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Effects of assisted outpatient treatment and health care services on psychotic symptoms

Andres R. Schneeberger [a, b, c, *, 1], Christian G. Huber [b, 1], Undine E. Lang [b], Kristina H. Muenzenmaier [c], Dorothy Castille [e], Matthias Jaeger [f], Azizi Seixas [g], Julia Sowislo [b], Bruce G. Link [d]

[a] Psychiatrische Dienste Graubuenden, Plazza Paracelsus 2, 7500 St. Moritz, Switzerland
[b] Universitaere Psychiatrische Kliniken, Universitaet Basel, Wilhelm Klein-Strasse 27, 4012 Basel, Switzerland
[c] Albert Einstein College of Medicine, Department of Psychiatry and Behavioral Sciences, 1300 Morris Park Avenue, Belfer Building, Room 402, 10461 Bronx, NY, USA
[d] Mailman School of Public Health, Columbia University, 722 W 168th St, 10032 New York, NY, USA
[e] Bethesda, MD, USA
[f] Psychiatrische Universitaetsklinik, Zuerich, Lenggstrasse 31, 8032 Zuerich, Switzerland
[g] Center for Healthful Behavior Change, New York University School of Medicine, 227 East 30th Street, 10016 New York, NY, USA

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ABSTRACT

Rationale: An ongoing debate concerns acceptability, benefits, and shortcomings of coercive treatment such as assisted outpatient treatment (AOT). The hypothesis that involuntary commitment to outpatient treatment may lead to a better clinical outcome for a subgroup of persons with severe mental illness (SMI) is controversial. Nonetheless, positive effects of AOT may be mediated by an increased availability of healthcare resources or increased service use.
Objective: The purpose of the present study is to evaluate the course of delusions, hallucinations, and negative symptoms among patients with SMI receiving AOT compared to patients receiving non-compulsory treatment (NCT). Moreover, we assessed if the effects of AOT on psychotic symptoms were mediated by increased healthcare service use.
Methods: This study used a quasi-experimental design to examine the effect of AOT and the use of healthcare services on psychotic symptoms. In total, 76 (41.3%) participants with SMI received AOT, and 108 (58.7%) received NCT. The participants were interviewed at baseline every 3 months up to 1 year. Propensity score matching was used to control for group differences.
Results: In the basic model, AOT was associated with lower severity of psychotic symptoms over all follow-up points. In the model including healthcare service use, the frequency of case manager visits predicted a reduction in severity of all psychotic symptoms. The frequency of visits to the outpatient clinics, frequency of emergency room, and psychiatrist visits were independently associated with lower levels of delusional symptoms. Psychiatrist visits were related to a decrease in negative symptoms.
Conclusion: Results indicate that the treatment benefits of AOT are enhanced with the increased use of mental healthcare services, suggesting that the positive effect of AOT on psychotic symptoms is related to the availability of mental healthcare service use. Coercive outpatient treatment might be more effective through greater use of intensive services.

1. Introduction

There is an ongoing debate concerning acceptability, benefits, and shortcomings of compulsory outpatient treatment in psychiatry. In the UK, Canada, and Australia, community treatment orders were introduced, which implement compulsory outpatient treatment to different degrees (Gledhill, 2007; Swartz and Swanson,

* Corresponding author. Psychiatrische Dienste Graubuenden, Plazza Paracelsus 2, 7500 St. Moritz, Switzerland.
E-mail addresses: andres.schneeberger@pdgr.ch, andres.schneeberger@gmail.com (A.R. Schneeberger).
[1] Contributed equally to this work.

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2004). In the USA, assisted outpatient treatment (AOT) has been implemented in some states and refers to a procedure whereby a judge orders a person with severe mental illness (SMI) to adhere to a mental health treatment while living outside of a psychiatric institution (Steadman et al., 2001). AOT programs currently operate in 45 states across the United States, although the type of outpatient treatment orders varies by state. Most states (e.g., New York, North Carolina) have preventive outpatient commitment statuses to avoid further deterioration of the mental health of a person to the point where inpatient commitment is needed (Wales and Hiday, 2006). Other states (e.g., Maryland) only know conditional release statutes after involuntary hospitalization (Morrissey et al., 2013). The hypothesis that involuntary commitment to outpatient treatment may lead to a better clinical outcome for a subgroup of persons with SMIs and, thus, to decreased rates of aggressive and criminal incidents is controversial. On the basis of experts' opinions and the general public (Pinfold and Bindman, 2001), it is clear that a consensus about the adequacy and effectiveness of AOT has not been achieved thus far.

Several studies have highlighted the treatment benefits of AOT, some of which include reductions in a revolving-door phenomenon, which describes a subpopulation of chronically mentally ill patients frequently readmitted to psychiatric units, declines in total hospitalization days, as well as reductions in service costs for persons with serious mental illness (Gledhill, 2007; Swanson et al., 2013; Swartz et al., 1999). Link et al. (2008) found that AOT was linked to improvements in social functioning and to an increased quality of life. Furthermore, self-reported coercion was related to lower self-esteem in this study. In summary, data on the benefits of AOT are mixed, and Kisely and Campbell (2015) concluded that the evidence indicating that AOT reduces hospital admissions or length of stay was very limited.

