

EFFECT OF ONLINE CME ON IMPROVING ADHD MANAGEMENT: FROM YOUNGER TO OLDER ADULTS

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STUDY OBJECTIVES

Attention-deficit/hyperactivity disorder (ADHD) is most commonly seen in childhood and adolescence, and frequently continues to impair function in adulthood in up to two-thirds of patients.^[1,2] The management for adult ADHD is complex due to the fact that adults can present very differently than children, diagnostic guidelines have typically focused on types of symptoms that appear in young adulthood, and many practitioners are reluctant to assess, diagnose and treat adults with ADHD because of lack of data on presenting symptoms in adulthood.^[2] The goal of this initiative was to determine the effect of continuing medical education (CME) programs on physicians' knowledge/competence/confidence in managing attention deficit hyperactivity disorder (ADHD) in adults across the ages.^[3,4]

METHODS

The impact of two online CME activities were evaluated:

- ACTIVITY 1** – The CME activity on management of ADHD in adults less than 50 years of age composed of 2 interactive, text-based patient cases with multiple-choice knowledge or competence questions on assessment and diagnosis of ADHD in adults and individual treatment decisions based on the latest clinical data.

- Educational design included a “test, then teach” approach to elicit cognitive dissonance with evidence-based feedback provided following each learner response

- Four (4) questions were repeated immediately after participation in the activity

- Data were collected from the July 21st, 2016, through August 29th, 2016.^[2]

- ACTIVITY 2** – The CME activity on management of ADHD in adults older than 50 years of age was a 45-minute video-based discussion with slides between two experts.

- The topics included epidemiology and clinical presentation of ADHD in older adults to guide diagnosis, and improve competence in creation of treatment plans for older adults based on clinical evidence and patient characteristics, such as age and polypharmacy.

- Two (2) knowledge/competence questions and 1 self-efficacy question were asked prior to and immediately after participation in the activity

- Data were collected from the March 25th, 2017, through May 2, 2017.^[4]

- The question results were assessed using a repeated-question pairs pre- to post-assessment study design in which each individual participant served as his/her own control

The analysis plan included:

- For all questions combined, McNemar’s chi-square test assessed the response differences from pre- to post-assessment

- P* values measured significance; *P* values <.05 are considered statistically significant

- Effect size was calculated using Cramer’s *V* by determining the change in proportion of participants who answered questions correctly from pre- to post-assessment (Cramer’s *V* of <0.06 represents no effect, 0.06-0.15 represents a small effect, 0.16-0.30 represents a medium effect, and >0.30 represents a large effect)

RESULTS

A total of 969 psychiatrists and 276 primary care physicians (PCPs) completed all the pre- and post- assessment questions related to Activity 1 (adults under 50 years of age), and 861 psychiatrists and 237 PCPs completed all the questions related to Activity 2 (adults over 50 years of age).

On questions related to management of adults under 50 years of age (Activity 1), there were statistically significant improvements as follows:

- 8% relative improvement for psychiatrists and 14% for PCPs in ability to select suitable scales and accurately assess patients who present with symptoms of adult ADHD [Activity 1, Question 1]
- 52% relative improvement for psychiatrists and 64% for PCPs in recognition of the appropriate treatment recommendation of a long-acting stimulant medication based on ADHD diagnosis and existing comorbidity [Activity 1, Question 4]

On questions related to management of adults over 50 years of age (Activity 2), there were statistically significant improvements as follows:

- 31% relative improvement for psychiatrists and 43% for PCPs in ability to differentiate symptoms of ADHD from other systemic conditions in older adults [Activity 2, Question 1]
- 16% relative improvement for psychiatrists and 9% for PCPs in knowledge of over-the-counter medications that may compound the effects of ADHD medications and should be avoided in these patients [Activity 2, Question 2]
- 45% of psychiatrist and 46% of PCPs reported greater confidence in management of ADHD in adults over 50 years of age after participation in the CME activity [Activity 2, Question 3]

