

## EDITORIAL: ON NEUROSCIENCE, EPIDEMIOLOGY, PHARMACOTHERAPY, RECOVERY, TREATMENT RESISTANCE, AND COMMUNITY MENTAL HEALTH TEAMS

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To start with welcome to the Conference. The Conference has been becoming more and more popular over the years and again we expect a great deal of interest and discussion, both with our international delegates and from our colleagues within the UK.

This year we have made the theme of the conference 'from Neuroscience to service delivery'. We are using neuroscience more and more to understand about how the brain works and hence it is becoming important that our increasing understanding of neuroscience and the pathogenesis of mental illness should begin to influence how we treat mental illness and indeed how we design services to deliver that treatment. One article in the Journal is, in fact, a transcript of a tutorial which was given to a group of Cambridge students when we moved from discussing the neuroscience of depression to how we treat it. We came to argue that to optimise the treatment of depression, we needed to understand the concepts of neurogenesis and how it is influenced by both pharmacology and psychology and we also needed to develop shared care arrangements between primary and secondary care in order to optimise the treatment of depression (Agius et al. 2011).

At a previous Conference we had shown that there is a great deal of evidence for shared care management of depression (Agius et al. 2010), and some of us are anxious to develop a study to look how this can be developed in the East of England.

One of the consequences of applying both epidemiology and neuroscience to the work of our CMHT is that we are gradually beginning to identify groups of patients within the team's caseload who are more resistant to treatment. We are also beginning to try and understand why this treatment resistance occurs. This understanding works well in conjunction with the development of service delivery based on a recovery model, and in order to facilitate the implementation of such a model. It begins to be clear that the epidemiology of the patients within the CMHT should help with the development of programmes for optimising treatment and thus helping with recovery. At this time we have published a whole series of articles in this supplement which illustrates this point. We had, at a previous

conference, shown that there were a number of patients with bipolar disorder particularly bipolar II disorder who had been either misdiagnosed or suboptimally treated (Agius et al. 2010). The re-diagnosis of these patients has been important in re-assessing their management. This is particularly so because it is now known patients with bipolar disorder who are only treated with antidepressants become resistant to those antidepressants. Furthermore, it became clear to us that bipolar patients do develop affective mixed states and it is important to note that there is an increase in suicide risk related to this.

Hence it became important to decide how best to identify and treat affective mixed states and Suarab Singh and Jasmine Ho's paper on this issue has given us guidance based on our experience which will also be relevant to crisis teams as to how one can deal with affective mixed states and thus reduce suicidality (Ho et al. 2011).

We have also looked at the different augmentation strategies that we have been using in the treatment of unipolar depression. We have examined the different augmentation strategies we use. We have compared augmentation of SSRIs with Mirtazapine with augmentation with atypical anti-psychotics within our practice (Holt et al. 2011, Butler et al. 2011). To study this we used a technique we had previously developed to study our patients who had suffered depression, but were on only one antidepressant (Agius 2010). We have been able to show that we are able to be apply these strategies to treat people with resistant depression and even often to discharge them and furthermore have been able to reduce the suicidality.

Another group of patients which Emily Middleton will be describing in her paper is our patients with post traumatic stress disorder (Middleton et al. 2011). The reality is that we are seeing an increase in numbers of these patients within our clinics and there has been an issue that many of them have been previously diagnosed as having depression. It is, therefore, not surprising that they have not received the most appropriate both medical and psychological treatment through the years

and this has been a particular problem in the case of refugees, who present late for treatment. Identifying PTSD has been an important point which has led to the planning or recovery of these patients. We are making recommendations about what we could do about our more chronic post traumatic patients.

We have also identified that a number of patients that we have, perhaps more than we would have expected initially, who suffer from OCD and require augmentation of their SSRIs with antipsychotics. Again, this strategy is based on our Neuroscientific knowledge of OCD.

Michael Birtwistle and Donald Servant describe an audit of these patients (Agius et al. 2011), indeed those OCD patients who require atypical antipsychotics are more resistant than patients who do not. However, we have also been able to identify that within the group of OCD patients that there is a smaller group who seem to require a particularly great deal of input from services who suffer from comorbid OCD and bipolar disorder. These have been described in the text books but it was only when Laura Darby carried out her audit (Darby et al. 2011), which is also published in this journal, it became apparent that this group of patients were some of the patients who were most difficult to treat in our team.

Finally, Lalana Dissanayake, Henry Mumby and Chang-Ho Yoon (Dissanayake 2011) have produced a paper which compares employment status and accommodation status, important issues in the recovery process, in patients with schizophrenia and patients with bipolar affective disorder. Not surprisingly patients with schizophrenia were less likely to have a job and often needed accommodation in sheltered housing compared to people with bipolar affective disorder. What was also concerning was that many of our patients with bipolar disorder have a very poor employment history which leads to the issue of the presence of cognitive defects in bipolar patients as well as patients with schizophrenia and the suggestion that it would be wise to give attention to such cognitive defects during the treatment of patients with both of these conditions when we attempt to improve their employment prospects.

Hence all of these papers are beginning to enable us to gradually put together a model of what actually happens in a community mental health team such as the one in which these audits have been carried out. Hence we can consider the different groups of our patients and what needs to be done in order to achieve recovery for our patients. We are now able to show that the recovery model will depend on accurate diagnosis and proper planning of interventions and an understanding how the illness develops (which is provided by neuroscience) as well as proper measuring of the outcome of treatments (Agius 2010). Thus development of treatment pathways (Agius 2010) which has been argued for recently by ourselves is entirely dependent on understanding of the staging of illnesses (Agius 2010) such as schizophrenia

which is ultimately based on the neuroscience of these illnesses.

Our conference we have been very interested in placing side by side the very clinical descriptions which we mention above and the latest in the neuro-science of depression, bipolar affective disorder and schizophrenia. Noteworthy in this respect is the paper on Migraine and Bipolar Disorder by Jonathan Holland which suggests interesting ideas about the pathogenesis of bipolar disorder, but which originated from a clinical audit within our practice (Holland 2011a, 2011b).

We would like to suggest that the coming together of so many papers describing particular groups within a community mental health team maybe the first attempt of its kind to describe the workings of such a team. We would suggest that this is crucial further development of services. These services need to be based on knowledge of the number of patients who require that service (epidemiology), the knowledge of the appropriate interventions with the use of guidelines and clinical pathways as well as psycho-pharmacology and the effective measuring of outcomes (which in psychiatry must include the use of appropriate rating scales as well as more functional outcome measurement).

We hope you enjoy the conference.

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