

## RESEARCH LETTER

## Challenges and Opportunities for Implementing Diabetes Self-Management Guidelines

Bernard Appiah, BPharm, MS, Yan Hong, PhD, MPH, Marcia G. Ory, PhD, MPH, Janet W. Helduser, MA, Dawn Begaye, BA, Jane N. Bolin, RN, JD, PhD, and Samuel N. Forjuoh, MD, MPH, DrPH

**Purpose:** The purpose of this article was to examine primary care providers' perceived challenges when implementing evidence-based diabetes self-management guidelines and opportunities for promoting the use of such guidelines in practice.

**Methods:** We engaged 3 group discussions with 43 key stakeholders representing family physicians, medical directors, and quality assurance leaders in a large, university-affiliated, integrated health care organization in Central Texas. Transcripts from group discussions were summarized using thematic content analysis.

**Results:** Key themes that emerged as challenges of implementing evidence-based diabetes self-management guidelines included lack of easily retrievable electronic patient health information, inadequate coordination with other health care providers when implementing guidelines, conflict between information in the guidelines and physicians' knowledge, and physician compensation by patient load rather than by quality of care. Two main opportunities identified were the use of health coaches or nurses trained in diabetes self-management and active collaboration between practicing providers and key stakeholders in the development and dissemination of guidelines.

**Conclusion:** Our study shows a need for involving front-line family physicians and other primary care providers as well as patients in the design and development of best practice guidelines to enhance implementation of diabetes self-management guidelines in primary care settings. (J Am Board Fam Med 2013;26:90–92.)

**Keywords:** Diabetes Mellitus, Guidelines, Primary Health Care, Self-Management

Diabetes is an increasingly prevalent chronic condition that affects some 25.8 million people, or 8.3% of the US population.<sup>1</sup> Most adult patients

with diabetes receive their routine care from primary care providers. The American Diabetes Association issued the National Standards for Diabetes Self-Management Education in 1999.<sup>2</sup> There are also guidelines issued through state health departments or diabetes councils, for example, the Diabetes Toolkit in Texas. These guidelines often are based on the chronic care model, which emphasizes the importance of coordinating medical care with patient self-management.<sup>3</sup> Despite the existence of such guidelines and evidence of the significant improvement of patient outcomes as a result of implementing these guidelines, research shows that the actual implementation of guidelines is relatively low or inconsistent.<sup>4</sup> In addition, there is limited research that has explored factors affecting the implementation of diabetes self-management guidelines by front-line primary care providers, medical directors, and administrative leaders in family med-

This article was externally peer reviewed.

Submitted 6 July 2012; revised 18 September 2012; accepted 24 September 2012.

From the Department of Health Promotion and Community Health Sciences (BA, YH, MGO, SNF) and the Department of Health Policy and Management (JWH, JNB), School of Rural Public Health, Texas A&M Health Science Center, College Station, TX; and the Department of Family and Community Medicine, Scott & White Healthcare, College of Medicine, Texas A&M Health Science Center, Temple, TX (DB, SNF).

**Funding:** This research was supported by Award No. 1P20MD002295 from the National Institutes of Health, National Institute on Minority Health and Health Disparities, for the Program for the Study of Rural and Minority Health Disparities Research.

**Conflict of interest:** none declared.

**Corresponding author:** Samuel N. Forjuoh, Department of Family and Community Medicine, Scott & White Santa Fe – Century Square, 1402 West Avenue H, Temple, TX 76504 (E-mail: sforjuoh@sw.org).

icine. Therefore, the main objective of this study was to examine the perspectives of primary care providers on what they perceive to be challenges of implementing evidence-based diabetes self-management guidelines and what they consider to be opportunities for promoting the use of such guidelines.

## Methods

We engaged 3 different groups—front-line primary care providers, medical directors, and administrative leaders in family medicine—working for a large, university-affiliated, integrated health care system in central Texas in 3 different discussions. The participants were recruited through invitation letters sent to members of the Department of Family Medicine. To our knowledge, the respondents may represent late adopters of diabetes self-management guidelines. Two group discussions and 1 phone meeting with 14 practicing family physicians (in person), 26 medical directors or leaders in family medicine (in person), and 3 quality control family physician leaders (via phone) were conducted in the spring of 2012. Group discussions lasted 15 to 30 minutes and were audiotaped and transcribed verbatim. Using the approach detailed by Kreuger and Casey,<sup>5</sup> 2 researchers independently coded the transcripts and analyzed their contents. All coding disagreements were resolved by discussion and consensus. Quote excerpts and summaries then were categorized by participant characteristics and coding domains. The study protocol was approved by the institutional review boards of Scott and White Healthcare and the Texas A&M University.