ACTIVITY 1 – MANAGEMENT OF ADHD IN ADULTS LESS THAN 50 YEARS OF AGE

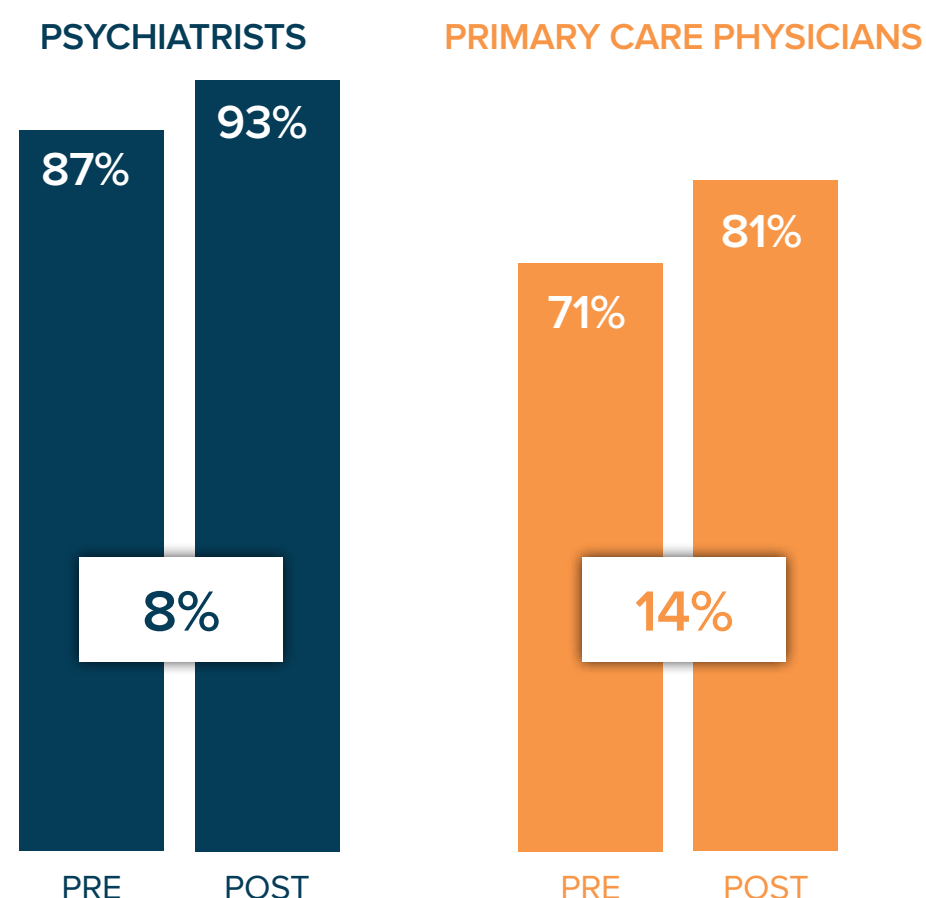
CASE 1: JON



- 19 year-old college student who presents for evalation of ADHD; he’s currently on academic proation because of poor class attendance and poor grades
- Jon was originally diagnosed with ADHD in elementary school at age 7 and took immediate-release methylphenidate at that time, but stopped after agitation and insomnia
- Jon has a significant history of alcohol and marijuana use

Question 1: What should the clinician do?

