CONTINUING MEDICAL EDUCATION IMPROVES KNOWLEDGE ON LATEST CLINICAL DATA IN SCHIZOPHRENIA AND BIPOLAR DISORDER

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STUDY OBJECTIVES

Schizophrenia (SCZ) and bipolar disorder (BP) are among the more challenging psychiatric conditions to manage. In order to continuously improve clinical management of SCZ and BP, and augment patient outcomes, physicians need to stay up to date with the latest information, therapeutic developments, and clinical data on novel treatments such as cariprazine and brexpiprazole that are frequently presented at national psychiatric conferences. [1,2] This study measured the impact of an online continuing medical education (CME) program on clinical knowledge of psychiatrists and primary care physicians (PCPs) regarding the latest data on current and emerging antipsychotic therapies for SCZ and BP. [3]

METHODS

Instructional Method:

- The instructional method consisted of an online CME intervention which included expert perspectives on the latest clinical data on emerging antipsychotics in 2014, with relevance to schizophrenia and bipolar disorder, presented as a video-based panel discussion on Medscape Education.[1]

Assessment Methods:

- Assessment was done via an online survey that was administered to measure effectiveness of the online CME program.
- Linked participants (i.e., the learners), who served as their own controls, were assessed with a set of 4 identical pre- and post-CME assessment questions to determine the effectiveness of knowledge transfer/exchange following participation in the online CME program.
- A paired 2-tailed t-test was used to assess whether the mean post-assessment score was different from the mean pre-assessment score. McNemar's chi-squared statistic was used to determine statistical significance.
- Cohen's *d* was used to calculate the educational effect of the CME. Effect sizes greater than 0.8 are large, between 0.8 are 0.4 are medium, and less than 0.4 are small.
- The online CME program was launched on September 22, 2014 and data were collected through December 29th, 2014.

RESULTS

Responses from 631 psychiatrists and 135 PCPs who answered all pre/post questions during the study period were analyzed. Participation in online CME discussing emerging clinical data in SCZ and BP demonstrated the following:

- For psychiatrists who participated in the CME activity, correct responses on post-assessment questions were between 54% and 76% higher after CME completion versus pre-assessment , with an overall large educational effect size of *d*=1.231 (*P*<.05).
- While only 67 (11%) of psychiatrists answered all 4 questions correctly on pre-assessment, 338 (54%) answered all 4 questions correctly on the post-assessment, with significant improvements in correctly identifying relevant attributes of antipsychotic medications and understanding the results of the latest clinical data, such as for cariprazine and ITI-007. (Figure 2; Figure 3B)
- For PCPs who participated in the CME activity, correct responses on post-assessment questions were between 55% and 76% higher after CME completion versus pre-assessment, with an overall large educational effect size of *d*=1.244 (*P*<.05).
- While only 18 (13%) of PCPs answered all 4 pre-assessment questions correctly, 72 (53%) answered all questions correctly on the post-assessment, with significant improvements in correctly identifying relevant attributes of antipsychotic medications and understanding the results of the latest clinical data, such as for cariprazine and ITI-007. (Figure 1; Figure 3A)

FIGURE 1. Percentage of psychiatrists' answering questions correctly on the latest data in SCZ and BP pre- and post-CME (n=631; p<.05; *d*=1.231)

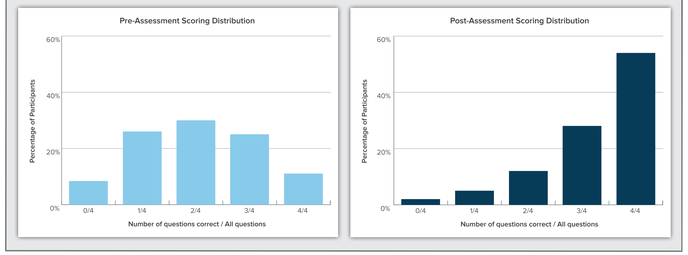


FIGURE 2. Percentage Percentage of PCPs answering questions correctly on the latest data in SCZ and BP pre- and post-CME (n=135; p<.05; *d*=1.244)

