

Measurement-based Practice May Not be Effective in the Community Care of Patients with Schizophrenia

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ABSTRACT

Introduction: Experts' recommendations to implement measurement-based treatment in the community raise many questions about the feasibility and effectiveness of this practice.

Methods: This study used a case-controlled retrospective chart review of 60 patients with chronic schizophrenia to investigate the impact of an abbreviated symptom rating scale (Positive and Negative Symptom Scale [PANSS]) on several outcome measures during 1 year.

Results: Compared to treatment-as-usual, the use of the abbreviated PANSS had no impact on numerous outcome measures, such as the number of prescribed medications, number of hospitalizations, or patient's global level of functioning.

Conclusion: Measurement-based practice in community clinics may not be effective unless accompanied by other changes, such as the ability of psychiatrists to spend more time with their patients.

INTRODUCTION

Recently, large-scale treatment studies in depression (Sequenced Treatment Alternatives to Relieve Depression), bipolar disorder (Systematic Treatment Enhancement Program for Bipolar Disorder), and schizophrenia (Clinical Antipsychotic Trials for Interventions Effectiveness) have been completed. Many reports, detailing their results, have been published.¹⁻³ At times, it has been difficult to translate findings from these projects into concrete guidelines for practitioners. However, as the result of these studies, one of the most frequent recommendations made is the need to bring measurement-based practice into the real world.⁴

FOCUS POINTS

- Based on large-scale treatment studies, such as the Clinical Antipsychotic Trials for Interventions Effectiveness, experts are recommending the implementation of measurement-based practice in the community.
- This recommendation raises questions about the feasibility and effectiveness of this practice.
- This study used an abbreviated Positive and Negative Symptom Scale in the care of 60 patients with schizophrenia during 1 year.
- The use of the rating scale did not appear to influence outcome measures, such as level of functioning, number of hospitalizations, or number of prescribed medications.
- Measurement-based practice in the community may need to be accompanied by other changes to become effective.

Basing treatment decisions on actual symptom rating scales, rather than global impressions, is believed to be more efficient and effective.

A general recommendation to use measurement-based practice in the real world, based upon the above studies, provokes several questions. Are these studies truly representative of the real world? Is it feasible to employ similar instruments in busy community clinics? Is measurement-based practice effective for all the different diseases studied?

Because the answer to these questions is not yet available, it is problematic that some intermediaries, for example insurance companies, have started to put pressure on psychiatrists to use algorithms and rating scales in community clinics,⁵ without taking the realities of these clinics into account. These include providing care for a large number of severely ill patients, who have significant psychosocial adversity; infrequent 10–15-minute follow-up visits; few support staff;

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and little time to document encounters. Most importantly, it is not clear if patients are better served with the use of specific symptom rating scales. This article reports on the use of a rating scale during the treatment of patients with schizophrenia in a community clinic.

The largest source of information regarding the implementation of measurements during clinical care of schizophrenia comes from the Texas Medication Algorithm Project.⁶ The specifics of this state-wide project are well known and are available online.⁷ Research coordinators, available on site, administered the rating scales and provided feedback to the treating physicians, who followed the antipsychotic algorithm. Published results⁸ appear to be quite modest; the group of patients with schizophrenia who received the measurement-based practice did not differ on positive and negative symptoms after 12 months, compared to the treatment-as-usual group, although a sustained improvement in cognitive functioning was noted.

Other attempts have been made to introduce evidence-based decisions into routine clinical care.^{9,10} Clearly, much effort is involved in the realization of these practice improvements.¹⁰ While fidelity to the originally developed algorithm is important,¹¹ it is problematic that many algorithms do not discuss very specific guidelines, such as response criteria.¹² Thus, for individual practitioners in the community, questions regarding feasibility and effectiveness remain.