- Refer Jon back to his school for academic counseling
- Administer the Adult ADHD Self Report Scale (ASRS v1.1)
- Initiate treatment with a selective serotonin reuptake inhibitor because of his dysphoria regarding his academic performance
- Initiate treatment with a stimulant medication for presumed ADHD, given his history of diagnosis in childhood

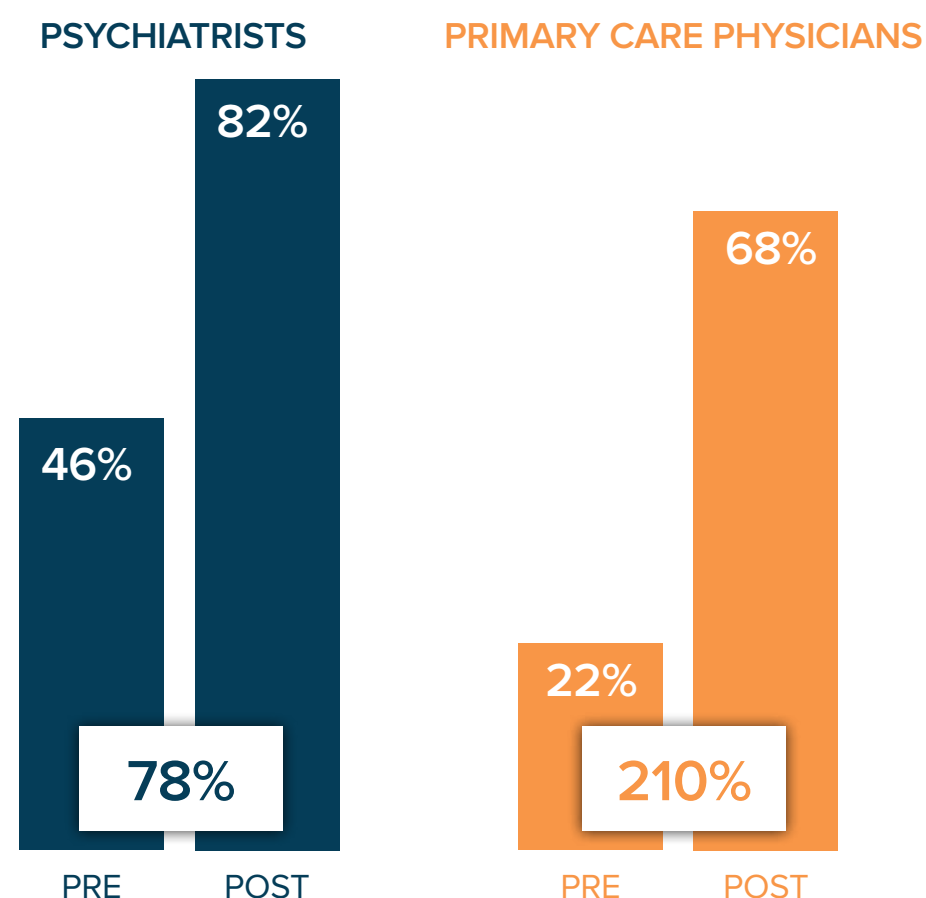


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Jon’s completes the ASRS v1.1 Screener and Symptom Checklist and yields a positive for adult ADHD based on having 5 items at a significant symptom level (which is higher than the cutoff of ≥4 significant items); this indicates that further evaluation for adult ADHD is necessary.

Question 2: What should the clinician do next?

- Make a diagnosis of adult ADHD based on the ASRS v1.1 Screener and Symptom Checklist findings and formulate a treatment plan
- Refer Jon for neuropsychologic testing to make an adult ADHD diagnosis
- Start Jon on bupropion for presumed depression and adult ADHD
- Inquire about Jon’s childhood symptoms of ADHD



