An increase of 29% among PCPs
88% (429)*
6% (30)
If you had done a better job of diet and exercise, we probably wouldn't have to add the second
3% (6)
9% (42)
2% (4)
9% (43)
Dipeptidyl-peptidase-4 (DPP-4) inhibitor (eg, saxagliptin, sitagliptin, linagliptin, alogliptin)
10% (17)
29% (142)
86% (149)*
An increase of 54% among PCPs
1% (2)
3% (5)
13% (64)
25% (43)
Your type 2 diabetes is more severe than usual
Most patients still require 2 or more medications to attain and maintain their glycated hemoglobin
7% (35)
3% (16)
Basal insulin (eg, glargine, NPH)
8% (14)
Whatever antihyperglycemic therapy he prefers after an informed discussion of his therapeutic options
SGLT2 inhibitor (eg, canagliflozin, dapagliflozin, empagliflozin)
7% (36)
19% (92)
Your type 2 diabetes is progressing faster than usual
46% (80)
14% (67)
79% (389)
Glucagon-like peptide-1 (GLP-1) receptor agonist (eg, exenatide, liraglutide, dulaglutide, albiglutide)

For all questions combined, the effect size (calculated as the odds ratio) and diabetologists/endocrinologists (n = 174)
% (n) Physican Physicians Comparisons
Primary Care Physicians (n=174)
Endocrinologists/ Diabetologists (n=107)
100% (174) 100% (107)
96% (166) 93% (99) *P<.05
92% (159) 91% (99) *P<.05
90% (151) 88% (97) *P<.05
88% (149) 84% (88) *P<.05
86% (142) 82% (79) *P<.05
84% (134) 80% (67) *P<.05
80% (116) 77% (52) *P<.05
76% (111) 72% (40) *P<.05
72% (102) 68% (35) *P<.05
68% (96) 65% (28) *P<.05
64% (88) 61% (23) *P<.05
60% (81) 57% (22) *P<.05
56% (74) 53% (17) *P<.05
52% (67) 49% (15) *P<.05
48% (60) 45% (14) *P<.05
44% (53) 41% (12) *P<.05
40% (46) 37% (11) *P<.05
36% (40) 33% (10) *P<.05
32% (34) 29% (9) *P<.05
28% (31) 25% (7) *P<.05
24% (27) 21% (6) *P<.05
20% (24) 17% (5) *P<.05
16% (20) 13% (4) *P<.05
12% (15) 9% (3) *P<.05
10% (12) 7% (2) *P<.05
8% (10) 5% (2) *P<.05
6% (8) 3% (1) *P<.05
4% (6) 1% (0) *P<.05
2% (3) 0% (0) *P<.05
1% (2) 0% (0) *P<.05
0% (3) 0% (0) *P<.05
Sources: American Diabetes Association. Standards of Medical Care in Diabetes-2016. JAMA. 2016;315(17):184-197
Kurtz L. Practical Use of Modern Agents in Type 2 Diabetes. Medscape Education. http://www.medscape.orgNominees: A. Larkin, PharmD; Colleen S. Healy, MA; Anne Le, PharmD
T2D MANAGEMENT: CAN CASE-BASED CME IMPROVE PHYSICIAN PERFORMANCE?
Amy T. Larkin, PharmD, Colleen S. Healy, MA, Anne Le, PharmD
Medscape Education, New York, NY

CONCLUSIONS
This study demonstrates the success of an interactive, case-based, online CME activity on improving performance of PCPs and diabetologists/endocrinologists regarding clinical use of newer antihyperglycemic agents and individualizing care in T2D
For all physicians who participated in the CME activity, the statistically significant changes observed indicate success of the intervention in increasing knowledge and assessment score were significant
Interactive cases are an effective way to provide clinically relevant education and improve physician performance in the area of T2D management

Source of Support
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Notes
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Disclosures
The authors have nothing to disclose

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INTRODUCTION
To make appropriate individualized treatment recommendations for patients with type 2 diabetes (T2D), it is important for physicians to understand the role of newer oral antihyperglycemic agents. We sought to determine whether case-based, interactive, online continuing medical education (CME) could improve the performance of primary care physicians (PCPs) and diabetologists/endocrinologists in the United States related to clinical use of newer antihyperglycemic agents and individualization of treatment plans for patients with T2D in various clinical case scenarios.

METHODS
Instructional Design:
Text-Based Interactive Case
This 5000-word, interactive, text-based CME activity included 2 case scenarios that featured detailed case histories and posed questions exploring the learner’s current knowledge and therapeutic approach. Learners were prompted to determine the appropriate treatment and follow-up for the patient. After each question, a carefully detailed, fully referenced explanation of the most appropriate response was presented. By combining a case-based format with 4 to 6 questions per case, this format “tests” the learner’s level of understanding on each item before delivering any new education and “teaches” by correcting or reinforcing existing knowledge. The activity launched on August 26, 2015, and was data collected through September 29, 2015.

Assessment Method:
Linked Learning Assessment (LLA)
An LLA compares individual participants’ responses to questions before exposure to educational content (pre-assessment questions) with responses to the same questions after participation in the educational activity (post-assessment questions). The LLA shows the overall effect of the educational activity. With this method of analysis, participants serve as their own controls. Only participants who answered every question after participation in the educational intervention were included in the assessment analysis. Only participants who answered every question after participation in the educational intervention were included in the assessment analysis. Only participants who answered every question after participation in the educational intervention were included in the assessment analysis.

Statistical Analysis
For all questions combined, the effect size was calculated by comparing pre-assessment means and post-assessment means of linked learners to show the size of the effect of the educational intervention. Effect sizes calculated using Cramer’s VI greater than 0.3 are large, those between 0.3 and 0.15 are medium, and those less than 0.15 are small. A paired 2-sided t-test was used to assess whether the mean pre-assessment score was different from the mean post-assessment score. A Pearson’s r² statistic was used to determine significance. P-values are shown as a measure of significance. P-values less than .05 indicate a statistically significant result.

RESULTS
Improved performance was seen among PCPs (p < .001; V< 283, medium effect) and diabetologists/endocrinologists (p = .05; V = .232, large effect).

An increase of 29% among PCPs and 38% among diabetologists/endocrinologists in engaging patients in designing their individualized T2D treatment plan (Table 1).

An increase of 5% among PCPs and 10% among diabetologists/endocrinologists in educating patients about the progressive nature of the disease and need for additional medications, of T2D (Table 2).

An increase of 54% among PCPs and 53% among diabetologists/endocrinologists in designing an individualized treatment plan using newer oral agents for a given patient with T2D (Table 3).

Areas Identified as
Continued Educational Gaps
While improvements were seen in all areas examined, additional education is needed to highlight the need to engage patients and collaborate in the formulation of their T2D care plans.

TABLE 1
Nominees: A. Larkin, PharmD; Colleen S. Healy, MA; Anne Le, PharmD
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