

Continuing Medical Education for Promoting Shared Medical Visits in Diabetes Care

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Patient engagement and effective self-management, in concert with high-quality clinical care, are crucial for the optimal management of type 2 diabetes (1,2). Shared medical visits (SMVs) are a creative approach to engaging patients in self-care and allowing clinicians to spend the necessary time providing patient education while managing several patients at once. Studies show that patients who attend SMVs demonstrate improvements in diabetes knowledge, health measures, and a sense of self-efficacy (3–7). However, SMVs have not yet been widely adopted in practice (8).

Study Aim

The aim of this study was to provide clinicians with actionable education regarding innovative approaches to delivering care to patients with type 2 diabetes and to evaluate the effect of promoting the adoption of SMVs in clinical practice.

Methods

In 2012, we developed and implemented a series of five live, 3-hour continuing medical education (CME)-certified workshops, which included both education about the management of type 2 diabetes with insulin therapy (2 hours) and a focus on practical information on SMV implementation (1 hour). Diabetes educational content and survey questions were developed by leading medical experts. SMV content and survey questions were created by experts in practice management.

Diabetes education was delivered by medical experts, and SMV education was delivered by medical experts with experience in providing SMVs. To aid clinicians with SMV implementation, a variety of tools were made available online, including a general outline of SMV topics, tips for facilitating discussions, and templates for invitations and agendas. As a control, a live, 2-hour interactive workshop focused solely on insulin therapy for the management of type 2 diabetes and not including any material on the topic of SMVs was also presented.

Participants in both groups were assessed for confidence and knowledge before and immediately after the workshops. The SMV group answered two confidence and four knowledge questions, and the non-SMV group answered one confidence and three knowledge questions. Both groups were surveyed for their confidence in their ability to distinguish the pharmacological profiles of basal insulins, and the SMV group was also assessed for their confidence in providing diabetes-related education in an SMV setting. Both groups were also evaluated on their knowledge of guideline recommendations for insulin initiation, differences in the pharmacological profiles of basal insulins, and appropriate management of patients receiving insulin therapy. Additionally, the SMV group was evaluated for knowledge about implementation of SMVs.

A subgroup of SMV participants was reassessed 30 days after the

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DOI: 10.2337/diaclin.33.1.28

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workshop. Participants responded to confidence questions on a 4-point Likert scale, and their percentage of correct answers was calculated across the knowledge questions. χ^2 Analyses were used to compare their baseline and longer-term confidence and knowledge results.

A total of 157 SMV-group clinicians completed the pre-survey, 166 completed the post-survey, and 77 completed the 30-day post-survey. The sample was self-selected based on convenience. Among the non-SMV workshop participants, 41 clinicians completed the pre-survey and 43 completed the post-survey.

In-depth interviews about SMVs in clinical practice were conducted with 13 SMV-group clinicians who implemented SMVs after workshop participation and with four patient volunteers under the care of SMV-group clinicians. Additionally, five clinicians from the non-SMV group were surveyed regarding their opinions about SMVs. Three sets of standard questions were used for each interviewed group (SMV, non-SMV, and patients).

Findings and Discussion

SMV-group clinicians demonstrated significant improvements in confidence and in two of four knowledge questions (Table 1). These improvements were maintained by the subgroup of SMV participants 30 days after the workshops ($P < 0.001$ for both confidence questions and across four knowledge questions). Non-SMV participants also demonstrated improvements in confidence and in one of three knowledge questions immediately after the workshop (Table 1). There were no significant differences in confidence and knowledge between the SMV and non-SMV groups before or after the workshops (data not shown).

Clinicians who participated in the education that included SMV information reported perceived benefits in terms of clinical and emotional outcomes of patients and time and

cost efficiencies. Examples of successes cited by SMV-group clinicians included patients with diabetes achieving a better understanding of the disease, its potential risks, and approaches to treatment. According to clinicians, patients were also able to share information with each other and appeared to benefit from hearing responses to other patients' questions. Part of the value of SMVs lies in reducing the repetition involved in delivering the same information to multiple patients, allowing more time to answer patients' questions and address other issues. Clinicians' productivity has been reported to increase by as much as 31% with SMVs, allowing more time for administrative tasks, teaching, and research (9).

Changes in behaviors were also observed by clinicians for patients who attended an SMV. Clinicians noted a reduction in the number of missed appointments, better adherence to treatment plans, and more social participation. Clinicians perceived that patients were less upset, more appreciative, felt more acknowledged, and were more willing to work toward health goals.

Interviews with patients who attended the SMVs confirmed clinicians' observations. Patients' reactions regarding the SMVs were universally positive. The gatherings were described as a chance to hear from other patients, an opportunity to learn more about nutrition and self-care, and a source of peer motivation and support. Indeed, patients can benefit from listening to similar issues discussed with other patients despite limited individual attention (9).

SMV-group clinicians reported that the logistics of organizing the visits were challenging. Patient invitations and reminders, visit preparation, schedule coordination, and visit facilitation required dedicated time from nonmedical staff. Clinicians stated

that they would benefit from additional logistical information.

