on 14 counts of scientific fraud after a hearing of the NSW Medical Tribunal lasting 22 months, with 198 sitting days and costing A$ 5–7 million. The charges related to an experiment published in the *Australian Journal of Biological Sciences* on hyoscine, an anticholinergic agent related to one of the components of the anti-nausea drug Debendox. In the experiment conducted there were six rabbits, one deformity, and no controls. The published study had eight subjects, with three deformities and eight normal controls. It was now statistically significant. McBride used the experiment as part of his warning that Debenox was teratogenic. It followed earlier warnings from McBride about the teratogenicity of thalidomide (subsequently proved true) and imipramine (a claim he was forced to withdraw for lack of evidence). During the 1980s, McBride frequently gave expert testimony in US courts on claims for compensation following birth defects. His recollections of experiments he described as the basis for his testimony were dismissed by the tribunal as faulty.

67-year-old McBride, who was overseas at the time of the decision, was quoted in local newspapers as being ". . . shattered. The whole thing is terrible, devastating. It is a bloody awful thing to do to someone at the end of a career. Whatever the medical tribunal thought of me as a scientific researcher, I thought they might give me no more than a reprimand on the basis of the whole hearing". But the tribunal disagreed, with a majority conclusion that McBride could no longer be trusted and was not of good enough character to practise medicine.

Mark Ragg

Measuring quality of life

"What's your Euroqol index today?" is unlikely to be a question much put to patients in follow-up visits, at least not in the near future. For one thing, the reliability and validity to this index is still being evaluated. For another, a single global score of well-being based on a standardised questionnaire is unlikely to indicate which areas of life are adversely affected by the health state or the extent of the impact. Some researchers are thus assessing patient-generated measures—single-figure indexes derived from questions about areas of life nominated by the patient. Another approach is the development of health profiles, some illness-specific, others genetic. But even health profiles cannot be expected to be used in isolation.

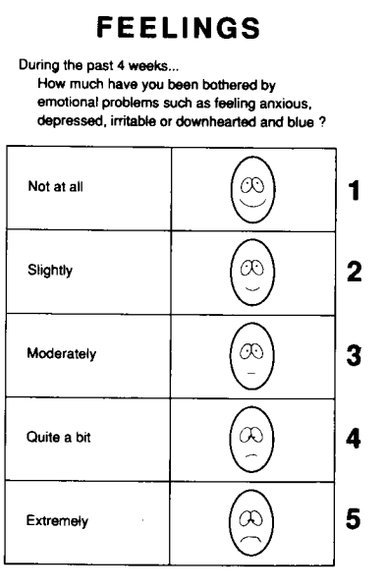

Figure: **A COOP chart**
Reproduced with permission from The Dartmouth COOP project.

A report from the Health Services Research Unit in Oxford provides a review of some of the most widely used generic profiles. The Dartmouth COOP profile, for instance, is based on nine illustrated charts covering physical, social, and role functioning, emotional status (figure), social support, pain, quality of life, overall health, and health change. It gives reasonably high levels of test-retest reliability for single-item measures, though perhaps less so for elderly patients and those in lower socioeconomic classes. The Short-Form (SF) 36 (a 36-item questionnaire covering eight dimensions) has been derived from two large-scale North American studies—the Health Insurance Experiment and the Medical Outcomes Study, both of which collected data on patient-assessed outcomes. The SF-36 has been extensively used in the US. Studies in the UK indicate that it is easy to complete, that there are high levels of internal reliability for the eight items, and that comparison of responses from different socioeconomic groups, from males and females, and from those who reported long-term chronic illness and those who had recently consulted a medical practitioner give the expected differences in profiles. However, there are few data on the extent to which SF-36 is sensitive to clinically important change.

The report includes UK population norms for SF-36. The slight differences between the Oxford and Sheffield samples probably reflect better health in the south.

Vivien Choo

1 Jenkinson C, Wright L, Coulter A. Quality of life measurement in health care. A review of measures, and population norms for the UK SF-36. Oxford: Health Services Research Unit, University of Oxford, Oxford OX2 6HE. 1993. Pp 66. £8.50. ISBN 1-974551-04-9.

Agent Orange

During the Vietnam War, US forces sprayed millions of gallons of the herbicide Agent Orange and other defoliants in order to deny cover to the Viet Cong guerrillas and North Vietnamese regulars. More than 40 000 Vietnam veterans have now filed Agent-Orange-related claims. But only a few have received compensation from the Department of Veteran Affairs, which has disputed the connection between most complaints and herbicide exposure. To end the debate, Congress asked the National Academy of Sciences' Institute of Medicine to evaluate scientific publications on herbicide exposure, but the committee's conclusions [1] are unlikely to put the matter to rest. The panel found:

- sufficient evidence for a statistical association between exposure to herbicides or dioxin, which is found in these herbicides, and soft-tissue sarcomas, Hodgkin's disease, non-Hodgkin lymphoma, chloracne, and porphyria cutanea tarda;
- limited or suggestive evidence of an assocation between herbicide exposure and respiratory cancers, prostate cancer, and multiple myeloma;
- inadequate evidence to demonstrate an association for most other cancers and disorders, and
- for a small group of cancers—those of the skin, gastrointestinal system, bladder, and brain—a sufficient number of well-designed studies to provide suggestive evidence that *no* association between the disease and herbicide exposure existed.

But most of the studies reviewed looked at the health of industrial and agricultural workers who were exposed to much higher levels of herbicides for much longer periods of time than the average soldier in Vietnam. Hence the committee recommended that an independent agency be established to determine the amount of herbicide exposure experienced by US servicemen by reconstructing the history of herbicide use by different units during the war.

Michael McCarthy

1 Veterans and Agent Orange: health effects of herbicides used in Vietnam. Washington DC: National Academy Press, 1993.

Aldosteronism

An International Registry for Glucocorticoid-Remediable Aldosteronism (GRA) has been set up at the Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA. The finding reported last year that GRA results from a chimeric 11-β hydroxylase/aldosterone synthetase gene (*Nature* 1992; **335:** 262–65) has since been confirmed in 15 additional families. The registry will provide a screening service for GRA and a scientific database.