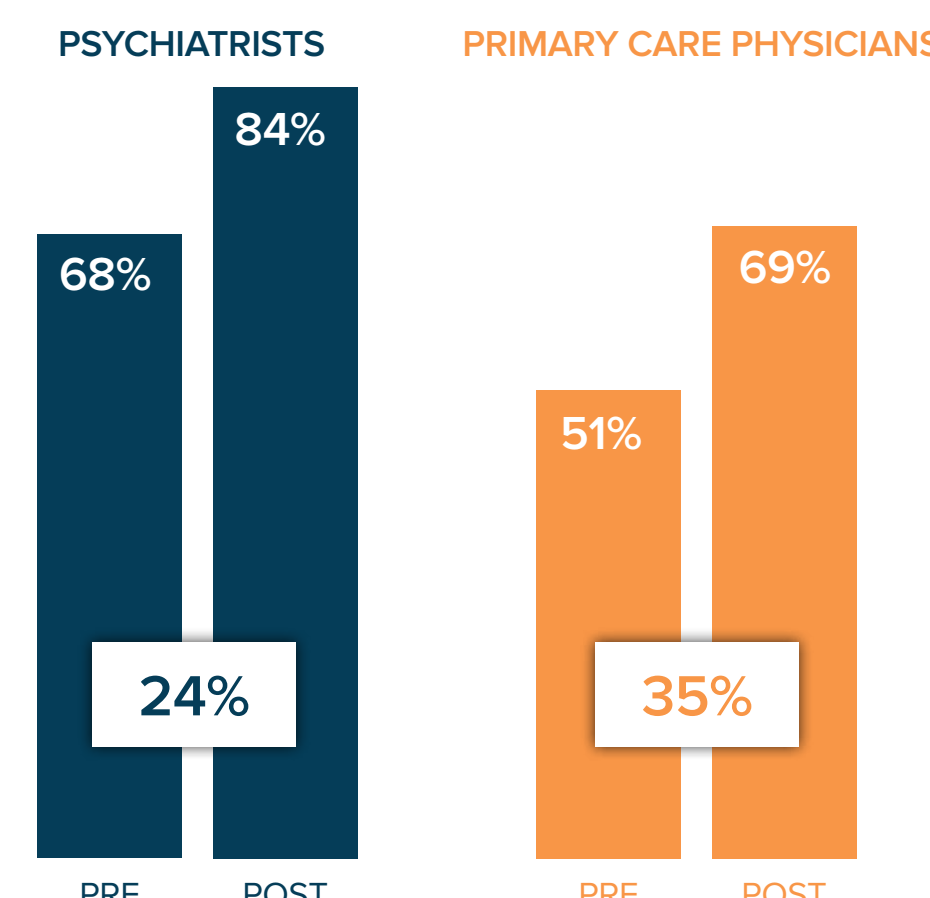
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Psychiatrists
n=969

Primary Care Physicians
n=276

Question 3: Now that a diagnosis of adult ADHD has been established, what is the next step?

- Initiate treatment with a stimulant medication
- Initiate treatment with a nonstimulant, such as atomoxetine hydrochloride
- Refer him for cognitive behavioral therapy
- Establish the nature and extent of substance use



