

THE ISSUE OF FIVE YEAR OUTCOMES IN EARLY INTERVENTION IN PSYCHOSIS-CONSEQUENCES FOR THE DESIGN OF SERVICES

Mark Agius

Department of Psychiatry University of Cambridge, Clare College Cambridge
South Essex Partnership University Foundation Trust, UK

SUMMARY

Early intervention for psychosis services have been a very important area of development in Community Mental Health in recent years. Here we attempt to describe the general principles on which early intervention services are based, the interventions which such services carry out, and the expected outcomes according to the latest literature. While there is consensus that at 3 years after the first episode, outcomes from an ad hoc Early Intervention Team are better than treatment as usual in a Community Mental Health Team. It has been found in most studies, that if patients are treated in an Early Intervention Team for three years, and then transferred back to a Community Mental Health Team, the improvement in outcomes is lost. The reasons for this are described. The Implications for services are that, if outcomes are to be optimised in the treatment of schizophrenia, then assertive treatment in the community needs to be given for as long as possible.

Key words: early intervention - psychosis-consequences - design of services

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INTRODUCTION

Early intervention for psychosis services have been a very important area of development in Community Mental Health in recent years. The WHO Declaration for Mental Health in Europe (WHO 2004) specifically recommends that specific care should be dedicated to those persons who develop mental illness for the first time. A set of standards which have been developed for Community Mental Health in Europe also recommends that specific services be set up for young patients who become psychotic for the first time (Agius 2005).

Early Intervention Services were first set up by Professor Patrick McGorry in Melbourne, Australia and also by Professor Max Birchwood in the Birmingham Early Intervention Service in the UK. As a result of the development of these two services, the concept of early intervention services has spread throughout the world, so that a worldwide movement has developed to replicate them.

According to Professor McGorry, Early Intervention in Psychosis 'amounts to deciding if a psychotic disorder has commenced and then offering effective treatment at the earliest possible point and secondly ensuring that intervention constitutes best practice for this phase of the illness, and is not just the translation of standard treatments developed for later stages and more persistently ill subgroups of the disorder' (Prof. Patrick McGorry, quoted in IRIS Guidelines 1999).

The fifty Early Intervention services set up, one for each county in England, by the UK Government follow patients who have had a first psychotic episode for three years. They are targeted at persons between the ages of 15 to 35 years, and will treat all forms of psychotic illness, reflecting the fact that there is marked diagnostic instability in the first few months of psychotic illness.

THE CRITICAL PERIOD AND THE DURATION OF UNTREATED PSYCHOSIS

The Critical Period Hypothesis is derived from an analysis by Prof. Max Birchwood (Birchwood 1998) of the Northwick Park longitudinal study of schizophrenia (Johnstone 1992). Birchwood observed that there is often major change in the psychosocial functioning of patients with schizophreniform illnesses within the first three years of the onset, but that thereafter, the deterioration tends to plateau out. Therefore the first three years of the illness could be described as a 'critical period' during which the future course and prognosis of the illness is set. The British Early Intervention Services are designed to intervene during those first three years.

The corollary to this concept is that it is extremely important that patients who present as being psychotic for the first time should be treated intensively in their first three years of illness, so as to get the best effect from treatment and thence possibly improve their prognosis.

The concept of the critical period has led to the view that it is of great clinical importance to identify and treat patients with acute psychotic episodes as early as possible, and that any delay in instituting treatment with appropriate medication is likely to adversely influence the prognosis of the illness. Unfortunately, however, it is common experience that patients tend to fail to present for treatment early, and there is a marked delay between the onset of psychosis and effective initiation of treatment. In the UK, before the inception of Early Intervention services, this delay in treatment was 12 months on average. As a concept, this was referred to as the Duration of Untreated Psychosis (Birchwood 1998).

