# Predictors of Service Disengagement in First-Admitted Adolescents With Psychosis

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**ABSTRACT**

**Objective:** To assess the risk and predictors of service disengagement in adolescents with first-episode psychosis (FEP) receiving their first treatment in a long-standing early intervention and prevention center. **Method:** The Early Psychosis Prevention and Intervention Centre (EPPIC) in Australia admitted 157 adolescents, ages 15 to 18, with FEP from January 1998 to December 2000. Treatment at EPPIC spans an average of 18 months. Data were collected from patients' charts using a standardized questionnaire; 134 charts were available. Time to service disengagement was the outcome of interest. Baseline and treatment predictors of service disengagement were examined via Cox proportional hazards model. **Results:** Kaplan-Meier 18-month risk of service disengagement was 0.28. A lower severity of illness at baseline (hazard ratio [HR] = 0.2; 95% confidence interval [CI] 0.1–0.4), living without family during treatment (HR = 4.8; 95% CI 2.1–11.2), and persistent substance use during treatment (HR = 2.6; 95% CI 1.1–5.9) contributed significantly to predicting service disengagement. Neither initial substance use nor insight at baseline was related to service disengagement. **Conclusions:** Clinicians should focus on treating substance use and establishing a social network if family support is missing for adolescents with FEP. In addition, clinicians should apply strategies to keep in touch with those adolescents who may not see the necessity of continuous treatment because of a moderate severity of illness. *J. Am. Acad. Child Adolesc. Psychiatry,* 2006;45(8):990–999. **Key Words:** schizophrenia, service engagement, adherence, compliance.

Nonadherence with treatment and service disengagement (henceforth disengagement) are common problems in psychiatry. This is a matter of particular preoccupation in psychotic disorders because long-term treatment including antipsychotic pharmacotherapy and regular outpatient contacts are known to decrease the likelihood of relapse and improve long-term functional outcome in these disorders (Gray et al., 2002). A recent review by Nose et al. (2003) of 86 studies on a total sample of 23,796 patients with psychotic disorders found an overall weighted mean rate of nonadherence with a variety of treatment programs of 25.8% (95% confidence interval [CI] 22.5–29.1). Nonadherence was defined as not taking psychotropic drugs as prescribed and/or not keeping appointments as scheduled including complete disengagement. Factors associated with nonadherence included lack of insight, positive symptoms, low social functioning, unemployment, a history of substance abuse, male gender, and young age. In addition, patients with first-episode psychosis (FEP) receiving their first treatment and those with a history of nonadherence were more likely to become nonadherent.

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The literature on factors predicting treatment adherence in adolescents in need of psychiatric treatment is sparse. Hack and Chow (2001) identified seven studies on adherence with stimulants. Even fewer studies reported on adherence with scheduled appointments or disengagement in child and adolescent psychiatry. Recently, Goldston et al. (2003) published a study on predictors of service use in a broader clinical sample of formerly hospitalized adolescents. The authors reported that the best predictors of service use within 1 month after discharge from the hospital were high psychiatric comorbidity, prior treatment, and living with a biological parent or grandparent; length of service use was best predicted by psychiatric comorbidity, young age, a minority group status, and a history of repeated suicide attempts. In a study by Baruch et al. (1998), predictors of dropouts in adolescents (ages 12–24) treated in a community-based psychotherapy center were young age, a high score of externalizing problems, and a low score of internalizing problems.

To the authors' knowledge, there is no study on the rate and prediction of nonadherence with treatment including disengagement in adolescents with psychotic disorders, especially in adolescents receiving their first treatment because of psychosis. This study is based on standardized charts of a representative FEP cohort receiving their first treatment in a specialized early prevention and intervention center. Early intervention attempts to improve outcome in psychosis through earlier detection of untreated psychosis and the provision of effective, phase-specific treatments (McGorry et al., 1996). During the past decade, early intervention services have been established in the United States, Canada, Australia, and several European countries (Edwards and McGorry, 2002). To overcome barriers to continuity of care, many of these services provide treatment to both adolescents and adults. To date, there are no data as to how these services are accepted by adolescents.

In this retrospective study, based on standardized charts, the following questions were asked: (1) What is the estimated risk of disengagement during the first 18 months in adolescents with FEP? (2) What are the factors related to disengagement? Factors were grouped chronologically in variables at baseline or within the first weeks of treatment (i.e., demographic, premorbid variables, baseline illness characteristics and diagnoses) and variables during course of treatment).

## METHOD

### Setting and Sample

The Early Psychosis Prevention and Intervention Centre (EPPIC) in Melbourne, Australia, covered, at the time of the study, a catchment area of approximately 880,000 people and had a mandate to offer initial treatment to all patients ages 15 to 29 with FEP. In this catchment area, EPPIC is the only facility for the target population, with virtually no private psychiatrists and little, if any, movement into private facilities outside the area; as such, the study sample represents an epidemiological cohort. The EPPIC program comprises a comprehensive early intervention treatment program, with a usual episode of care of 18 months, which encompasses extensive assessments, outpatient case management, cognitive-behavioral therapy, low-dose antipsychotic therapy, access to a specialized inpatient unit for acute care during crisis admissions, a mobile crisis intervention assertive community treatment team, group programs, family support groups, and a specialized treatment of enduring psychotic symptoms. Each patient is assigned to a core team of case manager, resident doctor, and consultant who treats the patient across settings and makes entries into the chart (Edwards and McGorry, 2002; McGorry et al., 1996). Although treatment at EPPIC spans an average of 18 months, some patients may be treated longer if needed, and other patients leave treatment earlier for various reasons (e.g., families move out of area, patients refuse further treatment contacts). Of note, entry into service usually means start of outpatient or home treatment and not necessarily admission to the inpatient unit. The extensive outpatient and home treatment may explain the low rate and short duration of hospitalizations (rate of approximately 60% within 18 months; average stay, 8–10 days; Yung et al., 2003).

The study sample is drawn from a larger cohort of 786 consecutive patients with FEP, ages 15 to 29, treated at EPPIC between 1998 and 2000, whose charts were assessed in the context of an extensive chart review study (Lambert et al., 2005). This study is based on a sample of all 157 adolescents, ages 15 to 18, who experienced FEP (*DSM-IV* diagnoses of schizophrenia, schizophreniform, schizoaffective, and bipolar I disorder with psychotic symptoms as well as other psychoses (i.e., psychosis not otherwise specified, delusional disorder, major depressive episode with psychotic symptoms, brief psychotic episode, substance-induced psychotic episode; *DSM-IV*; American Psychiatric Association, 1994). Exclusion criteria were a *DSM-IV* diagnosis of a psychotic disorder caused by a general medical condition and IQ <70. Of 157 charts, 141 (90%) were assessed; 16 charts (10%) were transferred to other services after patients were discharged from EPPIC and were not available for the study. The excluded subjects did not differ in diagnostic distribution, and available demographic variables (age and gender). In seven cases, the reason for disengagement was not specified in the respective charts. The remaining 134 charts entered into the analysis.

### Design and Procedures

All of the information on baseline, treatment, and outcome variables for each patient treated at EPPIC is documented in standardized charts. Treatment in EPPIC is systematized according to the Australian Guidelines for Early Psychosis (see McGorry et al., 2003). Each chart comprises information during the treatment period from various sources using high-quality assessments carried out by trained clinicians. Using a systematic comprehensive