue. The statistics on its physical, sexual, reproductive, emotional, and financial consequences are alarming. Although men may be abused, women are overwhelmingly the victims of intimate partner violence. Shortly we will have reliable estimates of its international prevalence, determinants, and consequences when the World Health Organization reports on its multi-country study on women's health and domestic violence against women.1 However, as Taft et al remind us in this issue (p 618), intimate partner violence affects entire families, including children, making the statistics even more shocking.² We need effective interventions to promote the necessary individual and societal changes to tackle current cases of intimate partner violence and to prevent new ones. Unfortunately, there are only a few examples of rigorous evaluations of interventions, and this paucity holds for both developed and developing countries. Without knowledge about whether interventions against intimate partner violence do more good than harm, what should doctors do about offering referrals for confirmed or likely intimate partner violence?

Many of those who are struggling with this question have asked the important corollary question-is there sufficient evidence about the benefits and lack of harm of screening for intimate partner violence to warrant its use? Unfortunately, the answer is complex. On the one hand, universal screening for intimate partner violence is generally endorsed by international guidelines because of the desire to cast a wide net, given the adverse effects of intimate partner violence. On the other hand, case identification methods based on presentation of specific signs or symptoms of abuse (diagnostic method)