SUN-0459

Planned Changes in Type 2 Diabetes Management: Effectiveness of CME in Practice

ACTIVITY 1 PCA Results

US completers at Medscape Education

N = 399

Initial survey, N = 399

(an average of 3.2 changes each)

Follow-up survey, N = 21

Results: 17 (81%) completed 95 changes

(an average of 5.6 changes each)

Follow-up Interviews, N = 10

post-activities vs long-term follow-up (N=21)

0% 20% 40% 60% 80% 100%

Change comparison: immediate

decision making

Reviewing the ADA/EASD position statement

Discussing advantages and disadvantages of

Considering less stringent regimens

therapy if A1c is greater than 10-12%

ecommended therapies with patients, taking into

Devoting a portion of every therapeutic encounter to

Considering initiating a 2 drug regimen as the first line

therapy in patients with an A1c greater than 9%

Considering insulin combination therapies as an

discussion of lifestyle management, until the patient is..

Considering more intensive insulin strategies as first line

alternative to basal bolus therapy in patients concerned...

Considering eGFR levels rather than creatinine alone when

considering therapy in the setting of chronic kidney disease

IMMEDIATE POST-ACTIVITY (n=48)

LONG-TERM FOLLOW-UP (n=76)

Management of Hyperglycemia in Type 2 Diabetes: A

Using the ADA/EASD algorithm as guidance for shared

Results: 391 (98%) planned to make 1239 changes

AMY LARKIN, PHARMD*, ANNE LE, PHARMD*, ZACHARY BLOOMGARDEN, MD*

*POTENTIAL CONFLICT OF INTEREST MAY EXIST. REFER TO THE ABSTRACT.

INTRODUCTION

Diabetes is a serious public health concern in the US and around the world. In 2011, the Centers for Disease Control and Prevention (CDC) estimated that approximately 25.8 million adults (8.3% of the US population) had diabetes, 95% of whom had type 2 diabetes (T2D) [CDC 2011; CDC 2012]. Findings such as these have provided considerable impetus for the development of new anti-hyperglycemic therapies in recent years to complement lifestyle changes, while at the same time leading to the realization that therapeutic management of T2D is not a "one size fits all" process, but rather should be individualized to each patient's specific clinical characteristics and life circumstances. Recent treatment algorithms, including the position statement developed by the American Diabetes practice. Association (ADA) and European Association for the Study of Diabetes (EASD), synthesize the clinical evidence and provide guidance

therapies and guideline recommendations into everyday practice.

The overall goal of this initiative was to educate primary care physicians, endocrinologists/diabetologists, cardiologists, nurses, and allied health professionals who treat patients with T2D on practical application of the recently updated ADA/EASD position statement. The study objective was to determine if online educational interventions could improve clinical utilization of recommendations in

METHODS

Two sets of educational activities, each comprising 6 short 8-15 minute interviews with synchronized slides, used realistic patient scenarios and ADA/EASD recommendations to provide expert guidance and rationale on patient-centered treatment options to get patients to glycemic goals. The activity targeted primary care physicians, endocrinologists/diabetologists, cardiologists, nurses, and allied health professionals who manage patients with T2D and was available online on Medscape Education. The educational content was developed by Icahn School of Medicine at Mount Sinai (ISMMS) and Medscape. The effects of education were assessed, in conjunction with Healthcare Performance Consulting, Inc, using a Planner Change Assessment (PCA) survey.

The PCA process allows for an immediate measure of activity outcomes as well as a delayed measure, which identifies actual behavior change. It also allows leaners to be reminded of the program content and their intent to change 4-8 weeks after completing the educational intervention.

INITIAL ASSESSMENT:

This initial survey administered upon completion of each educational activity asked:

- What will you do differently in your practice as a result of participating in this activity?
- What do you perceive as barriers to making the above selected changes in your practice?
- The survey included practice changes consistent with the learning objectives.

