the intangible gains to clinical practice as we implemented the system.

Barry Matthews, *Consultant Psychiatrist, Central Merton Mental Health Team, Pathfinder Community and Specialist Mental Health Services, Springfield Hospital, London SW17 7DJ*

CMMHT Database Individual Careplan form available from the author on request.

Can staff predict day hospital responders?

Sukhwinder S. Shergill, Robert Butler and Maurice Greenberg

To maximise the effectiveness of psychiatric day hospitals it is important to establish which patients benefit most. We tested the hypothesis that day hospital therapists can predict responders. The consultant, key-workers, junior psychiatrist and secretary predicted outcome for 26 patients. These were measured blind using the Brief Psychiatric Rating Scale (BPRS), Global Assessment Scale (GAS), Becks Depression Inventory (BDI) and the Social Functioning Questionnaire (SFQ). There was poor correlation generally between staff predictions and patient progress as measured by the standardised instruments. The only significant correlation was the consultant's prediction with the BPRS. We suggest this is consistent with the consultant's experience and training in phenomenology. We conclude that consultants should be fully involved in day hospital assessments.

Day hospitals play an important role in community care, particularly since they have the advantage of offering structured treatment while patients continue to live at home. The Jules Thorn Day Hospital is a psychiatric day hospital with an inner city catchment area. It offers a mixture of group therapies as well as individual support and medication. The multidisciplinary team consists of nurses, occupational therapists, a psychologist, a psychiatric social worker, a consultant psychiatrist and a junior psychiatrist (senior house officer with one year's psychiatric experience). There is a key-worker system whereby each patient is allocated a named therapist who may be any member of the team except the consultant. The secretary is based in an open-planned reception area and has contact with all patients on a daily basis.

In spite of psychiatric day hospitals being an important resource little is known about which patients benefit most from day patient care (Creed *et al*, 1988). Vidalis & Baker (1986) found that basic demographic data failed to predict day hospital responders. Although Vidalis *et al* (1990) found that staff's predictions of success correlated positively with an overall assessment of success after six weeks, they failed to show a direct correlation between prediction and outcome on any of their four scales and they did not include a consultant's prediction. We chose four scales for their breadth of outcome measurement and ease of use (the scales added only five to ten minutes to a standard history and mental state examination). The two observer-rated scales were the Brief Psychiatric Rating Scale (BPRS), designed to measure patient change over 16 areas of psychopathology on a seven point scale, and the Global Assessment Scale (GAS), a short

assessment of global function which is sensitive to change and is rated 0-100. The two patient-rated scales used were Becks Depression Inventory (BDI) which measures depth of depression over 13 areas on a four point scale, and the Social Function Questionnaire (SFQ) which measures social function over eight areas on a four point scale. The prediction questionnaire was a five point rating scale based on that of the Vidalis *et al* (1990). We set out to test the hypothesis that the consultant and key-workers could predict outcome on these measures. The day hospital secretary, who completed her questionnaire before typing any documents related to the patient, acted as our control.

The study

Between 1 September 1993 and 1 March 1994, all admissions to Jules Thorn Day Hospital were asked for written consent to enter the study. During their first week of admission basic demographic details were collected and patients were assessed on the four outcome scales, in addition to their routine work-up by the ward psychiatrist. During their second week of admission there is an assessment meeting where the patient is interviewed by the consultant with the key-worker and other staff members present. Immediately after this meeting the consultant and key-worker (who were present) and secretary (who was not present) were asked to complete the prediction questionnaire. The prediction questionnaire comprised five statements, commenting on the progress anticipated by the patient: 'expected to benefit much more than the average patient attending the day hospital'; 'more than the average'; 'as much as the average'; 'less than average' and 'expected to benefit much less than the average patient attending the day hospital' (as used by Vidalis *et al,* 1990). Patients were then reassessed, blind to prediction, at their sixth week of admission.

All assessments were undertaken by the ward psychiatrist (SS). At the end of the study, prior to the results being unblinded, the ward psychiatrist also completed the prediction questionnaire on the basis of his admission assessment interview only. Outcome was measured from the difference between each scale at the first and sixth week of admission. Since these results were not normally distributed ranking statistics were

Table 1. Change in rating scales

Rating scale	Range	Mean change	Number improved	Per cent improved
BPRS	+31,0	+14	25	96
GAS	+40,−9	+19	24	92
BDI	+20,−19	+4	17	65
SFQ	+9,-6	+1	15	58

Direction of change adjusted, where appropriate, so improve=+

Table 2. Correlations between predictions and outcome measures

Predictor	Outcome measures			
	BPRS	GAS	BDI	SFQ
Consultant	0.34*	0.01	−0.06	−0.07
Key-worker	−0.02	0.11	−0.01	−0.04
Secretary	−0.03	0.23	−0.12	0.26
SHO	0.23	0.27	0.15	−0.09

Kendall's Rank Correlation Test (all figures Kendall's correlation coefficients). *=$P<0.05$

used. To address floor and ceiling effects correlation tests were repeated with Pearson's coefficients.

