

planned reductions of 15 647 beds by 1996. Day hospital places are expected to rise by 6499 over the same period to a total of 34 231. Wide Regional differences in day hospital services are expected to persist: there is a five-fold difference between the 828 places planned by the Northern Region and the 4116 in the North Western Region.

The results of this survey demonstrate a continuation of the long-standing decrease in the number of psychiatric in-patient beds. No acceleration in the rate of discharge of patients in England is expected over the next decade: it will remain about 2300 patients per year. The present total number of both in-patient and day-patient places is 89 126. These results suggest an estimated 78 400 total places after the planned closures: a shortfall of approximately 10 000 places from the current level of service provided by the Regions. The estimated 54 140 in-patient places after closures remains over 6000 places short of the long-standing government target of 47 900 (HMSO, 1984). The Audit Commission (1986) found that Health Authorities have been more successful in planning hospital closures than in implementing successor services. These figures suggest that this will continue to hold throughout the next 5–10 years. Given this, local government authorities may be expected to play an increasingly active role in providing for deinstitutionalised patients (Griffiths, 1988).

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References

- AUDIT COMMISSION (1986) *Making a Reality of Community Care. A Report by the Audit Commission*. London: HMSO.
 GRIFFITHS, R. (1988) *Community Care: Agenda for Action*. London: HMSO.
 HMSO (1975) *Better services for the mentally ill*. Cmnd 4683. London: HMSO.
 — (1984) *In-patient statistics from the mental health enquiry for England 1981*. London: HMSO.
 SOCIAL SERVICES COMMITTEE (1984) *Community Care. Second Report from the Social Services Committee, Session 1984–1985*. London: HMSO.

Therapy-Resistant Depression

SIR: We read Professor Leonard's article (*Journal*, April 1988, 152, 453–459) on the biochemistry of resistant depression with interest. We would like to ask him how his serotonergic hypothesis of resistant depression explains certain experimental findings that are at variance. Most antidepressants enhance

electrophysiological responsiveness of cells to iontophoretically applied 5HT (de Montigny & Aghajanian, 1978), yet this is in conflict with receptor binding and behavioural evidence for down-regulation of 5HT function following antidepressant therapy (Peroutka & Snyder, 1980; Goodwin *et al.*, 1984). Neither is it explained why ECT would appear to have the opposite effect to antidepressants by increasing 5HT mediated behaviour and 5HT₂ receptor binding (Green *et al.*, 1983). It would thus appear that, as yet, no one hypothesis can link together the various mechanisms of actions of the antidepressant therapies on 5HT function.

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References

- GOODWIN, G., GREEN, A. R. & JOHNSON, P. (1984) 5-HT₂ receptor mediated head-twitch behaviour following antidepressant treatment to mice. *British Journal of Pharmacology*, 15, 393S–405S.
 GREEN, A. R., JOHNSON, P. & NIMGAONKAR, V. L. (1983) Increased 5-HT receptor number in brain as a probable explanation for the enhanced 5-hydroxytryptamine-mediated behaviour following repeated electroconvulsive shock administration to rats. *British Journal of Pharmacology*, 80, 173–177.
 DE MONTIGNY, C. & AGHAJANIAN, G. K. (1978) Tricyclic antidepressants: long-term treatment increases responsiveness of rat brain neurones to serotonin. *Science*, 202, 1303–1306.
 PEROUTKA, S. J. & SNYDER, S. H. (1980) Long-term antidepressant treatment decreases spiroperidol-labelled serotonin binding. *Science*, 212, 827–829.

SIR: While I agree entirely with the views of Drs O'Shea and Mathews that no one hypothesis can link the various mechanisms of action of antidepressants to changes in 5HT function, I feel that their letter ignores the fact that the healthy, genetically pure laboratory rat differs from a depressed patient. The apparent differences between the biochemical and electrophysiological changes initiated by antidepressants and ECT in rat brain would not appear to apply to the depressed patient. In my annotation, I commented on the similarity of action of antidepressants and ECT on platelet 5HT transport in depressed patients. Thus all antidepressants so far examined normalised the decreased 5HT₂ receptor function (as shown by reduced platelet aggregation) in those patients responding to treatment; qualitatively similar changes occur in ³H-5HT uptake into platelets from these patients. Such findings suggest that there is a 5HT sub-normality in depression