research workers on totals and sub-scores were adequate and those at follow-up acceptable and satisfactory.

A curious innovation was the creation of a set of complex algorithms derived from an early version of PSE–10, each intended to test the content of one clinical HoNOS item. Several other instruments were used to provide 'equivalents' to the non-clinical items. An unpublished 73-page document (available from P. Bebbington, Royal Free and University College London Medical School, Archway Campus, Whittington Hospital, London N19 5NX, upon request) does little to clarify the procedures. Moreover, the 'equivalents' thus derived are untested instruments. Far from being a 'gold standard' they have no track record. HoNOS could well be testing them.

The overview by Stein (1999) contains no reference to the aims and recommendations of the original authors. Without an exposition of our intentions, specific caveats and suggestions for use, his comments simply summarise the papers and can be compared with our summaries, above. One specific conclusion needs correction. This is the assertion that HoNOS is unlikely ever to be used by clinicians in routine practice. In fact, the Department of Health has now completed the development work on its new MDS (Glover *et al*, 1997). HoNOS has been formally adopted for use in the context of major Care Programme Approach reviews, to be available to clinical staff on networked information systems. The data set reader program permits easy and flexible analysis of total and sub-scale scores in association with a wide range of socio-demographic, diagnostic and service use data.

More generally, there has already been a significant uptake of HoNOS. A telephone survey of 140 English trusts providing mental health services, conducted between October 1997 and May 1998, showed that one-third were using HoNOS routinely in one or more service setting. Another third had either received training or had adopted plans to use HoNOS as part of a pilot exercise. Current interest remains at least as high. Even without promotion, the CRU has distributed over 10 000 scales and glossaries to some 90 services during the past two years and has coordinated training in 25 trusts. There are translations into many languages. Updated software will be available early in the year 2000.

What next for HoNOS?

The papers reviewed reflect a real interest in the clinical, epidemiological and administrative ideas behind HoNOS. They also reflect the lack until now of a general strategy to take forward its testing and improvement in an orderly manner within an MDS. The instrument has the potential to fulfil three small but essential roles:

(a) The first is as a simple tool that large numbers of nurses and psychiatrists have found useful as a 'present state profile'. A label with the current profile can be stuck into a case record after each contact with a patient. Good software now under development could make such a record even more useful over time and allow the addition of other information. How the clinician uses the items and three types of score is for the clinician to decide.

(b) The second kind of use depends in part upon the goodwill generated by the first but it requires a discipline involving training and supervision to achieve a reasonable degree of reliability as a small part of an MDS, where it can fulfil a vital role as a measure (not a predictor) of progress and for making local comparisons.

(c) Third, the total score and subsection scores, when aggregated and anonymised and supervised to establish quality and prevent misuse, could be valuable for epidemiological and administrative functions. No other such simple clinical indicator is at present available.

We suggest that these limited aims are worth pursuing in a coordinated way. HoNOS cannot emulate the computer 'Deep Thought', which calculated that the answer to life, the universe and everything was the number 42 (in Douglas Adams' *Hitchhiker's Guide to the Galaxy*). But it is reasonably robust. The weaker items, either attempting to squeeze too much information into one item or concerned with social information often unavailable to the rating clinicians, do need attention, possibly in the context of a slightly larger HoNOS. As with all such public health documents, training and supervision will undoubtedly also be essential. Ideally there would be strong coordination with workers in other countries.

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UPDATE FROM DOWN UNDER

It was interesting to read Wing *et al*'s comments (above) on the HoNOS papers which appeared in the May 1999 issue of the *Journal*. As the creators of HoNOS it is natural that they take an interest in its development, but it is apparent that this six-year-old is now displaying some independence. The emergence of the instrument into the public domain has led to some unexpected results.

In their first sentence, Wing *et al* indicate that the scale is targeted mainly to clinicians within the National Health Service. In settings where the public/private mix is more equal than in the UK, and with the increasing blurring of the distinction, there is a need for a scale to be equally relevant across diverse settings. Although the HoNOS has been used with adults in in-patient, out-patient, public and private settings it is clear that its original and primary focus is service users in the public sector, and it is not so well targeted to

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conditions (e.g. eating disorders) encountered more frequently in the private sector.