Findings

Of 30 admissions over the study period, 26 patients completed the study. One dropped out because he went to prison, one moved abroad, one refused to complete the reassessment and the fourth was admitted as an in-patient (diagnoses depression, psychotic episode, schizophrenia and schizoaffective disorder respectively). The mean age of the samples was 34.9 years (range 17–61, standard deviation 10.3), 15 (58%) were female, 17 (65%) were referred from hospital and 13 (50%) lived alone. Referrers' diagnoses were as follows: schizophrenia 8 (31%), depression 8 (31%), hypomania 6 (23%) and other 4 (15%).

Changes in rating scales between the first week and sixth week are shown in Table 1. These were compared using the Wilcoxon matched-pairs signed-ranks test. All showed an overall improvement with three reaching significance: BPRS ($P<0.01$), GAS ($P<0.01$), BDI ($P<0.05$) and SFQ ($P=0.1$). Kendall's and Pearson's Correlations were performed comparing the predictions of the four raters with the four outcome measures (see Table 2). The consultant's predictions significantly

Shergill, Butler & Greenberg

correlated with outcome on the BPRS (Kendall, 2-tailed, $P = 0.02$). This was also the only significant relationship using the Pearson correlation coefficient (2-tailed, r=0.4, P=0.04). The consultant failed to predict any change in any other scale. The key-worker's predictions failed to approach significance on any of the measures. The secretary's predictions approached significance on two scales (Kendall, GAS, P=0.15, SFQ, P=0.10). the junior psychiatrist's predictions approached significance on two scales (Kendall, BPRS, P=0.12, GAS, P= 0.08).

Comment

We collected the same basic demographic data as Vidalis & Baker (1986) and consistent with their findings found that none of these factors alone predicted success. Patients improved on all outcome measures. This was significant on three scales (BPRS, GAS and BDI). With a small sample size and the use of a ranking correlation test there is the possibility of missing significant correlations (type II errors).

Overall there was poor correlation between staff predictions and patient progress as measured by the standardised instuments. Only five out of 16 correlations approached significance (consultant's predictions with BPRS, junior psychiatrist's with BPRS and GAS and secretary's predictions with GAS and SFQ). The results highlight the difficulty inherent in prediction of prognosis. The scales used may not have been always appropriate in measuring results of therapeutic interventions, e.g. BDI may not be useful in mania or psychosis. The time frame may have been too short to allow useful results to emerge. It may have been helpful to have incorporated a life events measure to tease out possible confounding variables.

With regard to the trends seen in our results, the BPRS is the best established outcome measure of the four scales and was designed specifically to measure change in psycho-pathology. Only the consultant predicted significantly on this measure, with the junior psychiatrist approaching significance. This is consistent with their training in phenomenology and the longer experience of the consultant, particularly in a day hospital setting. Both of these factors may be important. This finding underlines the importance of a consultant in assessments and suggests that predictive skill can be learnt. This is particularly relevant because in some units consultants do not see patients at the time of the assessment. The secretary's predictions approached significance on the global and social scales (GAS and SFQ). The junior psychiatrist's predictions also approached significance on the GAS. This may reflect her and the SHO's more frequent social contact with the patients. Key-workers failed to predict or approach significance on any of the outcomes. This group, however, consisted of several members of staff who key-worked on average three patients during the study. Numbers were too small to analyse individual staff member's predictions. Their lack of prediction may reflect the range of experience of key-workers or their training. We believe more research should be undertaken to look at the roles of professionals in psychiatric assessments.

References

CREED, F., ANTONY, P., GODBERT, K. & HUXLY, P. (1988) Treatment of severe mental illness in a day hospital. *British Journal of Psychiatry*, **154**, 341–347.

VIDALIS, A. A. & BAKER, G. H. B. (1986) Factors influencing effectiveness of day hospital treatment. *International Journal of Social Psychiatry*, **32**, 1–6.

— PRESTON, T. D. & BAKER, G. H. B. (1990) *International Journal of Social Psychiatry*, **36**, 137–142.

Sukhwinder S. Shergill, *Academic Registrar, Department of Psychiatry, University College London*; Robert Butler, *Registrar, Waikato Hospital, Hamilton, New Zealand*; and *Maurice Greenberg, *Consultant Psychiatrist, Jules Thorn Day Hospital, St Pancras Hospital, London NW1 OPE*

*Correspondence