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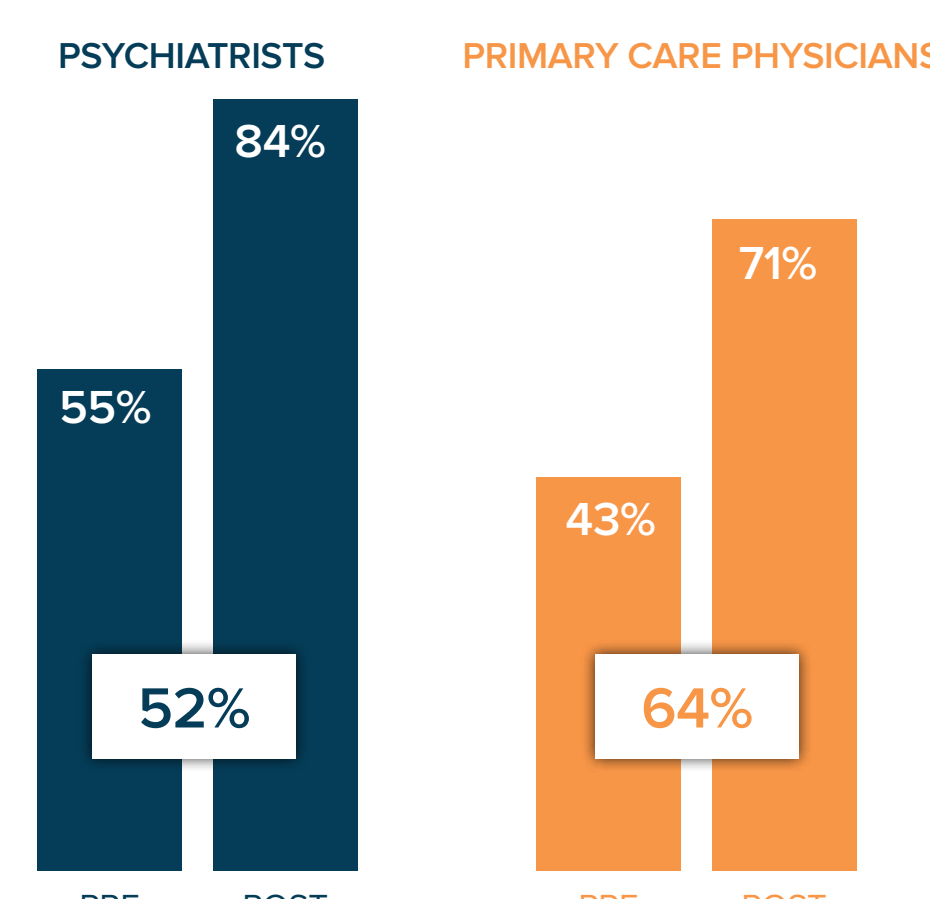
CASE 2: SAM



- 39 year-old married man with treated hypertension who has never sought help for psychologic issues visits his primary care physician and complains that he isn’t eating well, has trouble getting to sleep, and is abrupt with his young children
- Recent performance review at work was less than satisfactory and he reports that he has lost interest in exercise and has to drag himself out of the bed in the morning, has difficulty concentrating, and feels anxious about losing his job
- Although he expresses hopelessness, he denies suicidal ideation and denies hallucinations and delusions

Question 4: What is the next best treatment option?

- Wait for the optimal benefit of sertraline before considering other medication
- Refrain from ADHD medications because of his hypertension and refer to a therapist for training in organization and planning
- Start long-acting stimulant medication (eg, lisdexamfetamine, OROS methylphenidate, mixed amphetamine salts ER)
- Refer him to an expert on ADHD in adults



