Brit. J. Psychiat. (1982), **141**, 178–180

Prognosis in Chronic Mental Disability

ROGER MORGAN and SEAN GRAY

Summary: In a replication study three performance variables measured at the beginning of 200 patients' rehabilitation courses were combined to form an Index to quantify the degree of initial disability. The Index score was significantly associated with the ten-year outcome, and hence has predictive value. With it a level of disability can be specified beyond which a patients' prospect of resettlement is predictably hopeless from the outset, despite prolonged and intensive rehabilitative efforts. On the other hand, many less disabled patients cannot achieve resettlement unless such efforts are made. There are, therefore, humanitarian and economic reasons for seeking to distinguish these two groups.

We have previously described a method of rating chronic psychiatric disability and thereby predicting the outcome of rehabilitation (Morgan and Cheadle, 1974). The measures yielding the best prediction were (a) the Wing group (Wing, 1961); (b) the social withdrawal component of Wing's behaviour scale (Wing, 1961); and (c) the work performance score (Cheadle and Morgan, 1972). A patient's scores on each of these three variables were put together into a four-point scale and weighted as follows:—

Weighted score:	0	1	2	3
Wing group	1B	1A	1C, 2	3, 4, 5
Social withdrawal score	0	1, 2	3, 4, 5	6+
Work score	0–15	16–31	32–47	48–64

Addition of the three weighted scores gave a Prognosis Index that could be anything from 0–9, the lower the better. For the hospital's first 200 patients admitted in 1961–2, the correlation between Prognosis Index and 10-year outcome was 0.56 ($P < 0.001$).

We now present the findings in a subsequent cohort of 200 patients, admitted in 1962–66, and studied in the same way.

Materials and Methods

Two hundred and sixty-one patients consecutively admitted between August 1962 and April 1966 were considered for entry to the sample. Fifteen patients lacked basic data, 2 had discharged themselves prematurely, 17 had died within ten years, and 27 (over 10 per cent) had disappeared despite the clinical aim to follow them up and a later extensive research effort to trace them. This left a net sample of 200 patients.

Ratings made at the time of admission were extracted from the case notes and employed to assign retrospectively to each patient a Prognosis Index. Outcome was measured by counting the number of days spent in hospital in the ten years after admission, each day as a hospital day-patient being counted as half of one in-patient day. Other relevant data were noted.

Results

By chance the sample contained 100 men and 100 women. One hundred and sixty-four patients had a diagnosis of schizophrenia (by criteria of Feighner *et al*, 1972) leaving only small numbers with manic-depression, neurosis, inadequate personality, mental retardation or brain damage. At the time of admission their average age was 44 (± 8 years = SD), they had been in hospital already for a mean 12 years (± 8) and their average IQ was 82 (± 17).

Sex, age on first admission, age on key admission, diagnosis, length of previous hospital stay and attitude to discharge made no significant difference to outcome. The association found between the Prognosis Index and the differential 10-year outcome is shown in Tables I–III.

Table III conceals the extent to which continuing discharges and readmissions cancel out, but it does show how the best prognostic subgroups responded quickest, while the intermediate groups were much slower, many individuals needing 4–8 years' preparation for resettlement. Only one of the patients with an index of 7 or more was out of hospital after ten years, and his foothold was very precarious.

These results are very similar to our previous findings. Work performance remains the best single predictor of outcome (Median test $\chi^2 = 24.40$, 3 df, $P < 0.001$). Intelligence now plays a more logical role than previously, with an almost perfect gradient

https://doi.org/10.1192/bjp.141.2.178 Published online by Cambridge University Press

TABLE I

Prognosis Index × status achieved in subsequent ten years: numbers of patients

	Prognosis Index								
	0	1	2	3	4	5	6	7–8	Total
Full discharge + job held continuously	6	6	9	10	10	1	1		43
Full discharge + brief job(s) only		6	12	7	5	4	5		39
Full discharge + sheltered work elsewhere	3	5	7	5	5	2	1		28
Day-patient of St Wulstan's was peak achievement	1	3	13	3	9	2	2	3	36
Returned to parent hospital but did not remain in-patient there continuously		4	2	2	2	2	1	1	14
Remained in-patient throughout		3	6	12	2	7	3	7	40
Total	10	27	49	39	33	18	13	11	200

One fifth did outstandingly well, one fifth completely undischargeable, an intermediate third dischargeable, but unable to do anything but sheltered work at best.
Contingency coefficient = 0.39, P < 0.02.

