

## Implementation of Treatment Guidelines for Specialist Mental Health Care

Corrado Barbui<sup>\*1</sup>, Francesca Girlanda<sup>1</sup>, Esra Ay<sup>2</sup>, Andrea Cipriani<sup>3</sup>, Thomas Becker<sup>2</sup>, and Markus Koesters<sup>2</sup>

<sup>1</sup>Department of Public Health and Community Medicine, Section of Psychiatry, University of Verona, Verona, Italy; <sup>2</sup>Department of Psychiatry II, Ulm University, Guenzburg, Germany; <sup>3</sup>Department of Psychiatry, University of Oxford, Oxford, UK

\*To whom correspondence should be addressed; Department of Public Health and Community Medicine, Section of Psychiatry, University of Verona Policlinico “GB Rossi” Piazzale L.A. Scuro, 10 37134 Verona, Italy; tel: +39-0458126418, fax: +39-0458124155, e-mail: [corrado.barbui@univr.it](mailto:corrado.barbui@univr.it)

Although treatment guidelines are commonly employed in healthcare settings, it remains unclear whether their use has any positive impact on the performance of mental health services or whether they improve patient outcomes. This systematic review is based on a search carried out in March 2012 and includes 5 randomized studies that examined the effectiveness of guideline implementation strategies in improving healthcare services and outcomes for people with mental illness. The 5 studies were generally at unclear risk of bias, and all evidence in the “Summary of Findings” table was graded by review authors as of very low quality. Although single studies provided initial evidence that implementation of treatment guidelines may achieve small changes in mental health practice, with only 5 studies meeting inclusion criteria, and with limited usable information, it is not possible to arrive at definitive conclusions. A gap in knowledge still exists about how guideline implementation strategies might improve patient outcomes and health services. This leaves scant information for people with mental health problems, health professionals, and policy makers. More large-scale, well-designed and well-conducted studies are necessary to fill this gap in knowledge.

*Key words:* guidelines/implementation/schizophrenia

### Background

A huge gap exists between the production of evidence and its take-up in clinical practice settings. To fill this gap, treatment guidelines, based on explicit assessments of the evidence base, are commonly employed in several fields of medicine, including schizophrenia and related psychotic disorders. It remains unclear, however, whether treatment guidelines have any impact on provider performance and patient outcomes, and how implementation should be conducted to maximize benefit.

### Objectives

The primary objective of this review was to examine the efficacy of guideline implementation strategies in improving process outcomes (performance of health care providers) and patient outcomes. We additionally explored which components of different guideline implementation strategies can influence process and patient outcomes.

### Search Methods

We searched the Cochrane Schizophrenia Group Register (March 2012), as well as references of included studies.

### Selection Criteria

Studies that examined schizophrenia-spectrum disorders to compare guideline implementation strategies with usual care or to assess the comparative efficacy of different guideline implementation strategies.

### Data Collection and Analysis

Review authors worked independently and in duplicate to critically appraise records from 882 studies; 5 individual studies met the inclusion criteria and were considered. As critical appraisal of the 5 included studies revealed substantial heterogeneity in terms of focus of the guideline, target of the intervention, implementation strategy, and outcome measures, meta-analysis was carried out for antipsychotic co-prescribing only.

### Main Results

Of the 5 included studies, practitioner impact was assessed in 3. The 5 studies were generally at unclear risk of bias, and all evidence in the “Summary of Findings” table was graded by review authors as of *very low quality* (table 1). Meta-analysis of 2 studies revealed that a

**Table 1.** Summary of Findings Table

Active Education + Support for Implementation vs Routine Care or Passive Dissemination for Participants With Schizophrenia and Related Psychosis

Outcomes	Illustrative Comparative Risks (95% CI)		Relative Effect (95% CI)	Number of Participants (Studies)	Quality of the Evidence (GRADE)
	Assumed Risk	Corresponding Risk			
	Routine Care or Passive Dissemination	Active Education + Support for Implementation			
Polypharmacy	441 per 1000	428 per 1000 (331–552)	RR 0.97 (0.75–1.25)	310 (2 studies)	Very low <sup>a,b</sup>
Not screened for cardiovascular risk factors	895 per 1000	635 per 1000 (429–922)	RR 0.71 (0.48–1.03)	38 (1 study)	Very low <sup>a,c</sup>
Global state (PANSS total score)		Mean global state—PANSS total score—design effect corrected in the intervention groups was 01.30 lower (10.52 lower to 7.92 higher)		59 (1 study)	Very low <sup>d,e</sup>
Satisfaction with care (ZUF8)		Mean satisfaction with care—ZUF8—design effect corrected in the intervention groups was 0.10 higher (1.96 lower to 2.16 higher)		46 (1 study)	Very low <sup>d,e</sup>
Lack of treatment adherence	385 per 1000	346 per 1000 (169–712)	RR 0.90 (0.44–1.85)	52 (1 study)	Very low <sup>e,f</sup>
Drug attitude (DAI)		Mean drug attitude—DAI—design effect corrected in the intervention groups was 1.40 lower (3.38 lower to 0.58 higher)		32 (1 study)	Very low <sup>d,e</sup>
Quality of life	No trial reported this outcome				

