# USING COMBINED DATA FROM CLINICIANS AND THEIR PATIENTS TO EVALUATE EFFECTIVENESS OF ADHD EDUCATION

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## ABOUT THIS POSTER

**Abstract Number:** P20

**Theme Related Area:** Quality of care and patient health outcomes improvement

**Competency Area:** 3.2 - Use measurement data to assess educational outcomes/results

Target Audience: Non-beginners

Member Section: All

# OBJECTIVES

- Identify benefits associated with the use of an outcomes study using data collected from clinicians who participated in a CME intervention and their patients.
- Delineate the merits associated with combining analysis of quantitative and qualitative data to evaluate CME intervention effectiveness.

### BACKGROUND

The highest goal of continuous medical education (CME) and continuous professional development (CPD) is to change clinical practice behaviors<sup>1</sup> that result in improved individual patient outcomes and ultimately population health.<sup>2</sup> This goal is the rationale for why Criterion 11 of the ACCME Updated Accreditation Criteria mandates that CME providers "analyze changes in learners' competence, performance, or patient outcomes" and use those data to inform the effectiveness of their CME activities.<sup>3</sup>

One way CME providers analyze change in participant performance is via learner responses on immediate postactivity questionnaires that ask about commitment-to-change at the end of the activity. Another method is to follow-up with the CME activity participants months after the activity and ascertain how they perform on competence-based questionnaires in comparison to a group of matched peers that did not participate in the CME activity. Both of these methods are commonly used and accepted in the field as valid measures that CME providers can use to evaluate activity effectiveness in terms of performance and satisfy Criterion 11. A third strategy is to survey patients of the learners who participated in the CME activity. Patients are one of the best sources of information to ascertain clinicians' behavior in practice. Because they are the personified point-of-care, patients can provide a first-hand account of the clinical encounter; and they most often are motivated to do so in an honest an open manner, given the opportunity to do so anonymously. As such, patient surveys that ask patients about how their clinician implemented certain specific practice strategies—strategies that were taught at a CME activity on adult ADHD—can be used as a surrogate marker for clinician performance.

In adult ADHD, clinicians have numerous educational gaps.<sup>4</sup> They either *do not know how* to implement evidence-based strategies (competence gap) or they *do know*, but simply fail to consistently implement them (performance gap). Thus, we sponsored a CME activity titled "ADHD Across the Ages: Focus on the Adult" (Table 1) to help improve the rates at which clinicians provided evidence-based care to adults with ADHD. Then, we used innovative methods to collect and analyze the data from both clinicians and their adult ADHD patients to evaluate outcomes of the activity. This poster represents those outcomes.

# METHODS

# RESULTS

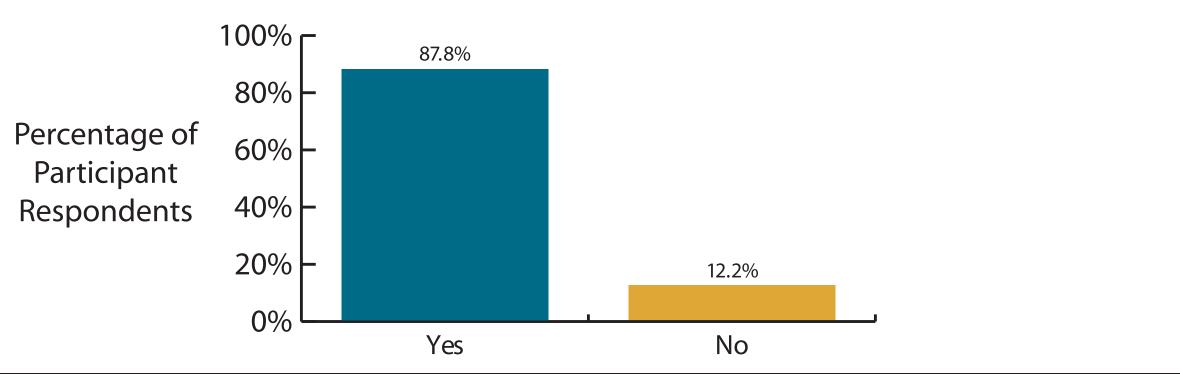
Presented at the 36th Annual Conference of the Alliance for CME. January 26-29, 2011; San Francisco, CA. Abstract P20.