Early Intervention services have been set up to treat patients with acute psychotic episodes as early as possible, according to the UK Government Policy Implementation Guide (DOH 2003). Patients with a clear first psychotic episode will receive appropriate psychosocial and medical interventions from these Early Intervention teams for a period of three years from first presentation. The problem with this policy is the difficulty of engaging with patients who are psychotic for the first time. It is known that most patients who suffer from psychosis do not present for treatment with anti-psychotics for several months after they have become psychotic. This might be due to difficulties which the patients and families have in identifying that something is wrong, what to do about it, and where they should go for help, and also to failure by health professionals to diagnose and treat psychosis appropriately. The months of acute psychosis which are not treated are referred to as the Duration of Untreated Psychosis (DUP), which is defined as 'the delay between the onset of the first psychotic symptom and the commencement of treatment with anti-psychotic medication'. The DUP has been shown to be associated with an unfavourable course of schizophrenia (De Haan 2003).

The reasons for DUP are Complex, and include: Stigma, Positive experience of symptoms, especially paranoia which may prevent disclosure of illness, the tendency of patients to feel that they are not really ill, poor recognition of psychosis by clinicians and poor mental health literacy.

We know that (IRIS 2009):

- Long DUP leads to unfavourable outcome, whether this is physical, social or legal.
- Long DUP is associated with longer Hospital Admissions, Seclusion, Police involvement, and more frequent Hospital admissions.
- Prolonged DUP leads to the necessity of a higher dose of medication to stabilise the patient.
- Long DUP can be correlated with difficulty in diagnosis.
- The decline in functioning linked with prolonged DUP actually begins in the prodromal phase of the illness.

Because of the association between a prolonged DUP and a more unfavourable outcome of the illness, great efforts are now being made by many services to reduce the duration of untreated psychosis.

In order to achieve such a reduction, some services have committed themselves to an important effort in outreach, including public advertisement and education (Birchwood 1998, de Haan 2003, Lieberman 2000, Larsen 2001).

Two important Meta-analyses, by Marshall and by Perkins, published in the same year (Marshall 2005) (Perkins 2005) have shown that prognosis in schizophrenia is adversely affected by a long duration of untreated psychosis.

The reason that a long DUP makes prognosis worse is that it reduces the available time for treatment during the critical period, which is the period during which the illness course and prognosis is established. Clearly, then, it is important that Early Intervention Services should attempt to do all in their power to reduce DUP for patients in the area which they operate.

As a consequence of these concepts, there is now a world-wide attempt to develop new services to deliver effective care to younger psychotic patients. This has led to the development of new services focused on this age-group. Thus guidelines for these new services have been developed.

OUTCOMES

All of the above demonstrates that a very comprehensive service can be developed to deal with young persons developing a psychotic episode for the first time; however there are issues as to whether these services are effective.

It is becoming clear from reported results that there are marked advantages in developing dedicated teams to deal with early psychosis, and that this treatment is better than treatment as usual in ordinary Community Mental Health Teams.

There have been a number of outcome studies which have demonstrated improvements in various outcome measures in Early Intervention services compared to treatment as usual. These studies are only one or two year outcome studies. The studies which have reported one year outcomes are: the Swedish 'Parachute Project' (Cullberg 2002) the Leo Study from Lambeth, London (Craig 2004, Garety 2005), and the OPUS Study from Denmark (Nordentoft 2002, Petersen 2005) and the Danish National Schizophrenia Study (Rosenbaum 2005). The Swedish Parachute Project (Cullberg 2002) reported that it was possible to successfully treat first episode psychosis patients with fewer inpatient hospital days, and less antipsychotic medication (prescription of antipsychotic medication was lower than is usually recommended), when combined with intensive psychosocial treatment and support. This was also accompanied by high patient satisfaction in the trial group. The OPUS study, from Denmark, reported reduced family burden of illness in the Early Intervention Group (Jeppesen 2005). Patients had significantly fewer psychotic and negative symptoms; less co-morbid substance abuse, better adherence to treatment and more satisfaction with treatment at one year and two year follow ups (Petersen 2005, Nordentoft 2006, Petersen 2005, Thorup 2005). Furthermore, the Danish National Schizophrenia Project reported a non-significant tendency towards a greater improvement in social functioning in the integrated treatment and the supportive psychodynamic groups, compared with treatment as usual. If allowance was made for the confounding effects of drug and alcohol abuse, then significance was reached in some measures (Rosenbaum 2005).

