Community Treatment Order: Identifying the need for more evidence based justification of its use in first episode psychosis patients

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ABSTRACT

Objectives: Community Treatment Order (CTO) is a legal regime that obliges patients suffering mental disorder to adhere to treatment in the community and allows for a swift admission to hospital if necessary. Study aims were to: (i) determine CTO frequency in a large representative sample of first episode psychosis (FEP) patients; (ii) compare the characteristics of patients with or without CTO before entry, during treatment and at discharge from an early psychosis program.
Methods: Information on 660 patients treated at the Early Psychosis Prevention and Intervention Centre (EPPIC) between 1998 and 2000 was collected from medical files.
Results: 19.2% of patients were under CTO at least once during treatment and they differed on most pre-treatment, baseline, treatment and service discharge variables. They were less educated, more likely to have a history of offending behavior, had lower pre-morbid functioning, longer duration of untreated psychosis, increased prevalence and more persistent substance use disorders, greater severity of symptoms, lower functioning, poorer insight at any time during treatment and were more likely to be admitted to hospital.
Conclusions: CTO frequency was high, likely related to the representativeness of the cohort. Characteristics of patients on CTO are comparable to those with serious and persistent mental illness. Considering the absence of solid evidence regarding the effectiveness of this form of compulsion, it is crucial to study the use of CTO in FEP patients in order to explore its impact and identify patients for whom it may be beneficial.

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1. Introduction

The early phase of psychotic disorders has received increasing attention over the last decades (Marshall and Rathbone, 2011). Different intervention programs that target this early phase of the illness have been developed and assessed (Garety et al., 2006; Gleeson et al., 2013; Petersen et al., 2005). One of the main aims of such programs is to reduce the duration of untreated psychosis (DUP), because of the association between a longer DUP and poorer outcome (Boonstra et al., 2012; Golay et al., 2016; Penttila et al., 2014). Disengagement from services

and poor adherence to treatment has been identified as factors that are likely to limit the effect of early intervention programs (Conus et al., 2010c; Garety et al., 2006).

There is an absence of evidence regarding the effectiveness of Community Treatment Orders (CTOs) (Kisely and Campbell, 2014). Studies that addresses the topic have been questioned because of specific bias such inclusion criteria or protocol violation (Burns et al., 2013a). In this context, CTOs are often considered by specialists as useful tools to reduce disengagement and improve adherence to treatment (Mustafa, 2015). As a reminder, the concept of a CTO was developed in several jurisdictions and was first commonly used in the US in the 1960s and 70s. They were quickly adopted by other countries, especially in the English speaking world (Hiday, 2003). By authorizing outpatient care within the structure of a CTO, the aim was to offer a less restrictive alternative to involuntary hospitalization. It was hoped that CTO would make it possible to keep people in care outside of hospital, to avoid any decline in their state of health and their social situation, and crucially, to limit recourse to institutional placements (least restrictive CTO). Several

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jurisdictions like most of the US states, Australia or New Zealand further adapted their legislation to authorize the use of CTO on a preventative basis (preventative CTO).

Victoria was the first Australian state to introduce CTO in 1986 (Power, 1999). This new form of compulsion has been implemented in the context of deinstitutionalised services and well-developed networks of community mental health teams (Churchill et al., 2007). The criteria for a CTO required that: (a) the person suffered a mental illness; (b) a risk to self or other people existed; (c) the person refused treatment or his or her consent was unavailable; (d) there was no less restrictive alternative for treatment; and (e) immediate and adequate community treatment or care was available (Dawson, 2005).

To our knowledge, the use of CTOs for first episode psychosis (FEP) patients involved in a specialized youth-specific early intervention program has never been studied. Considering the importance of the restriction it imposes on patients, it is crucial to study if it has a positive impact on patients' outcome. The aims of the study were to: (i) determine the frequency of CTOs in a large representative sample of FEP patients; and (ii) to compare pre-treatment, treatment and outcome characteristics of FEP patients who were put on a CTOs during treatment at a specialized early intervention program with those of patients who were not exposed to CTOs.

2. Material and methods

2.1. Patient sample

This paper is based on a file audit study (FEPOS; First Episode Psychosis Outcome study) (Conus et al., 2007). The initial sample comprised a population-based cohort of all the 786 FEP patients consecutively treated at the Early Psychosis Prevention and Intervention Centre (EPPIC) between January 1998 and December 2000. EPPIC is a comprehensive program for young people aged between 15 and 29 years and experiencing their first episode of psychosis (McGorry et al., 1996). The catchment area covered the northwestern regions of Melbourne, Australia. Eighty-two patients were transferred to other services and their medical files were unavailable for the audit. Forty-three cases were excluded because of a non-psychotic diagnosis. One case was excluded because information about CTO was missing. Therefore, data were available on 660 patients. Contrary to certain countries, application of CTO in Victoria at the time of the study was not restricted to patients aged 18 or more.