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ACTIVITY 2 – MANAGEMENT OF ADHD IN ADULTS MORE THAN 50 YEARS OF AGE



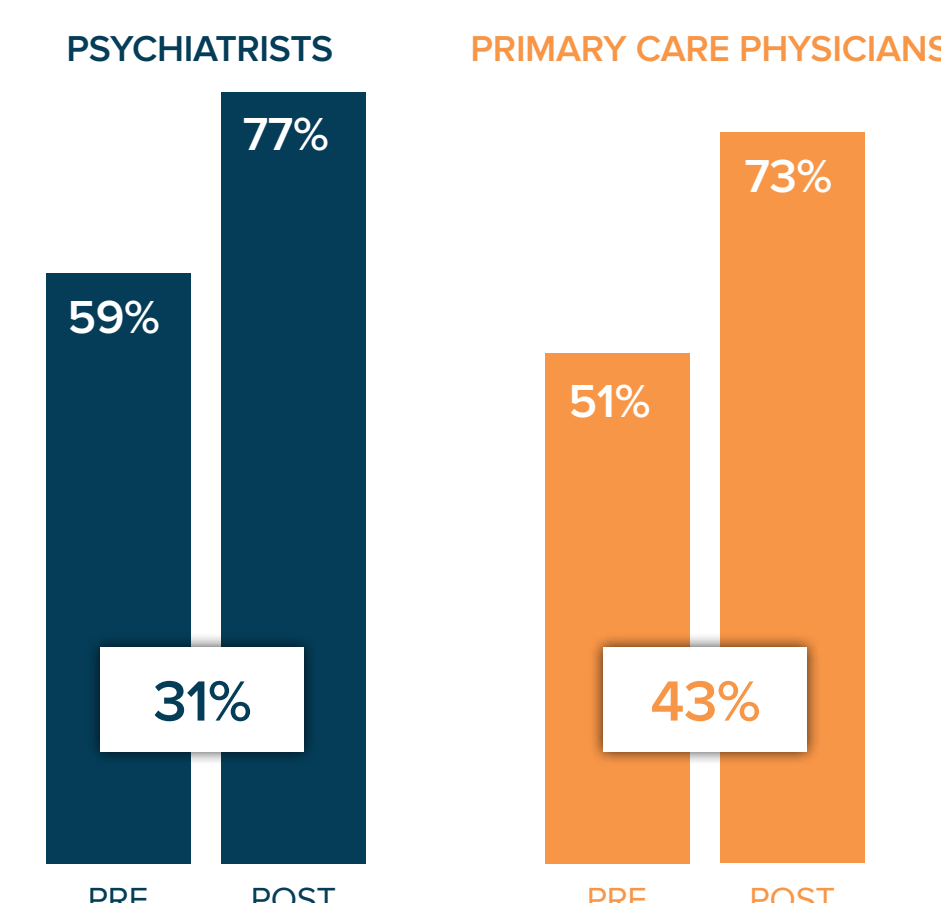
Psychiatrists
n=861

Primary Care Physicians
n=237

Question 1: Which of the following is most important in differentiating attention-deficit/hyperactivity disorder (ADHD) from other systemic conditions in older adults that can manifest as difficulties in attention, executive function, and memory?

- Severity of symptoms of inattention and hyperactivity/impulsivity
- Chronicity of symptoms of inattention and hyperactivity/impulsivity
- Rapid cognitive decline over weeks and months with motor abnormalities
- Third party confirmation of current symptoms

