



Suspected child abuse: false positives or false negatives?

An Australian model could be used to get better “evidence” into legal decision-making

The UK government is reviewing 258 cases in which a parent was convicted of murder, manslaughter or infanticide. This review follows the overturning of the conviction of one mother for the murder of two of her children, and the collapse of the prosecution case against another mother accused of murdering three of her children. In addition, the cases of thousands of children spirited into care, as they were deemed to be at risk of child abuse, may also be revisited. One of the key issues in these events has been the incorrectness of evidence advanced by an expert medical witness whose estimates of the probability of the occurrence of more than one sudden infant death occurring in a family were grossly incorrect.

As a consequence of all these developments, UK doctors are now apparently reluctant to sit on child protection committees. A news item in the *BMJ* reporting this eventually generated 38 rapid online responses, reflecting varied but always strong views on the difficulty of getting the appropriate balance between protecting the child and destroying the family. The foregoing events raise two issues — how do we get better “evidence” into legal decision-making and, realising that we may never get it completely correct, should we have a system that is inclined to accept false positives or false negatives in attribution of guilt in cases of possible child abuse?

Taking the issue of evidence first, one of Australia's better-kept secrets is its excellent system of applying evidence to compensation claims of military veterans — a model which could be adopted elsewhere.

The crux of the system is an independent panel that uses sound medical–scientific evidence to determine the causation of injury, disease or death in relation to exposure to military service. Although this does not relate to individual cases, but to the generality of exposure, the success of the program and the principles by which it operates provide a model that may be adapted in other jurisdictions.

The independent panel arose from a request in 1994 by the Australian government to the Repatriation Commission. The Commission was asked to prepare, in consultation with veterans' organisations, legislation to reform the process of decision-making about the causation of disease. The purpose of the reform was to create a more equitable and consistent system for dealing with claims for disability pensions received from Australian veterans and their dependants. One of the outcomes of the legislative reform was the formation of the Repatriation Medical Authority (RMA), an independent statutory authority responsible to the Minister for Veterans' Affairs (see <www.rma.gov.au/>).

The RMA consists of a panel of five practitioners eminent in fields of medical science. Their role is to determine “statements of principles” for any disease, injury or death that could be related to military service, based on sound medical–scientific evidence. The statements of principles state the factors that “must” or “must as a

minimum” exist to cause a particular kind of disease, injury or death.

The statements of principles also identify what constitutes “sound medical–scientific evidence” for the purpose of applying the relevant standards of proof relating to particular kinds of injury, disease or death affecting veterans: the “reasonable hypothesis” standard and the “reasonable satisfaction” (or “balance of probabilities”) standard.

In its modern guise, epidemiology makes attribution of causation a rigorous process, with clear principles to be followed, and there can even be different levels of proof required for decisions from the same database. Acquiring these skills is quite different from the experience of clinical practice and significantly changes the definition of the traditional “expert witness”. The RMA has been externally reviewed and shown to make consistent decisions at its prescribed standards of proof. With such consistency in establishing causal decisions, all plaintiffs can be assured of a standardised level of judgement that does not vary from one expert

witness to another. Such a system would not have allowed the error in assigning probabilities that occurred after the deaths of children in the UK.

Having mentioned epidemiology, let's move to the question of false positives or false negatives. Set the bar of suspicion too high, and child abuse will go unpunished. Set it too low, and there will be false accusations, imprisonment and family break-ups. What would be the epidemiological approach to this?

First, there is a pressing need for better diagnostic tests. Are social workers and paediatricians trained well enough to identify and differentiate between real and alleged child abuse? Does this training identify the importance of pretest probability (the prevalence) and its influence on false positives and false negatives? While the training should include the relevant clinical, psychosocial, ethical and legal domains, there needs to be some good old-fashioned clinical epidemiology thrown in, to demonstrate that, in situations of low prevalence (as is usually the case with child abuse), the predictive value of a “positive” test is low. Paediatricians, social workers and primary care teams should receive more formal training and undergo some kind of accreditation and review process. Both in the UK and Australia, primary care is not particularly well placed to detect cases of child abuse or early warning signs of infanticide, and there are lost opportunities.

Second, can we improve systems for reporting or our monitoring and evaluating services? An overhaul of current processes, development of less cumbersome reporting procedures, and better resourcing, as well as incentives for people to do this work, would be a start.

In all this, the role of the media and various lobby groups in whipping up public concern cannot be forgotten — objectivity is difficult enough to achieve without these pressures. There is an obsession with identification and demonisation of paedophilia in

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Britain, fuelled by the tabloid press with its unhelpful, brutalising effect on complex social issues.

But is child abuse less common in Australia? Are the media more, or less, responsible? Are paediatricians and social workers better trained?

The Repatriation Medical Authority certainly sets a good example, which could be followed both within Australia and elsewhere for reducing the variability of expert opinion in possible child abuse and other medicolegal cases. Adopting this model in the UK may reduce the uncertainty surrounding child abuse that has transfixed the medical and general community here.

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