The Leo study from the UK has shown that the early intervention group were less likely to relapse, were re-admitted fewer times, and were less likely to drop out of the study than those receiving CMHT care. However, when adjustment was made for sex, previous psychotic episode and ethnicity, the difference in relapse rate ceased to be significant (Craig 2004). At 18 months, outcomes from the participants receiving care from the Early Intervention team were significantly better for aspects of social and vocational functioning, satisfaction, quality of life and medication adherence. Symptom improvement did not differ significantly between the groups (Garety 2006).

My own group reported on sixty-two patients who had been treated for three years in an ad hoc, assertive treatment team for patients who had suffered a first psychotic episode, and compared their outcomes to sixty-two patients who had been followed up after a first psychotic episode in a standard community mental health team (Agius 2007). All patients had suffered a first or early psychotic episode. The main differences between the two teams was that the ad hoc team was assertive in its approach, offered more structured psycho-education, relapse prevention and psycho-social interventions, and had a policy of using atypical anti-psychotics at the lowest effective dose.

There were many differences in outcome measures at the end of three years between the two groups. The EI patients were more likely to be taking medication at the end of three years. They were more compliant with medication. They were more likely to be prescribed Atypical Medication. The EI patients were more likely to have returned to Work or Education. The EI patients were more likely to remain living with their families. They were less likely to suffer depression to the extent of requiring antidepressants. They committed less suicide attempts. The patients in the EI service were also less likely to suffer relapse and re-hospitalisation, and were less likely to have involuntary admission to hospital. They had systematic relapse prevention plans based on the identification of Early Warning Signs of relapse. They and their families receive more psycho-education. These facts suggest that the EI patients are at the end of three years better able to manage their illness/vulnerability on their own than the CMHT patients. More patients in the EI group stopped using illicit drugs than in the CMHT group.

All the above changes were statistically significant except for the total improvement in employment status and education status, which however approached significance. These results do suggest that an ad-hoc Early Intervention Team is more effective than standard Community Mental Health Team in treating psychotic illness.

Recently there have been further reports from the OPUS Study. These involved a two year assertive intervention from an Ad Hoc team, and now they are reporting on 5 year follow up once the assertive interventions had ceased. The intensive early-intervention

program improved clinical outcome after 2 years, but the effects did not appear to be sustained at 5 year follow up. However the number of patients living in supported housing and number of days in hospital at 5-year follow-up appeared to favour the assertive early-intervention program. (Bertelsen 2008). It has also been reported that the rates of recovery (defined as no psychotic or negative symptoms, living independently, GAF (f)>59, working or studying) and institutionalisation at 2 years and 5 years during this study were the same, being 18% recovery after five years, and 13% were institutionalized either at hospital or supported housing after five years. Thus it appeared that in this group, the illness did not deteriorate progressively, since no changes in the rates were seen from two to five years (Bertelsen 2009). Presumably this shows that only a proportion of patients deteriorate progressively, previous studies suggesting, that those who deteriorate are about 16% of all patients with schizophrenia. OPUS have also reported that patients who were offered inpatient rehabilitation and supportive psychotherapy used more hospital bed days and spent more time in sheltered accommodation than those who were given assertive treatment in the community. Although this was a small sample, it did suggest that patients who received assertive treatment for two years had a better quality of life over five years (Thorup 2010).

In general, it does then appear that assertive early intervention during the critical period offers better results than treatment as usual.