Note: CI, confidence interval; DAI = Drug Attitude Inventory; PANSS, Positive and Negative Syndrome Scale; RR, risk ratio; ZUF8 = patient satisfaction questionnaire.

<sup>a</sup>Risk of bias: Rated—“very serious”—Randomization and allocation poorly described.

<sup>b</sup>Imprecision: Rated—“serious”—Only 2 studies with a pooled treatment estimate ranging from substantial beneficial effect to substantial harmful effect.

<sup>c</sup>Imprecision: Rated—“serious”—Only 1 study with few cases and events.

<sup>d</sup>Risk of bias: Rated—“serious”—Groups were not well balanced in terms of length of hospitalization and psychopathology ratings.

<sup>e</sup>Imprecision: Rated—“very serious”—Only 1 study with few cases.

<sup>f</sup>Risk of bias: Rated—“serious”—Groups were not well balanced in terms of ethnic groups and psychopathology ratings.

combination of several guideline dissemination and implementation strategies targeting health care professionals did not reduce antipsychotic co-prescribing in schizophrenia outpatients (2 studies,  $n = 1082$ , risk ratio [RR] 1.10, CI 0.99 to 1.23; corrected for cluster design:  $n = 310$ , RR 0.97, CI 0.75 to 1.25). One trial, which studied a nurse-led intervention aimed at promoting cardiovascular disease screening, found a significant effect in terms of the proportion of people receiving screening (blood pressure:  $n = 96$ , RR 0.07, CI 0.02 to 0.28; cholesterol:  $n = 103$ , RR 0.46, CI 0.30 to 0.70; glucose:  $n = 103$ , RR 0.53, CI 0.34 to 0.82; body mass index:  $n = 99$ , RR 0.22, CI 0.08 to 0.60; smoking status:  $n = 96$ , RR 0.28,

CI 0.12 to 0.64; Framingham score:  $n = 110$ , RR 0.69, CI 0.55 to 0.87), although in the analysis corrected for cluster design, the effect was statistically significant for blood pressure and cholesterol only (blood pressure, corrected for cluster design:  $n = 33$ , RR 0.10, CI 0.01 to 0.74; cholesterol, corrected for cluster design:  $n = 35$ , RR 0.49, CI 0.24 to 0.99; glucose, corrected for cluster design:  $n = 35$ , RR 0.58, CI 0.28 to 1.21; body mass index, corrected for cluster design:  $n = 34$ , RR 0.18, CI 0.02 to 1.37; smoking status, corrected for cluster design:  $n = 32$ , RR 0.25, CI 0.06 to 1.03; Framingham score, corrected for cluster design:  $n = 38$ , RR 0.71, CI 0.48 to 1.03; *very low quality*). Regarding participant outcomes, 1 trial assessed

the efficacy of a shared decision-making implementation strategy and found no impact in terms of psychopathology, satisfaction with care, and drug attitude. Another single trial studied a multifaceted intervention to promote medication adherence and found no impact in terms of adherence rates.

### Authors' Conclusions

With only 5 studies meeting inclusion criteria, and with limited low- or very low-quality usable information, it is not possible to arrive at definitive conclusions. The preliminary pattern of evidence suggests that, although

small changes in psychiatric practice have been demonstrated, uncertainty remains in terms of clinically meaningful and sustainable effects of treatment guidelines on patient outcomes and how best to implement such guidelines for maximal benefit. Please see Cochrane review for full details.<sup>1</sup>

### Reference

1. Barbui C, Girlanda F, Ay E, Cipriani A, Becker T, Koesters M. Implementation of treatment guidelines for specialist mental health care. *Cochr Database Syst Rev.* 2014; CD009780. doi:10.1002/14651858.CD009780.pub2