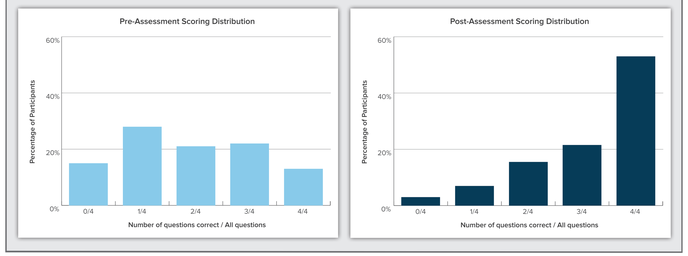


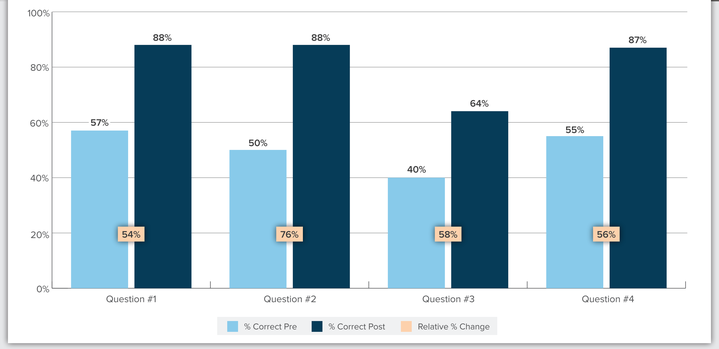
FIGURE 3. Question by question responses of psychiatrists' (n=631; p<.05; *d*=1.231) and PCPs (n=135; p<.05; *d*=1.244) pre- and post-CME

QUESTION #1

Which of the following is true regarding the investigational antipsychotic aripiprazole lauroxil and the US Food and Drug Administration (FDA)-approved aripiprazole monohydrate?

- **Aripiprazole lauroxil is a prodrug that is administered intramuscularly once a month and converts to aripiprizole through enzymatic processes in the body**
- Aripiprazole monohydrate is associated with good adherence among patients with schizophrenia, whereas findings suggest that aripiprazole lauroxil provides a higher blood concentration of the active ingredient at administration
- Schizophrenia symptom improvements with aripiprazole lauroxil were demonstrated as early as day 25 post-administration

FIGURE 3A. **Percent of Psychiatrists with Correct Response by Question**
(Pre- and Post-Assessment Questions) n=631

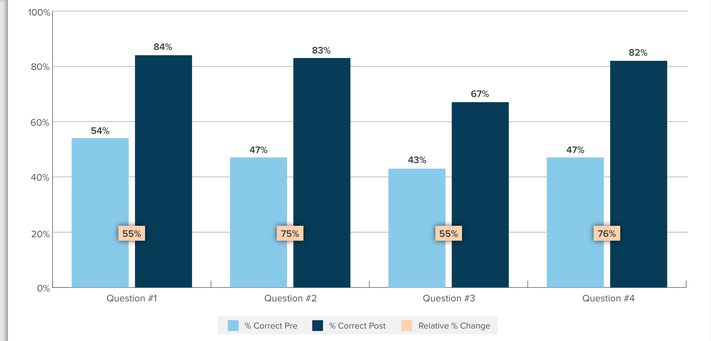


QUESTION #2

In a recent trial designed to evaluate the efficacy and safety of ITI-007, a drug with multiple mechanisms of action, in patients with acute schizophrenia, which of the following was a finding of the phase 2 randomized, double-blind, placebo- and active-controlled trial?

- A dosage of 60 mg ITI-007 did not significantly separate from placebo on the total PANSS at day 28
- A dosage of 120 mg improved schizophrenia as measured by change from baseline on CGI-S
- **A dosage of 60 mg improved schizophrenia as measured by change from baseline on the total PANSS score on Day 28 compared with placebo and significantly improved Clinical Global Impression-Severity (CGI-S)**
- The trial was stopped early due to adverse events including motor disturbances, hyperprolactinemia, and weight gain

FIGURE 3B. **Percent of PCPs with Correct Response by Question**
(Pre- and Post-Assessment Questions) n=135



QUESTION #3

Which of the following was a finding from researchers who conducted a post-hoc analysis relating to the CGI-S data from 3 pooled phase 3 studies of the dopamine D_3 and D_2 receptor partial agonist cariprazine in patients who had mixed or manic bipolar episodes? Note: The primary end point in the study was improvement in Young Mania Rating Scale (YMRS) and the secondary end point was improvement in CGI-S.

- Among patients who were moderately ill at baseline, 51% of those receiving cariprazine improved to mildly ill or better compared with 60% of those receiving placebo
- The majority of patients receiving cariprazine who had improved from markedly ill to mildly ill or better at week 3 relapsed to markedly ill at week 5
- **Among patients who were markedly ill at baseline, 41% of patients receiving placebo vs only 18% of patients receiving cariprazine remained markedly ill or worsened to severely or extremely ill**

QUESTION #4

Which of the following is a finding of researchers who conducted a post-hoc analysis of pooled clinical trial data related to negative symptoms among patients with or without prominent negative symptoms hospitalized for an acute exacerbation of schizophrenia?

- Treatment with lurasidone was poorly tolerated among patients with prominent negative symptoms
- Significant reductions in negative symptoms were noted only among patients with non-prominent negative symptoms at entry in the study
- **Significant reductions in negative symptoms were noted among patients with or without prominent negative symptoms and non-prominent negative symptoms at entry in the study**

CONCLUSIONS

Online CME utilizing a video-based panel discussion to communicate the latest clinical data in SCZ and BP was effective in improving physician knowledge, which may facilitate adoption into clinical practice. Thus, online recap of novel data presents an effective venue for covering national psychiatric conference information, which may benefit both clinician attendees and non-attendees, and may further facilitate clinical recall.

Acknowledgments

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