

**AADE DSMET ACCESS GRANT PROJECT  
2007 END OF YEAR REPORT  
Mark Peyrot, PhD**

***Project Overview***

This project is funded by the AADE Education and Research Foundation. It is a comprehensive study to address both supply-side and demand-side factors affecting access to diabetes self management education and training (hereafter, DSMET). The supply-side approach focuses on factors that inhibit or promote the availability of DSMET. The demand-side approach focuses on factors that inhibit or promote the utilization of DSMET.

The study design involves three study populations, physicians who treat people with diabetes, diabetes educators, and diabetes patients. The study of diabetes educators focuses on supply-side issues and the studies of physicians and diabetes patients focus on demand-side issues. Each component incorporates two phases: a preliminary qualitative phase consisting of focus groups and a subsequent quantitative phase consisting of surveys. The focus groups were conducted via telephone and the surveys administered over the Internet. These strategies are designed to maximize the number and diversity of respondents while minimizing the cost and time of data collection.

In addition to studying what factors have contributed to past access to DSMET, this study assessed provider and patient attitudes toward alternative and supplemental strategies for delivering DSMET (e.g., community settings, mobile van, telephone, computer media, Internet).

The specific aims of the study are:

1. Identify the barriers and facilitators to referral of patients to DSMET.
2. Identify the barriers and facilitators to patients' entering DSMET, including attitudes toward DSMET, social network factors, logistic factors, etc.
3. Identify the barriers and facilitators to educators providing DSMET, including organizational factors influencing the reduction/expansion of DSMET.

**Project Background and Significance**

DSMET has been found to make a significant contribution to the health and wellbeing of persons with diabetes (1-3). Much progress has been made in conducting evaluations of diabetes education, including the NDEOS, recently developed by the AADE to track the delivery of DSMET services and their impact on patient outcomes (4).

The Second National Diabetes Summit, sponsored by AADE, identified a gap in our knowledge about DSMET – why do so few people take advantage of this critically important health service (5). Research suggests that less than half (perhaps as little as one-third) of patients with diabetes receive DSMET (6,7). In the opinion of many, this represents the key barrier to optimizing health services for persons with diabetes, and it received a high priority at the Diabetes Summit.

While there has been little direct research on factors affecting utilization of DSMET, there has been some related research. One study asked diabetes educators why they

thought patients did not receive DSMET (8). Reasons cited include several patient-related factors: patient characteristics (lack of insurance coverage), patient attitudes (low priority for DSMET), logistical barriers (difficulty attending sessions), and social network factors (lack of family support). The role of the physician also was regarded as important; physician referrals were perceived to be a key motivator for patients, but many physicians were not perceived to be supportive of DSMET.

All of these beliefs may be true, but it is necessary to regard these beliefs as hypotheses and validate them by studying the patients and physicians themselves. For example, contrary to the belief noted above, one study of patients found that the majority wanted to have education as an important component of the diabetes-related services they receive (9). Moreover, if we are to remedy the underutilization of DSMET, we must find out what other factors affect its use and how much influence each exercises. For example, one study found that rural patients were less likely to have received diabetes education (10). The inaccessibility of DSMET may override all other factors for some patients, making other factors irrelevant for them.

There has been some research on patient characteristics related to use of DSMET. DSMET is more often used by those with type 1 diabetes, insulin treated patients, those with complications, younger patients and those over 70, blacks, and those living in the Midwest (6,11). But this research does not tell us what about those characteristics leads to DSMET use. Do these factors increase physicians referrals, patients referral requests, patient follow through on referrals, patient self-initiative, or some combination of these? And what psychological beliefs mediate between the patient characteristics and the actions taken?

Another important development is the expansion of innovative DSMET delivery systems. There have been a number of studies of DSMET in community-based settings (12-17), through the telephone (18-21), and via computer (21-24). These studies provide some evidence to suggest that these strategies can be effective alternatives or supplements to DSMET in traditional clinical or office settings, and might increase utilization of DSMET. But we know little about how such strategies are perceived by patients, providers, and those who refer patients to providers. A better understanding of these perceptions could play a major role in making better use of these innovative strategies.