Those who initiated SMVs in their practice said they would advise other providers interested in implementing SMVs to provide a healthy snack, visual aids, and educational handouts for the group. They also noted the importance of being aware of patients' concerns; being familiar with the clinical evidence on discussed topics; having dedicated medical staff present to assist with laboratory orders, medications, and exams; encouraging interaction among patients; and being cognizant of time spent on various topics. Clinicians cautioned about being mindful of patient confidentiality issues, which can be addressed by having patients sign confidentiality waivers (5,10). Clinicians also commonly reported that SMVs would be beneficial for educating patients with other chronic medical conditions (11,12). These observations are important insights for developing future SMV educational programs for clinicians.

Importantly, none of the interviewed non-SMV-educated clinicians employed SMVs in practice, and less than half were aware of SMVs as an educational tool. After hearing a description of SMVs, those in the non-SMV group believed the concept would benefit patients, allowing for provision of quality education to a greater number of patients and positive emotional support among patients. However, these clinicians believed insurance reimbursement issues would be a barrier to providing SMVs. SMV-group clinicians also reported concerns regarding billing and reimbursement for SMVs, despite an overview provided during the workshop. Billing and reimbursement issues have been discussed in depth by others (8,10); these findings highlight the continued need for education about reimbursement and billing practices for SMVs to facilitate implementation.

TABLE 1. Confidence and Knowledge Outcomes After Workshop Participation

	SMV				Non-SMV		
	Pre-Survey	Post-Survey	30-Day	P	Pre-Survey	Post-Survey	P
Immediate Gains							
Confidence*							
Ability to differentiate PK and PD profiles of basal insulins (%)	24 (n = 142)	68 (n = 143)	NA	<0.001	18 (n = 36)	73 (n = 37)	<0.001
Ability to provide diabetes-related education in an SMV setting (%)	28 (n = 138)	67 (n = 142)	NA	<0.001	NA	NA	NA
Knowledge							
ADA/AACE guideline recommendations for initiating insulin in patients with T2DM (%)	35 (n = 134)	35 (n = 139)	NA	0.970	31 (n = 36)	50 (n = 36)	0.012
PK and PD profiles of basal insulins (%)	61 (n = 136)	76 (n = 139)	NA	<0.001	49 (n = 35)	64 (n = 36)	0.066
Management of patients with T2DM using insulin (%)	64 (n = 131)	71 (n = 128)		0.099	77 (n = 35)	89 (n = 27)	0.145
Understanding SMV (%)	18 (n = 128)	59 (n = 135)	NA	<0.001	NA	NA	NA
Percent correct across three knowledge questions	NA	NA	NA	NA	53 (n = 25)	67 (n = 25)	0.030
Percent correct across four knowledge questions	45 (n = 99)	61 (n = 99)	NA	<0.001	NA	NA	NA
Longer-Term Gains							
Confidence*							
Ability to differentiate PK and PD profiles of basal insulins (%)	25	NA	44	<0.001	NA	NA	NA
Ability to provide diabetes-related education in an SMV setting (%)	32 (n = 62)	NA	43 (n = 66)	<0.001	NA	NA	NA
Knowledge							
ADA/AACE guideline recommendations for initiating insulin in patients with T2DM (%)	34 (n = 64)	NA	52 (n = 64)	0.003	NA	NA	NA
PK and PD profiles of basal insulins (%)	66 (n = 65)	NA	86 (n = 65)	0.001	NA	NA	NA
Management of patients with T2DM using insulin (%)	70 (n = 59)	NA	74 (n = 66)	0.403	NA	NA	NA
Understanding SMV (%)	14 (n = 58)	NA	41 (n = 66)	<0.001	NA	NA	NA
Percent correct across four knowledge questions	46 (n = 56)	NA	63 (n = 66)	<0.001	NA	NA	NA

*Extremely and moderately confident.

AACE, American Association of Clinical Endocrinologists; ADA, American Diabetes Association; PD, pharmacodynamic; PK, pharmacokinetic; T2DM, type 2 diabetes mellitus.

Conclusion

Overall, this study provides evidence that CME is a valid approach to providing educational resources on the topic of SMVs, including steps and tools to help implement SMVs in clinical practice. SMVs are an efficient way to monitor patients' health and improve patient education and may provide additional benefits to patients in the form of shared experiences, peer support, and motivation. As the diabetes epidemic continues, widespread adoption of innovative health delivery systems is needed. CME activities are an effective method for increasing awareness and providing information about SMVs to busy practicing clinicians.

Acknowledgments

The authors thank Owen Dahl and Elizabeth Woodcock for their expertise in practice management and implementing SMVs; Barbara Gassaway and Julie Downs for conducting clinician and patient interviews; Whitney Stevens Dollar and Amy Sison for project management; LaWanda Abernathy Stone and Beth Wills for participant recruitment; Suzanne Jenkins for technological assistance; Samantha Roberts for CME

oversight; Mary Catherine Downes for assistance with data management; Kim Keaton for assistance with data analysis; and Lisa Rinehart for editorial assistance.

Duality of Interest

Dr. Fonseca has received research support from Daiichi-Sankyo, Eli Lilly and Co., Halozyme, and Novo Nordisk. Dr. Trencie is a stock shareholder in Boston Scientific Corp., Medtronic, and Sanofi U.S. No other potential conflicts of interest relevant to this article were reported.

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