TABLE II

Prognosis Index × aggregate time in hospital during subsequent ten years: numbers of patients

Years spent in hospital	Prognosis Index								Total
	0	1	2	3	4	5	6	7–8	
0–3	6	11	11	5	8	1	1	0	43
–6	2	6	11	12	8	4	1	0	44
–9	2	7	21	10	15	6	8	4	73
10	0	3	6	12	2	7	3	7	40

r = +0.36, P < 0.001.

TABLE III

Prognosis Index × percentage of patients fully discharged from hospital on 2-yearly anniversary dates after accession

Prognosis Index	0	1	2	3	4	5	6	7–8	All patients
Number of patients	10	27	49	39	33	18	13	11	200
Percentage out after:									
2 years	60	52	18	20	27	6	15	0	24
4 years	60	48	31	33	30	22	23	0	32
6 years	70	63	35	33	42	28	31	0	38
8 years	80	56	43	44	42	28	15	0	41
10 years	70	59	51	44	48	39	15	9	45

https://doi.org/10.1192/bjp.141.2.178 Published online by Cambridge University Press

according to outcome (Median test $\chi^2 = 12.27$, 3 df, $P < 0.01$).

Discussion

We have described a rudimentary instrument for measuring the degree of overall disability in a typical sample of 200 chronic patients, and we have shown the extent to which this may be used as a valid predictor of the outcome of intensive rehabilitation. This lends weight to similar findings in a previous sample.

Our Index is able to specify a sub-group of patients with scores of 7, 8 or 9 who are predictably too severely disabled to be helped ever to manage outside hospital or similar sheltered environment. There is, therefore, no point and no cost-benefit in persevering endlessly with expensive attempts to rehabilitate and resettle these patients.

At the same time other sub-groups of patients with decreasing degrees of chronic disability enjoy progressively better prospects of successful resettlement, and we have been able in Table III to make a rough measurement of these prospects, according to degree of disability. Our Index is not sensitive enough to predict the outcome for an individual patient any more accurately than this. What stands out clearly from our findings is that it pays to persevere indefinitely with attempts to resettle these patients with Index scores of 0–6. Indeed, fresh candidates were still coming forward after 6 and 8 years of preparation.

Our data also show that advancing age, long illness, long hospitalization and initial reluctance to leave hospital are no bar to eventual resettlement. Indeed, some of the most successful patients had these features. We found no evidence, therefore, that resettlement need be impeded by intractable institutionalism, though it undoubtedly was by intractable illness.

Acknowledgements

We are grateful to Mr A. Glass, Nursing Officer, and Mr N. McCann, Charge Nurse, who helped with the early stages of data collection and analysis; to Mr G. Newbould, Community Charge Nurse, who located some of the more elusive patients; to the Medical Records Officers of the parent hospitals who kindly answered our enquiries and provided us with follow-up data; to the ex-patients who conscientiously replied to our letters; and to Dr P. J. F. Walsh, Consultant Psychiatrist, whose after-care notes on patients who had passed into his care were helpful in many cases.

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Roger Morgan, M.B., M.R.C.Psych., *Director of Rehabilitation*

Sean Gray, S.R.N., R.M.N., Dip.N., *Nursing Superintendent*

St Wulstan's Hospital, Malvern, Worcestershire

(*Received 25 January; revised 1 March 1982*)

https://doi.org/10.1192/bjp.141.2.178 Published online by Cambridge University Press