## Results and Discussion

Several challenges were identified by the discussants (Table 1) and included (1) the lack of easily retrievable electronic health information for better tracking of care for patients with diabetes; (2) inadequate coordination with other providers within and outside their institution; (3) conflict between physician practice and their interpretation of the guidelines, including self-management advice given to patients; and (4) cost disincentives to devoting substantial time to educating patients on self-management, with physician compensation based on quantity instead of quality of service.

Lack of easily retrievable electronic health information for patients in the health facilities made it difficult for primary care physicians to identify patients with diabetes. Some of these patients with diabetes seek medical care in different specialties within and outside of the primary care setting, but the discussants indicated that the lack of coordination among different caregivers was a challenge. Some primary care physicians also felt that the diabetes self-management information patients receive sometimes is contradictory to what they (the primary care physicians) know. Some primary care physicians even posited that because they are compensated based on the number of patients they see, undertaking self-management counseling for patients was considered to be an additional task and therefore a disincentive to them.

The discussants also explored solutions and strategies to improve adherence to the guidelines. First, they felt that more health coaches (such as Certified Diabetes Educators or providers trained

**Table 1. Major Themes and Exemplary Quotes from Family Physicians, Medical Directors, and Administrative Leaders About Challenges to Practicing Evidence-based Diabetes Self-Management Guidelines**

Theme	Example
Lack of easily retrievable electronic health information	“We actually pull data ourselves and rely upon the health plan. It’s complicated because they don’t even know who our patients are.... I’m searching through all their information hoping that the electronic health record would solve all of this.”
Inadequate coordination with other providers within and outside the institution	“[How we] get the information in an efficient way from, for example, the eye care providers that do our diabetic eye care...is a real challenge.”
Incentives to physicians are based on quantity of care not quality	“So, if you say, we want you to deliver the best possible care for each patient, not, how many patients can you see every day, which is still how we &quot;by large’ get paid, the organization has to invest in that.”
Conflict between current physician practice and information in the guidelines, including self-management advice given to patients	“I’ve had patients come back and say, &quot;Well they told me to do that and now you’re telling me to do this.” “The state or the ADA guidelines differ from the way we’re practicing.”

ADA, American Diabetes Association.

to help educate patients) and nurses can be trained in diabetes self-management (using a train-the-trainer model) to reach more patients. For example, one noted that, "Health coaches or experienced registered nurses are being trained externally [in Iowa] with the hope that they also train more nurses to help manage diabetes." Second, they indicated that active collaboration between health care organizations and community organizations should be strengthened to maximize the use of existing community resources. For example, a participant remarked: "Some of the most widely used community resources I've seen are where there has been this collaborative effort between health care providers, community resource folks, [and] patients...." Third, they felt that the database of patient information should be available to providers to enable them identify medical problems and existing treatment and facilitate coordination across institutions. For example, one medical director suggested that, "We are trying to develop clinical pathways for most of the common diseases, whether it's [chronic obstructive pulmonary disease], diabetes, hypertension, so that you get the same amount of space, time, quality, regardless of which clinic your patient is seen in."

## Conclusion

Our study shows the need for actively involving front-line primary care providers, medical directors, and administrative leaders in family medicine

as well as patients in the design, development, and dissemination of evidence-based diabetes self-management guidelines. We call for improving electronic medical record systems to allow better coordination between providers and across institutions, engaging more health educators and nurses in educating patients about diabetes self-management, mobilizing community resources to disseminate the guidelines, and incorporating quality of care into incentives for providers.

## References

1. Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011. Available from: [http://www.cdc.gov/diabetes/pubs/pdf/ndfs\\_2011.pdf](http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf) Accessed 8 November 2012.
2. Funnell MM, Brown TL, Childs BP, et al. National standards for diabetes self-management education. *Diabetes Care* 2009;32(Suppl 1):S87–94.
3. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness. *JAMA* 2002;288:1909–14.
4. Norris SL, Engelgau MM, Narayan KMV. Effectiveness of self-management training in type 2 diabetes. *Diabetes Care* 2001;24:561–87.
5. Krueger RA, Casey MA. *Focus Groups: A Practical Guide for Applied Research*. 4th ed. Thousand Oaks, CA: Pine Forge Press; 2008.