### BACKGROUND cont.

Table 1.   "ADHD Across the Ages: Focus on the Adult" Learning Objectives		
<b>Objective 1</b>	Increase clinical suspicion and screening for adult ADHD to improve detection rates.	
<b>Objective 2</b>	Apply criteria to definitively diagnose adult ADHD and potential comorbid conditions.	
<b>Objective 3</b>	Develop a strategy for tailoring individualized, comprehensive treatment plans using the best available evidence, given the absence of practice guidelines.	

- To investigate change in learner competence and performance, we used 3 post-activity follow-up strategies, separated in time.
- Immediate post-activity commitment-to-change question
- 3-month post-activity case-based competence survey
- 12-month post-activity adult ADHD clinician and patient survey
- **IMMEDIATE POST-ACTIVITY COMMITMENT-TO-CHANGE QUESTION** As a result of my participation in this activity, I will commit to utilizing the assessment tools
- described to develop an individualized management care plan for each of my patients.
- **3-MONTH POST-ACTIVITY CASE-BASED COMPETENCE SURVEY**
- A 10-item online survey was conducted with a subset of the CME activity participants (cases) and a matching group of nonparticipants. There were 2 main analyses:
- Each item: Statistical significance case versus control
- Cumulative: Effect size
- Calculation based on reach. The reach of this program was calculated by taking the average number of patients with ADHD older than 18 seen weekly by the psychiatrists who participated in this program. The percentage of average effect is based on a calculation using Cohen's d.
- 12-MONTH POST-ACTIVITY ADULT ADHD CLINICIAN AND PATIENT SURVEY
- A multi-item online survey (Survey Monkey<sup>®</sup>) that offered an incentive to clinicians and patients was used. The survey assessed the degree of use of clinical practice strategies presented in the activities, as self-reported by clinicians and their patients.
- **IMMEDIATE POST-ACTIVITY COMMITMENT-TO-CHANGE QUESTION** Most respondents committed to this change (Figure 1).

#### Figure 1. Commitment-to-Change Results



# **RESULTS** cont.

# **3-MONTH POST-ACTIVITY CASE-BASED COMPETENCE SURVEY**

#### Respondent

- Participants (Cases)
- U.S. psychiatrists that participated in the activity (n = 47)Nonparticipants (Controls)
- U.S. psychiatrists that did not participate in the activity (n = 47)

### Item Results

3 Items With the Great	Table est Diff
<b>Item 1:</b> 35-year-old patient with very short attention span and lack of focus that is affecting her job performance	92% c correc evalua
<b>Item 4:</b> 42-year-old male referred for impulsive and disorganized behavior	
<b>Item 9:</b> 23-year-old student recently diagnosed with ADHD	63% c correc nonpl

#### **Effect Size**

At least 987 adult patients with ADHD seen per week by psychiatrists who participated in "ADHD" Across the Ages: Focus on the Adult" are 22% more likely to receive evidence-based care than those seen by psychiatrists who did not participate in the activity.

### **12-MONTH POST-ACTIVITY ADULT ADHD CLINICIAN AND PATIENT SURVEY**

**Respondent Demographics** 

- Physicians (N = 2)
- Male psychiatrists
- Currently practice in North America and been in practice for over 15 years
- Have provided care for adult ADHD for over 7 years
- See 10 or more patients with adult ADHD
- Patients (N = 8)
- Age 25 57 years
- 50% male; 50% female
- Majority (63%) not diagnosed with ADHD as a child Comorbid disorders:
- None: 50%
- Bipolar disorder: 25%
- Oppositional defiant disorder: 13%
- Substance use disorder: 13%

# ence, Case Versus Control

of participants versus 85% of nonparticipants ectly identified the appropriate initial step in uating this patient.