The use of a rating scale in the treatment of patients with schizophrenia in a community mental health clinic is documented in this article. It was a quality improvement project in the care of chronic patients. A retrospective case-controlled chart review was used to examine the impact of an abbreviated version of the Positive and Negative Symptom Scale (PANSS)¹³ on several outcomes, such as the amount of medications used in the treatment, number of hospitalizations, and patient's level of functioning. If measurement-based practice, that is feasible within the constraints of a community clinic, is effective in schizophrenia, one would expect certain outcomes such as fewer hospitalizations, fewer medications used, and better level of functioning.

METHODS

Patients with chronic schizophrenia or schizoaffective disorder, who were followed in the same clinic between March 2007 and February 2009, were eligible to be included. Patients were seen by a psychiatrist every 2–3 months, in brief medication management visits. Since March 2008, all patients, during every psychiatric visit, were evaluated with a much abbreviated version of the PANSS. Three positive PANSS items (hallucinatory behavior, delusions, conceptual disorganization) and three negative PANSS items (blunted affect, poor rapport, emotional withdrawal) were rated on

a scale from one to seven (1=absent, 2=minimal, 3=mild, 4=moderate, 5=moderately severe, 6=severe, 7=extreme).

The positive items represent the most common positive symptoms in schizophrenia (hallucinations, delusions, and thought disorder). The negative items were chosen based on their observability within the patient-physician encounter.

Pharmacotherapy was based on clinical grounds, incorporating all relevant information provided during the visit by patient, family, and case managers. Since March 2008, the abbreviated PANSS was part of this clinical process. No specific guidelines were used to change the pharmacotherapeutic regimen based on the abbreviated PANSS rating. Rather, the use of the rating scale was meant to provide a more comprehensive assessment of pertinent positive and negative symptoms, compared to a treatment-as-usual situation. Also, no specific medication algorithm was used, since all subjects were chronic patients who had an extensive past history of multiple antipsychotic trials.

The study employed a retrospective chart review and compared, for each patient, the period of March 2007 until February 2008 (year 1) when no PANSS ratings were performed, with the period of March 2008 until February 2009 (year 2) when the abbreviated PANSS ratings were performed during every visit. The following data were extracted from the clinic's electronic record system: age; gender; race; Global Assessment of Functioning (GAF) scale and number of total psychiatric medications (antipsychotics, antidepressants, benzodiazepines, etc.) in the beginning of year 1 and year 2, and at the end of year 2; number of changes in all psychiatric medications made during the two periods (dose and actual medication changes); number of visits in each period; number of hospitalizations in each period; other treatments added and/or deleted in each period (case management, partial programs, etc); and the abbreviated PANSS scores in the beginning and end of year 2. Students' *t*-tests for continuous measures and Chi Square tests for categorical measures were used.

RESULTS

Sixty patients (30 males, 30 females) were included. Fifty-two patients were white and the remaining eight were black. Their average age was 49.2±11.1 years. All patients suffered from schizophrenia or schizoaffective disorder and had been followed for many years in the clinic.

At the beginning of year 1, 16 patients were taking clozapine, 49 were taking another atypical, and 6 patients were taking a typical antipsychotic. Three patients were not taking any antipsychotic, 14 patients were taking a combination of antipsychotics, and six patients were on long-acting injectables. Many patients were taking other psychiatric medications as well.

In the first year, patients had an average of 4.8 ± 2.4 visits. They started out taking an average of 2.8 ± 1.5 psychiatric medications and ended the first year on an average of 2.9 ± 1.6 psychiatric medications. Medications were changed 2.5 ± 3.8 times. An average of 0.17 ± 0.4 other treatments was added, while 0.15 ± 0.4 treatments were deleted. The GAF decreased slightly from 47.4 ± 8.3 to 47 ± 9.4 . Four patients were hospitalized during the first year.

In the second year, patients had 4.6 ± 2.2 visits. The amount of prescribed psychiatric medications did not change significantly from 2.9 ± 1.6 to 2.8 ± 1.5 ($P = .773$). Medication changes happened 2.3 ± 3.0 times in the second year. An average of 0.4 ± 1.4 other treatments was added, while 0.2 ± 0.6 treatments were deleted. The GAF increased slightly from 47.0 ± 9.4 to 49.5 ± 8.3 ($P = .133$). Six patients were hospitalized in the second year (two patients were admitted twice; $P > .5$). Antipsychotic poly-pharmacy did not change.