FOLLOW-UP ASSESSMENT:

The follow-up survey was an online assessment of the intended changes from the initial PCA questionnaire administered approximately 8 weeks after the launch of the activities. All completers of the initial survey (as of that date) were sent an email invitation and link to this follow-up assessment. The PCA Follow-up Assessment included questions about completed changes and about barriers to change

on developing individualized treatment plans [Inzucchi 2012]. However, studies suggest that many clinicians, including primary care physicians, are finding it a challenge to incorporate these new

PCA Process

Needs assessment and content development: Medscape and ISMMS

Surveys on clinical choices created by HPC and faculty

Clinicians complete educational activity

Initial survey: Intended changes

~ 8 weeks later Follow-up assessment: Actual changes

Follow-up interviews: Changes and Barriers

that learners may have encountered in their daily practice. Use of a unique respondent identifier on both the immediate PCA and the follow-up assessment allowed for direct matching of responses to both assessments. While not all learners completed both assessments, matching those who did helps to reduce the chance of sampling bias when comparing the results of the assessments. Completers of the

follow-up survey were invited to opt in to the follow-up interviews.

FOLLOW-UP INTERVIEWS:

Interviews were conducted with a sample of learners recruited from attendees who opted in from the follow-up assessment. These interviews were 20-30 minutes in length and were conducted by telephone. Questions were asked about why certain changes were selected, whether the changes were made, how the changes took place, and barriers to making the changes. These qualitative interviews were conducted to validate and clarify the practice changes and actual barriers.

RESULTS

ACTIVITY 1: Type 2 Diabetes Management: Applying the ADA/EASD Position Statement on Patient-Centered Management

INITIAL ASSESSMENT:

Of the 399 physicians who completed the survey, 60% were primary care practitioners, 7% were diabetologists/endocrinologists, and 33% were "other" specialties.

INITIAL ASSESSMENT FOLLOW-UP ASSESSMENT

FOLLOW-UP ASSESSMENT:

Of the 21 physicians who completed the survey, 74% were primary care practitioners, 16% were diabetologists/endocrinologists, and 11% were cardiology.

PRACTICE CHANGE	-::-:-:-:			
	DIABETES/ ENDO (N=28)	PRIMARY CARE (N=240)	DIABETES/ ENDO (N=2)	PRIMARY CARE (N=13)
Reviewing the ADA/EASD position statement Management of Hyperglycemia in Type 2 Diabetes: A Patient Centered Approach	82%	82%	50%	38%
Using the ADA/EASD algorithm as guidance for shared decision making	71%	70%	50%	69%
Discussing advantages and disadvantages of recommended therapies with patients, taking into account patients' individual concerns about weight gain, hypoglycemia, cost of medications, side effects, and medication efficacy	50%	60%	100%	77%
Devoting a portion of every therapeutic encounter to discussion of lifestyle management, until the patient is successful	46%	51%	50%	69%
Considering less stringent regimens in the elderly	39%	50%	100%	77%
Considering initiating a 2 drug regimen as first line therapy in patients with an A1c greater than 9%	46%	53%	100%	77%
Considering more intensive insulin strategies as first line therapy if A1c is greater than 10-12%	43%	52%	50%	69%
Considering insulin combination therapies as an alternative to basal bolus therapy in patients concerned about weight gain	43%	40%	0%	62%
Considering eGFR levels rather than only creatinine when considering therapy in the setting of chronic kidney disease	46%	51%	50%	77%
This program confirmed my existing practices	54%	28%	_	_
None	7%	1%	_	_

BARRIERS (1 = minimal barrier - 5 = high barrier):

Diabetologists/endocrinologists:

- Formulary or insurance coverage issues prevent me from utilizing preferred antihyperglycemic agents. (4.67 average impact)
- Evidence is lacking for less intensive glycemic control management. (3.67 average impact)

- Formulary or insurance coverage issues prevent me from utilizing preferred antihyperglycemic agents. (3.08 average impact)
- Patient attitudes prevent me from utilizing insulin therapy in an optimal manner. (2.85 average impact)

FOLLOW-UP INTERVIEWS

Knowledge Gains:

• "I learned about research trials and medication. I also learned to start insulin if A1c is >9."

"The emphasis on integrating the patient into care- that was my best take home point."

