ization of all the patients. As such, the morbidity and mortality index has been amazingly reduced.

The next step will be the avoiding of the institutionalization, the psychiatric attendance will become ambulatory or part-time ambulatory, using the ambulatory community health services. By using the a.m. services as well as the day-care centre and the residence care service, we hope to join the most modern requirements of the European psychiatric attendance.

'COST-BENEFIT ANALYSIS OF A NOVEL TREATMENT OF DEPRESSION'

María B. Tomé, Michael T. Isaac. *Lewisham and Guy's Mental Health NHS Trust and Department of Psychological Medicine, UMDS (Guy's Campus), London, UK*

Objective: To analyse the costs and benefits of augmentation of the antidepressant paroxetine with the $5HT_{1A}$ receptor blocker pindolol.

Method: Randomised, placebo controlled trial. Eighty outpatients meeting ICD-10 criteria for depressive disorder and scoring > 18 in the Montgomery-Åsberg Depression Rating Scale (MADRS) were recruited from primary care populations. All patients received paroxetine 20 mg *o.d.* and either pindolol 2.5 mg *t.d.s.* or placebo. The trial period was six weeks, during which the patients were monitored for changes in depressive symptoms using the MADRS and the Beck Depression Inventory. All patients, whether they completed the study or not, are followed up for six months. The economic analysis incorporates all the costs involved, including clinical and laboratory costs, costs of infrastructure and drugs. We applied the techniques of shadow pricing and intertemporal discounts of social taxes.

Results: The chief benefits are the speed and magnitude of improvement of quality of life and leisure, together with savings in clinical resource utilisation.

Conclusion: Economic analysis plays an increasingly important role in the evaluation of treatment. This study has proved amenable to such analysis and future clinical trials should include similar analyses wherever possible.

SEROTONERGIC AUTORECEPTOR BLOCKADE IN THE REDUCTION OF ANTIDEPRESSANT LATENCY: PERSONALITY VARIABLES AND RESPONSE TO ANTIDEPRESSANTS

María B. Tomé, C. Robert Cloninger [1], James P. Watson, Michael T. Isaac. *Lewisham and Guy's Mental Health NHS Trust and Department of Psychological Medicine, UMDS (Guy's Campus), London, UK; [1] Department of Psychiatry, Washington University, St Louis, Missouri, USA*

No antidepressant currently in use exerts a significant *antidepressant* effect for at least two to three weeks after the patient starts taking it. Open studies suggest that, for selective serotonergic re-uptake inhibitor (SSRI) antidepressants, this latency may be reduced when the drug is taken with the $5HT_{1A}$ receptor blocker pindolol. We have undertaken a randomised, placebo controlled, double blind trial of augmentation of the selective SSRI antidepressant paroxetine in combination with pindolol. All our patients ($n = 80$; mean age 36 [range 19–65]) met criteria for major depression and received a standard dose (20 mg *o.d.*) of paroxetine plus, randomly, either pindolol (2.5 mg *t.d.s.*) or placebo.

We examined personality variables in 40 consecutive subjects according to a shorter version (TCI-125) of the Cloninger [self-rated] *Temperament & Character Inventory*, and correlated the results with clinical responses in the trial. We present data that indicate that personality variables may be relevant in the prediction of response to antidepressants in these circumstances.

THE EFFECT OF TRAZODONE IN DEPRESSED AND NON-DEPRESSED PATIENTS IN CHRONIC PAIN

S.P. Tyrer, J. Lauder, M.H. Michie, H.W. Griffiths, J.E. Charlton. *Department of Psychiatry and Pain Management Unit, Royal Victoria Infirmary, Newcastle upon Tyne NE1 4LP, UK*

Aim: The aim of this investigation was to determine whether trazodone was effective in (i) improving depression in patients with chronic pain and (ii) whether it had an analgesic action separate from its antidepressant effect.

Methods: 119 patients attending a pain management unit who had complained of chronic pain for at least one year that had not been substantially altered by analgesics or non-antidepressant drugs, were randomly allocated to receive trazodone or placebo after giving consent to the procedure. Allocation of patients into each group was stratified according to sex, age, duration of pain and diagnosis. The patients were seen at weekly intervals for six weeks. Trazodone was administered in a dosage of 100 mg at night for the first week increasing to 300 mg at night after four weeks treatment if there was inadequate response. Daily analogue rating scales of pain intensity were completed one week before entering the study and daily thereafter. The results were analysed by group sequential design based on degree of change according to the daily analogue ratings.

Results: Trazodone significantly improved depression ratings compared with placebo ($P = < 0.05$). No significant reduction in pain intensity was shown between trazodone and placebo, however this was rated. There were more drop outs in the trazodone group.

Conclusion: Trazodone improves depression in patients with chronic pain but does not reduce pain intensity.

DETERMINANTS OF SUICIDE RATES IN MIDDLE-AGE IN WESTERN GERMANY BETWEEN 1955–1989

S. Weyerer [1], M.H. Brenner [2]. [1] *Central Institute of Mental Health, P.O. Box 122120, D-68072 Mannheim, Germany;* [2] *The Johns Hopkins University, Baltimore, MD, USA*

The aim of this study is to examine factors that influence the overall rate of suicide in the Western Germany population in the age groups 45–64 during 1955–1989. This age group was selected because of its relatively high suicide rate and because, in theory, it is most subject to the problems of economic change.

Four classes of variables were used to predict suicide rates: (1) economic: unemployment rates, labor force participation rates, business failure rates and real national income per capita; (2) social integration, measured by the immigration rate; (3) federal government expenditures on social concerns and (4) alcohol consumption per capita by major beverages.

In general, the authors find the most important factors involve alcohol consumption per capita. Indeed, if alcohol consumption variables are not inserted into the model as a foundation for the suicide trend in Western Germany, then the remainder of the model is extremely difficult to construct. Following the alcohol consumption variables, the next most prominent predictors are unemployment, business failure rates and government expenditures on the social budget. The last two variables to enter the explanatory model are the immigration and labor force participation rates. All variables are highly statistically significant, with t-values ranging from 5.744 to 12.267. The Durbin-Watson statistic shows minimal autocorrelation of regression residuals at 1.83, and the model explains well over 90% of the variance in suicide rates. Finally, the Chow test of stability of the relationships comparing 1955–1973 with 1974–89 shows that the basic relations are not significantly different between the periods.

We conclude that our model is suitable for explaining the suicide rate over the entire period 1955–1989 and is likely to provide a good forecasting basis for policy purposes.