

specific QoL-based interventions. The research literature reflects this growth in interest, from the earliest paper in 1931 to the present. Medline entries now stand at 34,624, and for all the major data bases, at 82,849 (including overlap). By comparison, routine QoL measurement is a recent and much less researched phenomenon. The issues in the routine measurement of QoL are not dissimilar to those for any assessment tool, such as reliability, validity, ease of use etc, but there are specific issues such as the nature of the concept being used, the capacity to demonstrate change over time, and responseshift, that also need to be addressed before routine measurement can be implemented. Data will be presented that relate to these specific issues. Consideration will also be given to the UK government's current attempts to introduce a standard set of outcome indicators, including QoL, for routine use in the National Mental Health Service.

### S03.4

Impact of regular outcome assessment on treatment – the MECCA Study

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There are wide spread calls for implementing regular outcome assessment in routine care. Clinicians and patients are more likely to comply with the requirements of regular outcome assessment, if there is a direct positive impact on individual treatment which needs to be demonstrated in research. The MECCA-Study is a randomised, controlled trial conducted in community mental health care services in six European countries. The Study investigates how the regular assessment and feedback of outcome indicators impact on treatment process and treatment outcome in community care of patients with psychotic disorders. Regularly assessed outcome criteria are simple indicators of subjective quality of life, treatment satisfaction and patients' wishes for different and/or additional interventions. We expect a more favourable outcome after one year in the experimental group as compared to standard care and hypothesize that the difference will be mediated through more accurate treatment decisions or a more positive therapeutic relationship or both. The focus on subjective outcome criteria is supposed to shift the communication between key worker and patient towards patients' views and to strengthen a partnership model of care. Concept, methods and organisational approach of the MECCA Study will be presented. This includes how the feedback process is implemented and practiced using simple technology and a special software programme.

### S03.5

Estimating treatment effects from trials and observational studies

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The theme is the estimation of the causal effects of treatment. It is based on Rubin's counterfactual model of causality. Basically, in estimating a causal effect, we are trying to compare outcome of the treatment actually received with that which would have been observed if, contrary to fact, the patient had received either no treatment or, alternatively, another form of treatment. The

arguments will be illustrated using data from a randomized clinical trial in which there are no protocol violations (everyone provides outcome data and fully complies with the allocated treatment). Next, we look at the impact of non-compliance and dropouts in a randomized clinical trial. Finally, we look at the problems of inferring causality from unstructured, routinely collected, outcome data. One possibility is to use so-called propensity models.

## S04. In vivo imaging of neurotransmitter mechanisms. Methods and clinical application

*Chairs: A.-L. Nordström (S), P. Grasby (GB)*

### S04.1

PET and SPECT in psychiatry

A. Catafau. *Spain*

No abstract was available at the time of printing.

### S04.2

PET studies of depression

P. Grasby. *UK*

No abstract was available at the time of printing.

### S04.3

Dopamine synthesis rate in prefrontal cortex in schizophrenia by use of PET

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**Objectives:** To investigate the dopamine-synthesis in the brain of drug-free schizophrenic patients in the prefrontal cortex by use of <sup>11</sup>C-I-DOPA as the tracer and PET.

**Methods:** PET was performed in 12 drug-free (10 drug-naive) schizophrenic patients and in 10 healthy volunteers matched for age and gender. The time-radioactive curve from occipital cortex was used as reference area and K<sub>i</sub> images in different brain areas were adapted to a brain atlas. A significant overall increase of the K<sub>i</sub> value was found in the schizophrenic group.

**Results:** Significantly higher K<sub>i</sub> values were found in the schizophrenic patients compared to the controls in the caudate nucleus, putamen and medial prefrontal cortex (Brodmann 24), with the greatest difference in the prefrontal cortex. The K<sub>i</sub> values reflect and increased utilization of I-DOPA, presumably due to increased activity of the amino acid decarboxylase enzyme.

**Conclusions:** Our results give support for an abnormal dopamine synthesis/activity in the prefrontal cortex in patients with schizophrenia.

### S04.4

PET and antipsychotic drugs – background

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Important clinical applications of positron emission tomography (PET) include studies of mechanisms underlying clinical drugs