Practice Changes:

- "I am a better clinician. I'm more observant: looking more at treatment categories for age groups, looking at comorbidities, matching A1c to identify those who I need to manage more aggressively. I am trying to follow guidelines, monitor and improve A1c levels for better management, treating all comorbidities and CV complications."
- "I am trying to follow the newest recommendations using different medications and different intervals of testing."
- "I am much more sensitive to looking at the whole patient. I consider drugs, patient age, comorbidities."
- "Using newer drugs & GLP-1 [receptor agonist]s, less sulfonylureas."

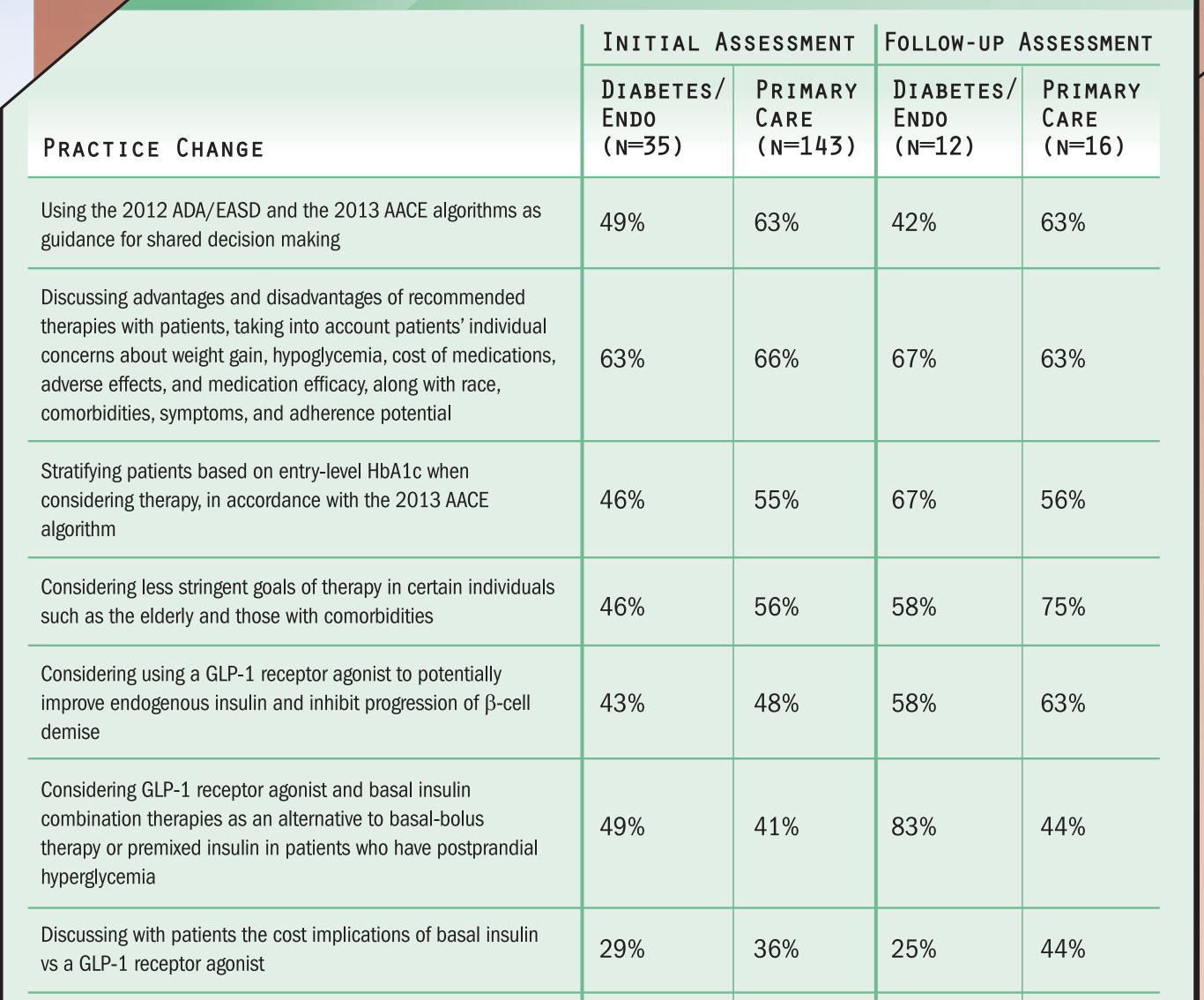
ACTIVITY 2: Strategies for Effective Patient-Centered Hyperglycemia Management

INITIAL ASSESSMENT:

Of the 178 physicians who completed the survey, 80% were primary care practitioners and 20% were diabetologists/endocrinologists.

