IMPROVING IMPACT OF GUIDELINES ON T2D TREATMENT: EFFECT OF ONLINE CME AND NEED FOR FURTHER EDUCATION

Amy T. Larkin, PharmD; Kelly Hanley; Jess Dropkin; Anne Le, PharmD

Medscape Education, New York, NY

INTRODUCTION

Guideline recommendations for type 2 diabetes (T2D) management rapidly evolving to reflect new clinical safety and efficacy data. In order to optimize incorporation of new information into clinical practice, we sought to determine if participation in online continuing medical education (CME) could improve the knowledge and clinical decision making of primary care physicians (PCPs) and diabetologists/endocrinologists in the United States related to guideline-based treatment of T2D.

METHODS

The effect of 2 educational interventions on guideline-based treatment of T2D was analyzed to determine the efficacy of online education.

Educational Interventions

Activity 1: CME 2014 – Minimizing Barriers to Treatment Success

The format used to deliver the education included a Video Roundtable Panel Discussion, conducted by 3 expert faculty using synchronous slides, with built-in questions and peer response to encourage participation and promote feedback. For learners wishing to view the program offline, a transcript and slides were made available for downloading/printing. In addition, the activity was available on the Medscape Mobile application, ensuring convenient access by the many clinicians who rely on mobile devices for education. The activity launched online on March 27, 2015, and data were collected through June 28, 2015.

Activity 2: Cases in T2D – Minimizing Barriers to Treatment Success

This 5000-word, interactive, test-based CME format included 2 patient cases that offered varied scenarios and posed questions exploring the learner's current knowledge and therapeutic approach. The cases were created to encourage learners to compare the appropriate treatment and follow-up for the patient. After each question, a 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 "teaches" the learner's level of understanding on each item before delivering any education and "teaches" by correcting or reinforcing existing knowledge. The activity launched online on March 26, 2015, and data were collected through May 4, 2015.

Assessment Method

Linked Learning Assessment (LLA)

An LLA compares individual participants' paired responses to questions posed before exposure to educational content (pre-assessment questions) with responses to the same questions posed after participation in the educational activity (post-assessment questions). Linking pre-assessment and post-assessment responses from individual participants allows each learner to serve as his or her own control.

Statistical Analysis

A paired 2-tailed t-test was used to assess whether the mean pre-assessment score was different from the mean post-assessment score. A Pearson’s r correlation was used to determine significance. P-values are shown as a measure of significance. P-values less than 0.05 indicate a statistically significant result.

RESULTS

In total, 856 PCP and 220 diabetologists/endocrinologists participants made appropriate clinical decisions regarding adjusting a treatment regimen in a patient with weight gain (Table 3).

Areas needing additional education are identified by the follow-up data:

- 52% of PCPs and 24% of diabetologists/endocrinologists remain unclear on when to select a higher-than-average A1c target
- 68% of PCPs and 52% of diabetologists/endocrinologists remain unclear on antihyperglycemic agent selection in the presence of renal insufficiency
- 38% of PCPs and 32% of diabetologists/endocrinologists remain unclear on treatment intensification in the presence of weight gain

Notes

These CME-certified activities were supported by independent educational grants from Eli Lilly and Company, Biotherix Ingepharm Pharmaceuticals Inc. and Lilly USA, LLC., and Merck & Co., Inc.

Source of Support

For more information, contact Amy Larkin, PharmD, Director of Clinical Strategy, Medscape, LLC, at alarkin@medscape.net.

TABLE 1

<table>
<thead>
<tr>
<th>PCPs</th>
<th>Diabetologists/Endocrinologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td></td>
</tr>
<tr>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Post-Assessment</td>
<td></td>
</tr>
<tr>
<td>90%</td>
<td>90%</td>
</tr>
</tbody>
</table>

In total, 856 PCP and 220 diabetologists/endocrinologists participants made appropriate clinical decisions regarding adjusting a treatment regimen in a patient with weight gain (Table 3).

27% more PCPs and diabetologists/endocrinologists made appropriate clinical decisions regarding adjusting a treatment regimen in a patient with weight gain (Table 3).

Areas needing additional education are identified by the follow-up data:

- 52% of PCPs and 24% of diabetologists/endocrinologists remain unclear on when to select a higher-than-average A1c target
- 68% of PCPs and 52% of diabetologists/endocrinologists remain unclear on antihyperglycemic agent selection in the presence of renal insufficiency
- 38% of PCPs and 32% of diabetologists/endocrinologists remain unclear on treatment intensification in the presence of weight gain

TABLE 2

<table>
<thead>
<tr>
<th>PCPs</th>
<th>Diabetologists/Endocrinologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td></td>
</tr>
<tr>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Post-Assessment</td>
<td></td>
</tr>
<tr>
<td>90%</td>
<td>90%</td>
</tr>
</tbody>
</table>

In total, 856 PCP and 220 diabetologists/endocrinologists participants made appropriate clinical decisions regarding adjusting a treatment regimen in a patient with weight gain (Table 3).

27% more PCPs and diabetologists/endocrinologists made appropriate clinical decisions regarding adjusting a treatment regimen in a patient with weight gain (Table 3).

Areas needing additional education are identified by the follow-up data:

- 52% of PCPs and 24% of diabetologists/endocrinologists remain unclear on when to select a higher-than-average A1c target
- 68% of PCPs and 52% of diabetologists/endocrinologists remain unclear on antihyperglycemic agent selection in the presence of renal insufficiency
- 38% of PCPs and 32% of diabetologists/endocrinologists remain unclear on treatment intensification in the presence of weight gain

TABLE 3

<table>
<thead>
<tr>
<th>PCPs</th>
<th>Diabetologists/Endocrinologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Assessment</td>
<td></td>
</tr>
<tr>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Post-Assessment</td>
<td></td>
</tr>
<tr>
<td>90%</td>
<td>90%</td>
</tr>
</tbody>
</table>

In total, 856 PCP and 220 diabetologists/endocrinologists participants made appropriate clinical decisions regarding adjusting a treatment regimen in a patient with weight gain (Table 3).

27% more PCPs and diabetologists/endocrinologists made appropriate clinical decisions regarding adjusting a treatment regimen in a patient with weight gain (Table 3).

Areas needing additional education are identified by the follow-up data:

- 52% of PCPs and 24% of diabetologists/endocrinologists remain unclear on when to select a higher-than-average A1c target
- 68% of PCPs and 52% of diabetologists/endocrinologists remain unclear on antihyperglycemic agent selection in the presence of renal insufficiency
- 38% of PCPs and 32% of diabetologists/endocrinologists remain unclear on treatment intensification in the presence of weight gain

CONCLUSION

This study demonstrates the success of CME in improving knowledge and clinical decision making of PCPs and diabetologists/endocrinologists regarding guideline-based treatment intensification of T2D.

For all physicians who participated in 1 or both of the CME activities, the statistically significant changes observed indicate success of the interventions, as demonstrated by an increase in evidence-based practice choices.

While improvements were seen in all areas, additional education is needed related to individualizing A1c goals and antihyperglycemic selection in various patient scenarios.

References