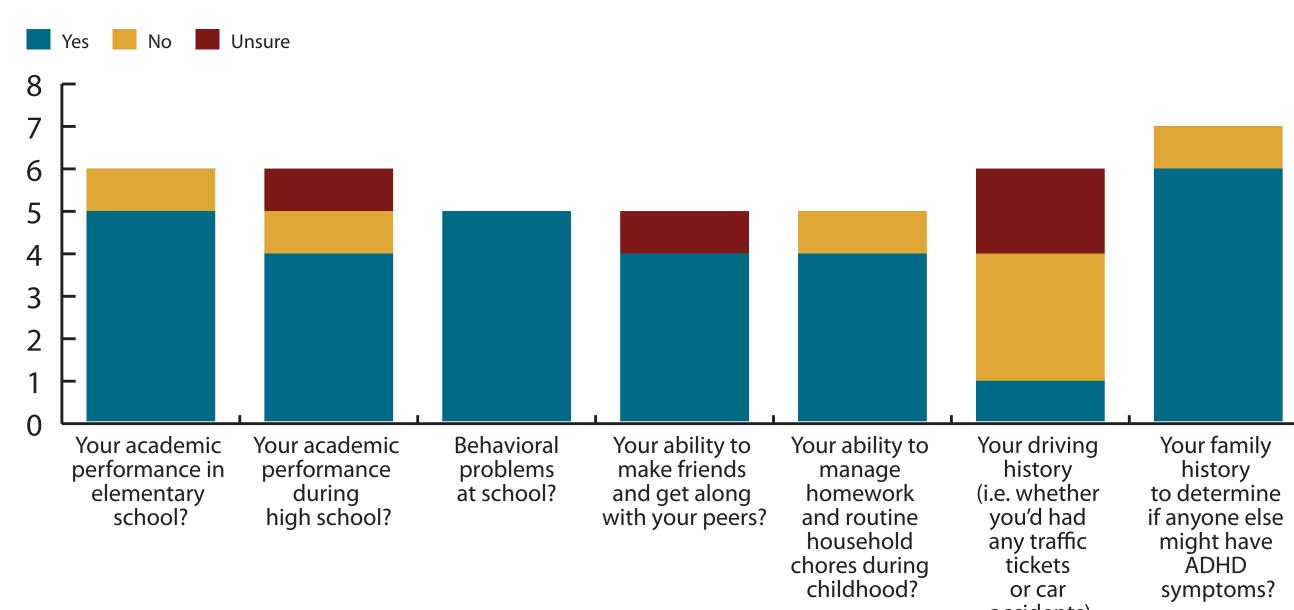
of participants versus 40% of nonparticipants ectly identified conditions that should be highly sidered in the differential diagnosis for this

of participants versus 50% of nonparticipants ectly selected the most beneficial pharmacologic strategy for this patient.

### **RESULTS** cont.

Patients were asked to reflect on questions their physician asked at the initial evaluation about indicators of ADHD during childhood or adolescence. Summary responses are featured in Figure 2.

#### Figure 2. Patient-Reported Physician Practices at Initial Diagnosis



Based on patient ratings, physicians did best at making the diagnosis in a timely manner, asking patients to complete a symptom rating scale at diagnosis, and providing long-term follow-up. (Table 3 - ratings >4.0). Physicians were scored lowest by their patients in counseling them on strategies for handling challenges in the workplace or at school and asking a significant other, a close friend, a coworker, or an employer to provide insight about the patient's symptoms. (Table 3 - ratings < 3.0).

Table 3. Level of Patient Agreement Regarding How Consistently Certain Practice Strategies Were Used (N = 8)		
<b>Clinical Assertions</b>	<b>Degree of Agreement</b> Rated on a 5-Point Likert Scale*	
I was diagnosed with adult ADHD in a timely fashion.	4.6	
I was asked to complete a symptom rating scale at diagnosis.	4.3	
I was asked to complete a symptom rating scale at regular time intervals after diagnosis.	3.1	
My doctors asked my significant other, close friend, coworker, or employer to provide insight about my symptoms.	2.5	
I was provided a patient education handout about ADHD at the visit when my diagnosis was made and explained to me.	3.4	
My doctor counseled me on strategies for handling challenges in the workplace or at school.	0.4	
My doctor provided consistent long-term follow-up regarding ADHD.	4.1	
* Measured on a 5-point Likert scale, where 5 = Strongly Agree and 1 = Strongly Disagree		



# CONCLUSIONS

The activity was effective at improving clinician knowledge, competence, and performance as evidenced by:

- The high percentage of participants registering a commitment-to-change
- The effect size at 3 months indicating that patients of activity participants are more likely to receive evidence-based care than those seen by activity nonparticipants.
- The patient responses at 12 months that suggests physician performed well related to timely diagnosis and use of symptom rating scale at diagnosis. These were 2 strategies highlighted in the CME activity, specifically related to learning objective #1.

While they proved effectiveness of the activity, these data will also beused to advise on persisting clinician gaps related to adult ADHD that can be addressed with ongoing CME. Specifically, more education is needed regarding use of in-depth interviewing skills that will help make the diagnosis in accordance with DSM-IV criteria for ADHD and better patient education.

# REFERENCES

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