## **References**

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### ***Project Progress***

During the first year of the project, all focus groups were conducted. Based on recommendations of the reviewers of the original proposal, the focus group plan was revised to use nationally representative samples of diabetes patients and physicians. IRB approval was obtained for these studies and the studies were conducted. A report of the results was presented at a session of the 2006 AADE annual meeting and a paper based on the focus group research was submitted for publication to *The Diabetes Educator*. That paper was accepted for publication (Peyrot, M., and Rubin, R. "Access to Diabetes Self-Management Education." *Diabetes Educator*, 34, 2008, in press).

I developed the questionnaires and recruitment letters for the 3 surveys. They were reviewed by diabetes educators who are experts in research and modified to incorporate their input. The questionnaires were designed to measure a variety of factors.

#### *DSMET Provider factors.*

- DSMET program characteristics
- Expansion efforts (and results)
- Outreach/recruitment efforts (and results)
- Barriers to expansion/outreach
- Supply/demand ratio (how much of capacity is used)
- Perceived barriers to patient utilization (proxy reports)
- Attitudes toward alternative delivery strategies (e.g., mobile van, community settings, telephone, Internet, computer media)

#### *Physician factors.*

- Awareness of DSMET
- History of patient referrals to DSMET
- Satisfaction with prior DSMET experience
- Perceived DSMET availability
- Perceived DSMET value
- Logistical barriers to DSMET
- Intentions to use DSMET
- Attitudes toward alternative DSMET delivery strategies (e.g., mobile van, community settings, telephone, Internet, computer media)

#### *Patient factors.*

- Awareness of DSMET
- History of referral to DSMET
- Prior DSMET use (extent, timing)
- Prior DSMET experience (satisfaction, patient-to-patient recommendations)
- Perceived need for DSMET
- Perceived DSMET availability
- Perceived DSMET value
- Logistical barriers to DSMET
- Intentions to use DSMET

- Attitudes toward alternative delivery strategies (e.g., mobile van, community settings, telephone, Internet, computer media)

The project questionnaires and the plans for survey implementation were approved by the Loyola College IRB. I contracted with a professional research organization to conduct the survey portion of the study. One major advantage of the revised project plan is that, based on recommendations of the reviewers of the original proposal, the survey plan was revised to use nationally representative samples of diabetes patients and physicians. The surveys were conducted in 2007.

#### Patient Sample

- Sample drawn from community survey panel
- Quotas = minimums of 500 who have and 500 who have not had DSME course/class
- N = 1169 adults with physician diagnosed diabetes (self-report)
- 85% take diabetes medications; 69% OHA, 27% insulin (~10% Type 1)
- Mean age = 55, 57% men, 89% white, 59% college degree, 96% insurance coverage
- 44% no DSME, 26% only at DX, 24% multiple

#### Educator Sample

- Respondents drawn from full AADE membership
- N = 1672, no quotas or exclusions
- 65% nursing, 28% dietitian/nutritionist
- Approximately equal # see patients 1-10, 11-20, 21-30 and 30+ hrs/wk
- 48% hospital setting, 14% physician office, 13% independent/free-standing
- Median monthly DSME population ~ 90
- Mean facility maximum DSME population ~ 95

#### Physician Sample

- Sample drawn from physician panel
- Exclusion = <5 DM Pt/mo, <75% clinical practice
- Quotas = 400 PCP, 200 Endo/Diabetology
- N = 629
- 39% FamPrac, 27% Gen/Int Med, 34% Specialist

A report of the survey research findings was presented at a session of the 2007 AADE meeting. I contacted the editor of *The Diabetes Educator* (Dr. Fain) to ask whether he would be open to considering for publication a paper based on these findings. Upon reviewing the report I presented at the 2007 AADE meeting, he indicated that he would be willing to consider publishing the findings of that research. We are in the process of negotiating the precise form of that paper or papers.