The abbreviated PANSS rating scale decreased from 12.2 ± 5.1 to 9.8 ± 3.4 ($P = .003$) during the second year.

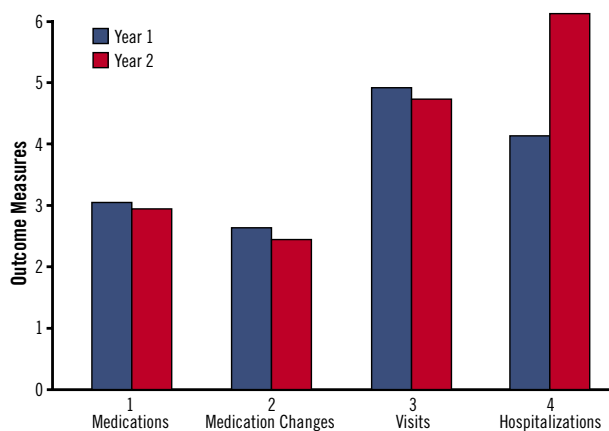
None of the differences in primary outcomes, level of functioning, number of medications, or hospitalizations between year 1 and year 2 were statistically significant. The Figure visualizes several of the outcome measures.

DISCUSSION

In this 2-year follow-up of 60 patients with schizophrenia or schizoaffective disorder, the use of a specific rating scale to measure symptomatology, added to the ongoing pre-existing clinical care, did not appear to make a difference in certain outcome measures, such as the number of hospitalizations, intensity of treatment, utilization of pharmacotherapy, or level of functioning.

FIGURE

TREATMENT-RELATED OUTCOMES



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The results need to be viewed in light of the study's limitations: small sample size, naturalistic design, abbreviated rating scale, and relatively brief period of follow-up. However, this study is probably representative of the manner in which patients with schizophrenia are treated in the community in the United States.

Some characteristics of the patients and the study may have limited the possibility to find an impact of this measurement-based practice. Patients were relatively stable. This was evidenced by their high GAF score and the low number of medications used in their treatment. Their stability may have limited the impact of measuring their symptomatology to guide changes in their treatment.

The abbreviated rating scale may not have captured enough symptoms or more crucial symptoms to show an impact on patients' level of functioning. However, longer rating scales may not be feasible on a routine basis in a community clinic. The fact that no guidelines were used on how to adjust medications, based on the score of the rating scale, may have limited the psychiatrist's ability to intervene appropriately. However, it is not clear what guidelines would be used in a very chronic patient population with multiple past antipsychotic trials.

A major limitation to clinical care and the use of more sophisticated measurements is the limited time available, in community clinics, for psychiatrists to spend with their patients (in the Texas Medication Algorithm Project, physicians were supported by on-site research coordinators). In this regard, the use of an abbreviated measurement may not add any value to the patient's care since no time is available to adequately investigate the meaning of the changes in the rating scale. Also, follow-up, in terms of frequency and length of psychiatric visits, may not be adequate. This may explain the slight increase in hospitalizations and other treatments in the second year of this study, possibly in response to changes in the abbreviated PANSS, while medications, prescribed by a psychiatrist, did not change.

CONCLUSION

Thus, it appears that making a recommendation for measurement-based treatment of schizophrenia in the community needs to be preceded by investigations into the necessary changes that need to accompany this practice.^{14,15} These changes could include training physicians in the use of validated rating scales, recommending specific treatment changes (optimization, switching, augmentation) based upon specific response criteria, developing guidelines for patients who do not fit into existing algorithms (eg, patients who refuse treatment with clozapine, patients on long-acting injectable antipsychotics with insufficient response), and developing regional networks to standardize treatments (so that patients who go from one treatment setting to another receive the same algorithmic treatment). In order for patients to benefit,

more frequent visits, longer visits, and higher reimbursement for psychiatric services, may be necessary as well. **PP**

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