At several points, Wing *et al* talk of the importance of training and supervision. They suggest that the Victorian training consisted of a brief international video link with them. That session was for the benefit of a few key staff in order to resolve a few ambiguities in the College Research Unit's training material. After this, trainers and clinical staff were trained in the recommended fashion.

The training materials issued by the College Research Unit, and the article introducing Version 4 (Wing *et al*, 1998), talk of the importance of training, but supervision is hardly ever mentioned. It may be that as the novelty of the HoNOS wears off, and as clinicians' HoNOS training recedes further into the past, there is progressive loss of fidelity to the rules. Ventura *et al* (1993), in relation to the Brief Psychiatric Rating Scale, wrote of the need to maintain consistency over time, of interviewer style and interrater reliability. In the real world of mental health care, the availability of quality supervision is not evenly distributed between agencies and professions, and any scale needs to survive and perform in that environment. To the extent that supervision additional to initial training is required, the economy of routine use of the instrument is somewhat diminished, but in return one would hope to gain increased confidence in the ratings.

Once a measure is introduced into routine practice (as is about to happen in Victoria), the question of maintaining data quality arises, and it is presumably in this respect that the idea of supervision has been introduced. Continuous local monitoring is one form of supervision; a centralised system of accreditation is another. It is unclear just what kind of supervision Wing *et al* have in mind. Now that the instrument is being used in several countries, a system centralised in Britain seems inappropriate. Ultimately, the best guarantee of data quality is meaningful use, feedback and ongoing monitoring.

The presence of a prompt, relevant and user-friendly feedback arrangement is crucial to clinician acceptance and compliance (Callaly *et al*, 1998*a*). Much of the clinician resistance alleged by Stein (1999) and questioned by Wing *et al* can be traced to the situation whereby clinical staff fill out forms for some obscure management purpose. If staff do not have the necessary tools to use the data they themselves have collected, is it any wonder that they should be less than enthusiastic? Graphical feedback via computer seems a most suitable medium for returning ratings to raters. The College Research Unit has freely distributed a program called HoNOSSoft which does this. Potential users should be aware that this program cannot discriminate between the missing value rating of nine and the real number nine. Thus, service users with one or more missing ratings attract grossly elevated total scores. A program without this fault and a number of extra features has been developed locally (Callaly *et al*, 1998*b*).

Wing *et al* make the good point that an instrument like the HoNOS should not be viewed in isolation, but ideally as part of a wider data set, like a minimum data set. In our article (Trauer *et al*, 1999) we were able to analyse HoNOS results against service utilisation data, and showed that certain useful conclusions could be reached. There are now several articles based on Australian inpatient settings examining the changes associated with acute psychiatric hospitalisation (public and private) and HoNOS has been shown to have a key role to play in psychiatric case mix classification (Buckingham *et al*, 1998). The outcomes information that a scale like the HoNOS can provide lends meaning and relevance to input and process information which are generally routinely collected.

Finally, we may speculate whether the current version (Version 4) of the HoNOS is the final one. Wing *et al* (1998) describe it as the final version, but the commentary suggests that further modifications might be needed. There is acknowledgement of the low reliabilities of certain items, and the possibility of a slightly longer instrument is entertained. In Victoria, where we have substantial experience and data on the scale, some of us are considering some modifications which, while retaining its essential features, will overcome some of the uncertainties in glossary descriptions and anchor points. To take just one example, it would be good to agree whether tobacco use is ratable on Scale 3.

Acknowledgement

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ASSESSMENT: FROM THEORY TO PRACTICE

Wing *et al* (above) indicate agreement with the main findings from our study. These were that HoNOS may be most suitable for tracking changes over time, but less useful for treatment planning, and should not be used to infer the level of morbidity in a case-load. The Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) (Slade *et al*, 1999*a*), by contrast, indicates when treatment should be commenced or continued, and can be used as a case-load measure, but may be insufficiently sensitive to be used as an outcome measure at the individual level. The concerns expressed in regard to other papers reflect the tension in creating assessments which are both robust and clinically relevant. Developing and implementing outcome measures for use in routine clinical settings will require attention to the construct being assessed, the purpose of the assessment, and the measurement tool used.

Clarity is needed about what constructs are assessed. The National Health Service and Community Care Act 1990 states that services are to be provided on the basis of need, and outcome measured in relation to changes in quality of life. This directive accords with recent research comparing these constructs, which found high need

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