2.2. Procedure

2.2.1. Assessment of CTO

The existence of a CTO was assessed on the basis of the case notes in the file as well as the legal forms that were produced in such contexts. For each patient, the number of treatment phases under CTO was reported in their case notes. The population was then dichotomized between patients who were treated under CTO for one or more period and those who never were under CTO.

2.2.2. Assessment of pre-treatment, baseline and outcome characteristics

Data was extracted from the file regarding the following periods: (1) pre-treatment phase, that is time before entry to EPPIC; (2) baseline, that is patient's characteristics at the time of entry to the EPPIC program and (3) during EPPIC treatment. Pre-morbid functioning was assessed with the Global Assessment of Functioning Scale (GAF, APA, 1994). Duration of prodrome was defined as the time between the moment when mention was made of the appearance of the first disturbances, which represented a deviation from the patient's previous behavior, and the development of the florid features of the disorder. Age at onset was defined as the age when first sustained positive psychotic symptoms occurred, according to the Duration of Untreated Psychosis (DUP) scale (McGorry et al., 1990a; McGorry et al., 1990b). DUP was defined as

age at entry into EPPIC subtracted by age when first sustained positive psychotic symptoms started (age at onset). Past exposure to trauma was documented according to sub-type of trauma as detailed elsewhere (Conus et al., 2010a; Conus et al., 2010b). Past history of psychiatric diagnoses, substance use disorder (SUD) included, were defined according to Diagnostic and Statistical Manual of Mental Disorders of Mental Disorders (4th ed., DSM-IV) criteria and past suicide attempts according to ICD-10 classification (Dilling and Dittmann, 1990). Diagnoses at discharge were preferred to the initial diagnoses because of the known instability of diagnoses in the early phase of illness (Schimmelmann et al., 2005).

Severity of illness at baseline and discharge was assessed with the Clinical Global Impressions scale (CGI) (Guy, 1976), and functioning level with the GAF. Insight into illness was assessed on the basis of one item with anchors ranging from absent to partial and full insight (Conus et al., 2007). Employment/occupation at entry and discharge was defined on the basis of the Modified Vocational Status Index (MVCI) (Tohen et al., 2000) as having a job (full-time or part-time) or being a student at school or university for at least the previous four weeks. Patients were also dichotomized according to the evolution of substance use disorder during treatment period as follows: (a) absence of substance use disorder (b) decrease or interruption of substance use disorder over treatment period and (c) persistence, increase or commencement of substance use disorder over treatment period (Lambert et al., 2005). Inter-rater reliability for forty cases (between Lambert and Conus who assessed all files) was established for CGI-S (ICC2,1 = 0.87), GAF (ICC2,1 = 0.88), PAS (ICC2,1 = 0.82), and insight score (kappa = 0.89) (Conus et al., 2007). The Structured Clinical Interview for DSM-IV-TR Axis I Disorders-Patient Edition (SCID-I/P) was used to determine the validity of diagnoses for a subset of 115 patients. There was good concordance for both psychotic (kappa = 0.80) and substance use (kappa = 0.74) diagnoses (Conus et al., 2007).

2.3. Statistical analysis

To allow all comparisons to be included on the same metric a series of logistic regression analyses were conducted with CTO (yes/no) as the dependent variable, and the individual premorbid and service entry variables as predictors (one at a time for each model). From these analyses, odds ratios (OR) and the 95% confidence intervals (CI) of the ORs were derived. The Wald statistic (z) was used to determine significance of predictors. In order to highlight the most important variables independently of each other, three synthetic multivariate logistic models were estimated with significant predictors for pre-treatment, baseline and "treatment" variables respectively.

For the treatment and discharge variables, adjusted ORs and 95% CI of the adjusted ORs were reported, controlling for entry characteristics and time in service. Comparisons between CTO and past history of offending behavior categories and final diagnostic at discharge were performed using Fisher's exact test. The association between CTO occurrence and the final diagnostic at discharge was tested with a Fisher Exact Test with Monte-Carlo estimation. In order to highlight which diagnostic categories differed the most between groups and contributed to the overall significant result we examined significant standardized residual at the 0.05 level. All statistical tests were two-tailed and significance was determined at the 0.05 level. All statistical analyses were performed with IBM® SPSS® version 22.

3. Results

3.1. Frequency of CTO

19.2% (n = 127) of the patients were placed under CTO at some point during the 18 months of treatment.