Positive effects of AOT may be mediated by an increased availability of healthcare resources or increased service use. This hypothesis is supported by research on the effectiveness of (intensive) case management (Dieterich et al., 2010; Ziguras and Stuart, 2000). Furthermore, a meta-analysis demonstrated that the implementation of resource group assertive community treatment yielded positive effects, including reduced symptoms, increased subjective reports of wellbeing, and functioning on the basis of various clinical measures for people with psychotic disorders (Nordén et al., 2012). Following this line of argument, Swartz and Swanson (2004) suggested that AOT can only be effective when more intensive services are provided, precluding its use as an inexpensive intervention. However, it is currently unclear if there is, indeed, increased service use through AOT. There is a growing belief that AOT undermines the delivery of voluntary mental health services and drives consumers away from the mental health system (Allen and Smith, 2001). Some studies have not found any differences in outcomes between people with SMI who were enrolled in outpatient commitment and those who received different types of treatment (Kisely and Campbell, 2015; Kisely et al., 2007; Swartz and Swanson, 2004). In addition, the question is raised if other forms of treatment engagement and the increased availability of healthcare service would be sufficient to improve treatment, questioning the need for AOT (Appelbaum, 2001; Rowe, 2013; Swanson and Swartz, 2014). Wagner et al. (2003) showed that outpatient visits were more frequent among participants with clear clinical need, and among those who continued treatment beyond an initial court order.

AOT mostly targets people who suffer from major psychiatric disorders such as schizophrenia, schizoaffective disorder, mood disorders, and other disorders that significantly impair social functioning (Munetz et al., 2014; Schneeberger et al., 2012). Key symptoms addressed in the treatment of SMI include positive psychotic symptoms such as delusions or hallucinations (Coltheart et al., 2011; Huber et al., 2008a) and negative psychotic symptoms such as anhedonia, avolition, and alogia (Messinger et al., 2011); these both may have significant negative effects on a patient's functional outcome (Huber et al., 2008b; Millan et al., 2014). To our knowledge, no study has specifically focused on how AOT, as a treatment modality, affects psychotic symptoms among SMI patients.

1.1. Aims of the study

The purpose of the present study is to evaluate the course of outcome parameters (i.e., delusions, hallucinations, and negative symptoms) among patients with SMI receiving AOT compared to patients receiving non-compulsory treatment (NCT). Moreover, we intended to assess whether the effects of AOT on psychotic symptoms were mediated by increased healthcare service use. We hypothesized that people with AOT will report lower levels of symptoms and greater functional outcomes compared to those who receive NCT over time, and that some of this effect is mediated by an increased use of mental health care services, among patients with SMI.

2. Method

The original study was commissioned by the New York State Office of Mental Health to evaluate the effects of AOT (Link et al., 2008). Participants were recruited from seven psychiatric outpatient clinics in the Bronx and Queens from 2001 to 2007. The baseline data were collected 3 months after the participants were discharged from psychiatric inpatient treatment. In total, 76 participants had been court ordered to AOT; 108 participants who had been recently discharged from a psychiatric hospital and were treated in the same outpatient clinics as the AOT group were assigned to the NCT group. Participants in the AOT group had been under court order for at least 1 month before being enrolled in the present study. Inclusion criteria for the entire sample involved being between the ages 18 and 65. The AOT subsample was recruited by the intensive case managers of the corresponding clinics, including all people court ordered to AOT, which were then referred to the study project manager if they agreed to participate. The NCT subsample was recruited from the corresponding outpatient clinics. Treatment staff approached the individuals if they were in voluntary outpatient treatment and had been discharged from an inpatient psychiatric hospitalization within 1 year, and referred them to the study project manager if they agreed to participate. Participants who declined enrollment did not differ in any important ways from people participating in the study. Exclusion criteria were the inability to complete an interview in English or Spanish, residing outside the Bronx or Queens, and not having the capacity to give informed and voluntary consent. An unaffiliated psychiatrist or doctorate-level psychologist screened for eligibility and assessed for capacity to provide informed consent. Individuals deemed to have such capacity and who decided to participate were enrolled in the study and compensated for their time. Interviewers had a Master's degree in either Psychology or Social Work, and all had previous experience interviewing people with SMIs. They were extensively trained and monitored for adherence to study procedures. Informed consent assured potential participants that participation would have no bearing on their treatment and, specifically, that neither participation nor refusal to participate would affect their treatment. There were separate sections in the consent form that agreed to each item: interview, chart review, and taping of the interview. Each item could be opted out of, and each or all could be refused. Finally, any item could be refused