## PSYCHIATRIC EPIDEMIOLOGY AND THE ROLE OF SPATIAL INFORMATION SYSTEMS

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Spatial (geographic) information systems have an important role in psychiatric epidemiology. Drawing on a New Zealand case study, this paper will evaluate the contribution of computerised mapping techniques in projecting the geographical distribution of demand for psychiatric services. A review the literature, is followed by a discussion of the methodology used in this research for forecasting demand for psychiatric care. The paper will also highlight the importance of census data for the planning of psychiatric services at regional and district levels.

## SLEEP PARAMETERS IN BIPOLAR RAPID CYCLING PATIENTS

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There is no systematic polysomnographic studies in bipolar disorder with rapid cycling course. Several studies in restricted number of patients have revealed considerable changes in sleep continuity and architecture, especially in REM sleep. These changes were related to the phase inversion and polarity (Kupfer, Heninger, 1977; Gillin et al., 1977; Wehr, Goodwin, 1983; Welsh, 1986).

The purpose of the study was to compare sleep structure in bipolar affective patients with frequent relapses (or rapid cycling) and with rare relapses as well as normal controls. Four standard scull derivations were used for continuous recording of sleep traces on 16-channel REEGA 2000/ALVAR polygraph. Sleep stages were analysed by 2 independent experts visually within every 30-second epoch and corresponded to the criteria of Rechtchaffen, Kales (1968). Registration was done during 3 consecutive nights. In order to avoid the first night effect (Backeland et al., 1971,) only records of the second and the third nights were analysed. The data were averaged.

Polysomnographic sleep characteristics were studied in patients with bipolar affective disorders with rapid cycling (N = 7), having four and more episodes a year, in patients with rare episodes (N = 10), and in healthy volunteers (N = 8). All patients were in remission, i.e. in the interval free from affective symptoms. Total scores in Hamilton-depression scale or Bech-Rafaelsen scale at the moment of registration were less than 6 points. Patients had no medication.

Sleep parameters in the first group were characterized by a shortened REM latency period — less than 65 min., a diminished slow wave sleep, especially in the first cycle, its domination in the second cycle, disordered ultradian distribution of REM-sleep with its preponderance shifted to the first hours of sleep, worse sleep continuity parameters (more frequent awakenings during the night, especially early awakenings).

No significant difference was revealed between rapid cyclers and patients with relatively rare episodes. The most important sleep parameters of the latter group took a strictly intermediate position between controls and rapid cyclers. This fact allows to speak about just a quantitative difference between the two groups of patients and about their common nosological background. Polysomnographic profile of rapid cycling patients strikingly resembled major (melancholic) depression, though did not coincided with it completely. Contrary to depression a prolonged REM latency period was found along with less obvious slow wave sleep supression, preponderance of the second stage and REM sleep with a decreased REM density as well as some other less apparent sleep continuity characteristics which pointed to a rather specific profile in rapid cyclers. The findings can be of diagnostic and predictive value.

## SOME ECONOMIC PROBLEMS OF CZECH PSYCHIATRY IN THE PERIOD OF AFTERCOMMUNISTIC HEALTH CARE SYSTEM TRANSFORMING

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In the Czech republic is coming to a transformation from the former socialistic health care to a functioning system. It concern about psychiatry too, which dispose, similar as other medical branches, with a great number of beds. They are tendencies to reduce them, like as staffs to a number nearly other west countries, while the government votes meanly an economic pressure.

However the health care system makes all purchases for free marked prices, the fees from Insurances are strong fixed and it is not any possibility to entry something over in account and in this way to check the really price.

For 1 inpatient the treatment is paid by Insurance through first 17 days by 479 points for each day (that means 254 CzK for 1 day) and for following 35 days by 279 points (that means 148 CzK for 1 day). To above described fees are 35 CzK for medicaments and 114 CzK for other special medical material.

Till October 1955 it was a common rate 279 points for 1 day. The really charge (the nearly same in each University clinic) makes 550.00 CzK for day. Over the charges above we can count to a basic outfinding (by the first admission) that means 335 points = 77.5 CzK. While the outfinding by dismissal the patient or consulting is evaluated by 168 points (89 CzK). The individual psychotherapy provided by psychiatrist in a duration of 30 minutes makes 159 points (87 CzK). Psychotherapy in a group in the number of 8 patients in duration of 30 min. is paid by 61 points (32 CzK) for 1 patient. Psychotherapy for a greater group is paid by 6 points for each patient.

Similar values we can find in the psychotherapy by psychologist or in psychologic outfinding.

The value of a point was origin fixed on 0.52 CzK. After three years and 30% inflation it increased to 0.53 CzK. (The international exchange is 41.1 CzK for 1 GBP. The salary for a doctor is in the Czech republic from 6 to 11 thousand CzK gross).

So settled values include performing by nurses, doctor's visits, control outfindings and so one, that means all common care management.

Obviously through this circumstances all psychiatric University clinics became similar into increasing debts.

The author against discuss various possibilities and aspects for solving above described situation, because the transforming is important.

## REFLEXE DER KUTANEN MIKROZIRKULATION BEI PATIENTEN UNTER MONOTHERAPIE MIT AMITRIPTYLIN, BZW. MIT FLUOXETIN

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*Einleitung:* Eine tiefe Inspiration in den Thorax lösst einen akralen Vasokonstriktionsreflex aus, der mittels Laser-Doppler-Fluxmetrie (LDF-metrie) als kurzdauernde Minderung der Hautdurchblutung in der Fingerkuppe nachweisbar ist. Mittels einer neu definierten "Flux-Halbwertszeit" für den Signalabfall ($\Delta t_{50\%\ down}$) sowie den Wiederanstieg ($\Delta t_{50\%\ up}$) können die Reflexzeiten für Vosokonstriktion und Redilation quantitativ bestimmt werden.

*Patienten und Methode:* Die kutane Mikrozirkulation wurde bei 30 depressiven Patienten unter Monotherapie mit Amitriptylin (AMI; n = 15), bzw. Fluoxetin (FLU; n = 15), sowie bei 15 unbehandelten Kontrollen (KON) untersucht. Der LDF wurde zunächst

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