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## In Debate

### Community Treatment Orders for Psychiatric Patients: The Emperor With No Clothes

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How does society protect some of its most vulnerable and disadvantaged patients while respecting individual autonomy? This is the dilemma facing many Canadian jurisdictions as they consider the extension of compulsory treatment to community settings. Canada is not unique but part of a trend to enforce outpatient treatment in many jurisdictions, including Australia, New Zealand, the United States, and the European Union (1,2). What is the basis for this enthusiasm? Certainly, research published in this journal has endorsed the measure to varying degrees (3), as does the position paper of the Canadian Psychiatric Association (4). We wonder whether this confidence is misplaced, and we critically examine several troubling aspects of the literature on CTOs.

#### Opinion Is Not Evidence

One approach to the evaluation of CTOs has been to ask practising psychiatrists for their opinion on the utility of the orders (3). These suggest general support for the measure. However, surveys of psychiatrists' views on CTOs provide only Level 3 evidence, in contrast to the Level 1 evidence from appropriately conducted RCTs and the Level 2 evidence from well-designed non-RCT studies, such as case-control studies or interrupted time series. Such surveys have little place in an era of evidence-based practice and, in the absence

of other data, would not be accepted as a reason to introduce any other psychiatric intervention.

#### No Controls, Little Evidence

Early uncontrolled studies, largely from the United States, suggested that patients on CTOs had reduced rates of rehospitalization and shorter stays in hospital, associated with increased compliance. However, there were no significant differences between the 2 groups when control subjects not subject to a compulsory treatment order were included (5–7).

The weakness of uncontrolled designs is the difficulty in determining the reason for any change in outcome. Aside from the effect of the intervention, other possible explanations include regression to the mean, other treatment, life events, or changes in social circumstances. These often overestimate the effect of the intervention of interest.

Controlled studies without randomization also have shortcomings. There may always be another reason why patients were placed on treatment and the control subjects were not. They may be less insightful about their illness or more likely to have a history of aggressive behaviour. Only one matched control study controlled for forensic history (7).

#### What About RCTs?

RCTs address many of these problems but are very difficult to conduct where mental health legislation policy is implemented at a state, provincial, or national level. There have therefore only been 2 RCTs, and both were in the United States (New York and North Carolina) (8–11). These trials have been the subject of much debate in terms of subjects, design, analysis, and generalizability.

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#### Abbreviations used in this article

CTO	community treatment order
RCT	randomized controlled trial

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## **Selection and Follow-Up Bias: Were the Patients Typical?**

Both RCTs excluded patients with a history of violence from randomization. Although understandable from an ethical and legal standpoint, this limits their applicability because recent dangerousness, particularly violence against others, is often the reason for compulsory treatment in hospital or in the community. One study did include a nonrandomized violent subgroup in the analysis, but this negates the whole point of an RCT (see below) (9–11).

Selection bias was further compounded by high dropout rates. Of the 577 patients identified as eligible for participation in the New York and North Carolina studies, including the violent subgroup, only 292 (51%) were followed up 1 year later. Although the North Carolina study had a higher completion rate among randomized patients than the New York study (82% and 45%, respectively), data were not available for all patients for all of the outcomes. The 1-year follow-up is therefore of a highly selected and potentially unrepresentative population that was not dangerous and was sufficiently compliant to participate in baseline and follow-up assessments.

## **Limited Generalizability: Was the Intervention Typical?**

Aside from bias, the generalizability of these studies is further compromised by the fact they are studies of court-ordered outpatient committal in the United States. This is in contrast to the rest of the English-speaking world, where the intervention is prescribed by clinicians. The results may therefore not be generalizable to other jurisdictions. Court involvement in making the order may, in itself, affect treatment compliance. We simply do not know.

## **Design and Analysis: When Is an RCT Not an RCT?**

Neither study showed significant differences between intervention and control groups in terms of hospital or other outcomes such as arrests, homelessness, or compliance with treatment over the following 12 months (2,8–11); nor were there any significant differences between the CTO and control groups in psychiatric symptoms or quality of life measured by standardized instruments (8).

The New York study did find that patients randomized to CTOs spent an average of 43 days in hospital in the follow-up period, compared with 101 days for the group discharged without a treatment order (8). Although a large difference, it did not reach statistical significance, possibly because of small numbers ( $n = 152$ ). There was also a suggestion that members of the control group and their case managers thought that they were actually on CTOs. Both these factors would minimize any effect of the intervention. However, the larger

study from North Carolina ( $n = 264$ ) also did not find any statistically significant differences in hospital or other outcomes between the intervention and control groups (9–11). Further, combining the results from the New York and North Carolina studies in a metaanalysis, which would help address insufficient power in either study, made no difference to the results (2).

Controversially, the North Carolina researchers supplemented their RCT with nonrandomized data that did show a difference between some groups on CTOs and the control group. In the first instance, they performed a post hoc analysis of a nonrandom sample ( $n = 47$ ) that underwent sustained periods (more than 180 days) of outpatient commitment beyond that of the initial court order. This group had about 57% fewer readmissions and 20 fewer hospital days than the control subjects. The group also had improved outcomes in terms of compliance with medication, homelessness, and forensic history (9–11). However, such analyses are subject to the bias and confounding that randomized trials are designed to minimize. Analysis of subjects who have not been randomly assigned to CTO groups of less or more than 180 days may reflect a bias where a CTO was selectively extended when it seemed to be helping the patient.

In the second instance, the North Carolina researchers included a nonrandom sample of violent patients who received the intervention and were excluded from the RCT; they then ran a series of multivariate analyses of various outcomes. Again, although interesting, this is not RCT evidence.

## **Are There Any Outcomes for Which Compulsory Community Treatment May Make a Difference?**

Controlled and RCT designs have shown that patients on CTOs have greater outpatient contact with mental health services than do control subjects in some circumstances (6,11). However, this is not really an outcome measure because it relates to the process of the intervention itself (2). If patients are compelled to attend outpatient appointments, it is not surprising that outpatient contacts will increase. It is a bit like measuring the efficacy of an antihypertensive medication by assessing patient adherence rather than the effect on blood pressure. Importantly, all this increased contact does not translate into meaningful change in terms of improved symptomatology or compliance with medication (2).

## **Conclusions**

Proponents of CTOs argue that they are less coercive than the alternatives of compulsory admission to hospital or arrest. However, research findings suggest that CTOs remain an unproven way of reducing either when subjects are compared with matched or randomly selected control subjects. Further,

these negative findings cannot be blamed on insufficient study power because they persisted when studies were combined in metaanalyses (2).

There have been 2 responses to this lack of evidence. One response is to say that we should expect CTOs to actually increase readmission rates through increased surveillance. Earlier and more frequent admissions could then lead to better outcome in terms of reduced lengths of stay. The other response is to argue that admission rates are not a relevant outcome at all and that other indicators are more appropriate. Unfortunately, the evidence on outcomes such as length of stay, symptomatology, homelessness, quality of life, or perceived coerciveness is no better (2). This is truly the case of the emperor (or in this case, the treatment) having no clothes.

We should be investing our energies in less coercive alternatives, such as assertive community treatment and advance directives for psychiatric care, where research findings show greater promise.

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