Thus it was concluded that the intensive early-intervention program improved clinical outcome after 2 years, but the effects were not sustainable up to 5 years later. Secondary outcome measures showed differences in the proportion of patients living in supported housing and days in hospital at the 5-year follow-up in favour of the intensive early-intervention program.

In 2010, the LEO project reported their 5 year outcomes (Gafoor 2010). At five years There were no significant differences in the admission rate or the mean number of bed days.

It was commented that these findings that specialist intervention did not markedly improve outcome at 5 years accord with those from a larger OPUS study. The sample size of this study was small and these results should be generalised with caution. More research is needed.

We have been able to assess our own four year outcomes of an early intervention service in which I have participated. We were able to plot outcomes in terms of admissions required and bed days used for a group of 62 patients treated by the early intervention team compared to 62 patients who received 'treatment as usual' from a community mental health team. It appeared that, whereas by the third year it appears that there was an advantage for the EI team patients, there does not appear to be a statistically significant advantage after this point, and that the EI group continued to generate a number of admissions and bed

days used from the third year onwards. Hence the results are similar to the previous two studies. It should be noted that, when we assessed the outcomes of our patients over 6 years, many of the patients in the EI group remained stable in the third and fourth year, but however later we found that some patients had their first admission in the last three years!

We continued looking at admissions and bed days used up to year 6, which is three years from when patients were transferred to the CMHT from the EI service. Here is one problem: after 3 years, in our service, patients are transferred to a Community Mental Health Team which is less assertive. We found that the outcomes of our patients are very heterogeneous. Certainly overall, there were less admissions in the first six years, but looked at globally, it appeared that the advantage of Early Intervention was in the first two years, and that a small number of patients in both groups continued to develop admissions in the last four years. To our surprise we were able to demonstrate that there were a small group of patients with multiple admissions in the first three years who had few or no admissions in the last three years. This we suspect is because of the great amount of psycho-education that the patients received every time they had a relapse. This we think is an illustration of the Critical Period Hypothesis.

When the LEO and OPUS 5 year outcomes were published, a number of papers were published to discuss them. Friis (2010) commented that they found no significant difference between the groups in the chances for any admission, the number of admissions or the number of bed days used during the follow-up period. Specialised treatment for people with first-episode psychosis is effective as long as the treatment continues. It seems like the 2-year effect is more the result of an ongoing active treatment than a cure.

It is likely that the termination of the intervention weakened attachment to treatment in several participants as the patients no longer had a person specially designated to maintain contact and coordinate the therapy (Friis 2010).

One of the most important reasons for the short-term success of the intervention programmes may have been the very fact that they (care-coordinators) put so much energy into keeping the individuals in treatment. When they were transferred to an ordinary programme, the intervention group lost this advantage (Friis 2010).

Similarly Singh (2010) commented. Clinical gains made within such services are robust as long as the interventions are actively provided. Longer term data show that some of these gains are lost when care is transferred back to generic teams. There is, however, a genuine uncertainty about how long intensive early intervention should be provided and whether all cases should receive the same fixed period input (Singh 2010). As we had noted, Singh suggested the second possibility is that the heterogeneous trajectories of early psychosis require differentiation, with early intervention

provision being tailor-made for longer periods for those with poorer early outcomes (Singh 2010). In other words in order to achieve continued recovery with these patients, the ongoing support needs to be maintained in the long term.

But this has been demonstrated in a Russian study (Gurovich 2009), in which patients continued to receive assertive treatment for five years. In this study, there were fewer admissions in the early intervention group over five years and indeed the Early Intervention patients were adherent more to their medication over 5 years, and they were more likely to retain their jobs, continue in education, and maintain their social connections and activities.

Hence we can indeed improve our outcomes in Psychotic Illness, but to do so require ongoing support from an assertive community team.

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Correspondence:

Mark Agius, MD

Department of Psychiatry University of Cambridge, Clare College Cambridge

South Essex Partnership University Foundation Trust, UK

E-mail: ma393@cam.ac.uk