FOLLOW-UP ASSESSMENT:

Of the 31 physicians who completed the survey, 55% were primary care practitioners and 45% were diabetologists/endocrinologists.



Follow-up survey, N = 31 Results: 28 (90%) made 114 changes (an average of 4.1 changes each)

ACTIVITY 2

Change comparison: immediate

Using the 2012 ADA/EASD and the AACE algorithms as

recommended therapies with patients, taking into.

Stratifying patients based on entry-level HbA1c when

Considering less stringent goals of therapy in certain

Considering GLP-1 receptor agonist and basal insulin

Considering using a GLP-1 receptor agonist to potentially

combination therapies as an alternative to basal-bolus.

Discussing with patients the cost implications of basal

individuals such as the elderly and those with...

improve endogenous insulin and inhibit.

considering therapy, in accordance with the 2013 AACE

guidance for shared decision making...

Discussing advantages and disadvantages of

post-activity vs long-term follow-up (N=12)

Follow-up Interviews, N = 10

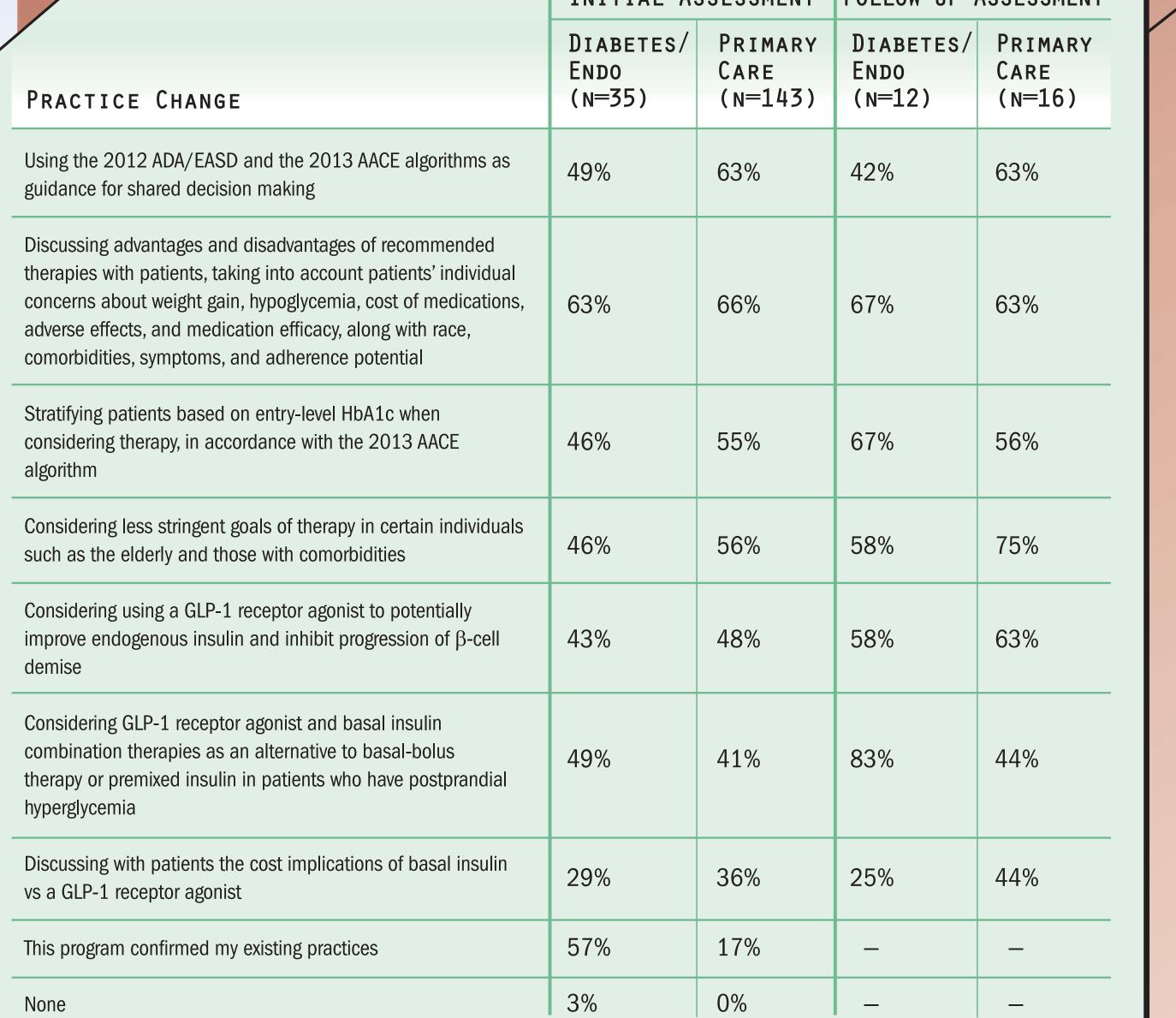
US completers at Medscape Education

N = 178

Initial survey, N = 178

Results: 177 (99%) planned to make 637 changes

(an average of 3.6 changes each)



BARRIERS (1 = minimal barrier - 5 = high barrier):

- Formulary or insurance coverage issues prevent me from utilizing preferred antihyperglycemic agents. (3.86 average impact, Diabetes/ Endocrinology; 3.18 Primary Care)
- Patient attitudes prevent me from utilizing insulin therapy in an optimal manner. (2.36 average impact, Diabetes/Endocrinology; 3.06 Primary Care)
- Evidence is lacking for less intensive glycemic control management in the elderly and patients with comorbidities. (2.71 average impact, Diabetes Endocrinology; 1.59, Primary Care)

FOLLOW-UP INTERVIEWS

Knowledge Gains:

• "I learned that if A1c equals 9 or greater, I really should start (the patient) on insulin and metformin." (PCP) "It was good to see the guidelines." (Specialist)

insulin vs a GLP-1 receptor agonist

- "Particular combinations of medications." (PCP)