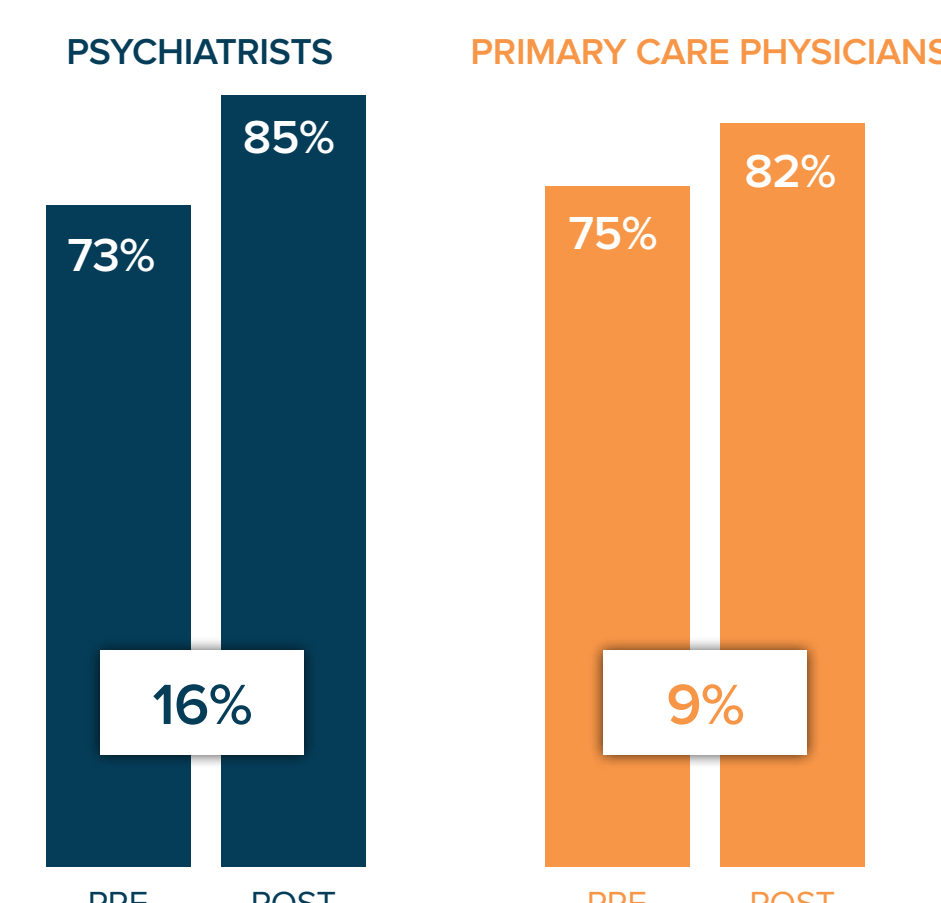
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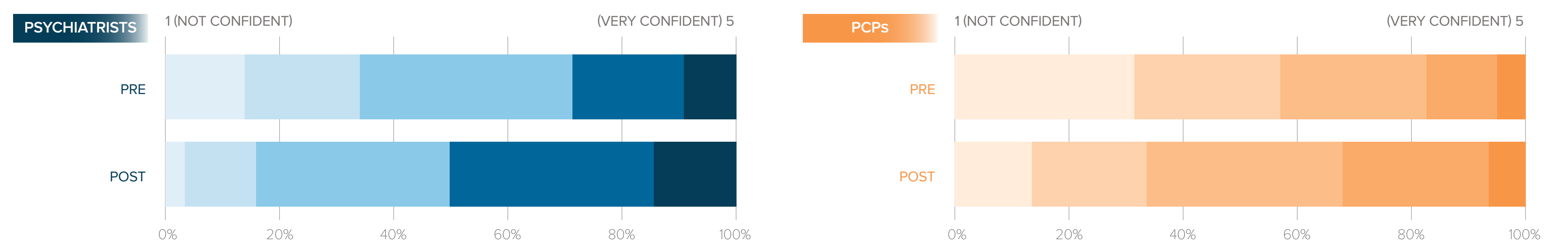
Question 2: Which over-the-counter medications may compound the effects of ADHD medications and should be avoided by older adults taking ADHD medications?

- Pain medications containing nonsteroidal anti-inflammatory drugs
- Heartburn/gastroesophageal reflux disease medications containing histamine H2 receptor antagonists such as famotidine
- Decongestants containing pseudoephedrine
- Cold medications containing guaifenesin/dextromethorphan

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Question 3: How confident are you in your ability to diagnose and manage ADHD in patients older than 50 years?



CONCLUSIONS

Participation in online CME activities in interactive, text-based case challenge formats as well as video formats improved physicians’ knowledge/competence/confidence in management of ADHD in adults under and over 50 years of age.

Acknowledgments

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References

- Turgay A, Goodman DW, Asherson P, et al: ADHD Transition Phase Model Working Group. Lifespan persistence of ADHD: the life transition model and its application. *J Clin Psychiatry*. 2012Feb;73(2):192-201.
- Wilens TE, Biederman J, Faraone SV, Martelon M, Westenberg D, Spencer TJ. Presenting ADHD symptoms, subtypes, and comorbid disorders in clinically referred adults with ADHD. *J Clin Psychiatry*. 2009 Nov;70(11):1557-62.
- Goodman DW. Clinical Pearls In Managing ADHD: Patient Case Challenges. July 21, 2016. <http://www.medscape.org/viewarticle/863083>. Accessed August 24, 2017.
- Goodman DW, Surman CBH. ADHD in the Baby Boomers: Is it Old Age, ADHD, or Something Else. March 25, 2017. <http://www.medscape.org/viewarticle/872877>. Accessed August 24, 2017.