Practice Changes:

"I am a little more aggressive in treating diabetes, especially T2D."(PCP)

IMMEDIATE POST-ACTIVITY

- "I am more aggressive in using injectables."(PCP)
- "Screening more patients, picking up more T2D. More emphasis on getting A1cs every 6 months." (PCP) • "I am not as stringent with the older population about A1c control. Previously, I had tried to keep
- tight control for all." (Specialist)
- "Using newer drugs & GLP-1 [receptor agonist]s, less sulfonylureas."
- "I am more likely to give more than 1-2 medications. Using more drugs with different mechanisms of action will result in better glucose control." (PCP)

CONCLUSION

The educational metrics gathered in this assessment are a strong indicator that these activities prompted changes in clinical performance, showing that education on practical application of guidelines in practice is a useful way to effect changes in practice. Future needs for education include overcoming patient misperceptions about insulin, illustrating guideline-based management, particularly second-line therapy, reinforcing information about patient-centered glycemic control management improving efforts to overcome patient resistance to insulin use.

SOURCE OF SUPPORT

This CME-certified activity was supported by independent educational grants from Lilly, Boehringer-Ingelheim, Daiichi-Sankyo, Novo Nordisk, and Sanofi.

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

- 1. Centers for Disease Control and Prevention: 2011 National Diabetes Fact Sheet. Available at http://www.cdc.gov/diabetes/pubs/factsheet11.htm. Accessed April 22, 2013.
- 2. Centers for Disease Control and Prevention: Diabetes Report Card 2012. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2012.
- 3. Inzucchi SE, Bergenstal RM, Buse JB, et al. Management of hyperglycemia in type 2 diabetes: a patient-centered approach: position statement of the American Diabetes Association (ADA) and the
- European Association for the Study of Diabetes (EASD). Diabetes Care. 2012;35:1364-1379.