

On-Site Educators Lead to Better Type 2 Outcomes

BY CHRISTINE KILGORE

Contributing Writer

When a diabetic patient needs to see a diabetes educator, convenient access can boost compliance and help improve health outcomes.

That's the experience of Dr. Francis X. Solano Jr. and his primary care colleagues, who refer patients with newly diagnosed or uncontrolled diabetes to a certified diabetes educator, who meets patients on site.

By having the educator in the office on designated days, most patients follow through and receive the prescribed diabetes self-management education (DSME). As a result, they have improved their health outcomes, Dr. Solano said in an interview.

The on-site education has also shown the physicians what can be achieved with outliers and new diabetics. "Some 65% of our patients now have an A_{1c} less than 7, and only 8% have an A_{1c} greater than 9. When we started [the project], at least 20% of our patients were above 9," he said.

Dr. Solano's practice is one of six primary care practices in Community Medicine Inc. (a group of 65 practices owned and managed by the University of Pittsburgh Medical Center) that are participating in a project aimed at integrating DSME directly into primary care offices, where it can be most easily accessed.

Although details of the project may not all be replicable outside such a large medical system, experts at the University of Pittsburgh Medical Center believe they are demonstrating why more primary care physicians should contract with diabetes education programs to bring educators in-house.

Physicians "need to think outside the box and look at what kinds of relationships they can develop with hospital program leaders," said Linda M. Siminerio, Ph.D., director of the University of Pittsburgh's Diabetes Institute and senior vice president of the International Diabetes Federation.

The University of Pittsburgh Medical Center is a logical place to try out such an approach. It's a large system with 19 hospitals and 21 diabetes education programs that are recognized by the American Diabetes Association (ADA) and overseen by the diabetes institute. Each year, 80,000 patients access diabetes care through the system. Yet despite the system's infra-

structure and availability of services, a "disappointing number of patients [with in it] receive DSME," said Sharlene Emerson, the certified diabetes educator involved in the program.

"Doctors don't know where the programs are, when they are [run], and they don't know how to refer a patient," Ms. Emerson said during a presentation at the annual meeting of the American Diabetes Association in Washington. And when they do refer, patients don't always follow through, she said.

Dr. Jennifer Mayfield, a family physician from Seattle, said such problems are common. "I don't think insurers understand how difficult it is for us to do the education—we don't have the training and the expertise. And insurers don't appreciate the fact that many patients won't go across town."

The University of Pittsburgh Medical Center project was started after physicians and other leaders of Community Medicine met in 2003 to discuss the state of diabetes management in primary care. They agreed on two things: A lack of diabetes education was a barrier to quality diabetes care, and implementing diabetes education in the primary care setting—where 90% of diabetes care is delivered—would improve access to education and boost outcomes.

Community Medicine drew up a contract in 2004 with the University of Pittsburgh's Diabetes Institute. Participating primary care practices in the project would provide space for Ms. Emerson during specific times, do the scheduling, bill for the diabetes education services (CDEs are not Medicare-recognized providers and cannot bill insurers directly), and pay the diabetes institute a set fraction of the reimbursement for Ms. Emerson's time.

At that point, Ms. Emerson had begun working on a pilot basis (with grant money from University of Pittsburgh Medical Center) at Dr. Solano's practice on one 8-hour day a week, alongside the practice's registered dietitian. She and other University of Pittsburgh Medical Center experts had secured recognition for the practice's education program from the American Diabetes Association. (Providers must have program recognition from the ADA or the Indian Health Service to bill Medicare for DSME.)

Now, five other Community Medicine primary care practices have ADA recog-

nition and are opening their doors regularly for Ms. Emerson. Other University of Pittsburgh Medical Center-affiliated practices, including a large cardiology practice, have expressed interest in signing contracts.

Of all the issues involved in implementing DSME in primary care, scheduling and space have been among the most easily resolved, Ms. Emerson said at the ADA meeting and in an interview.

At one practice, she was allotted her own space. In another practice, she uses a physician's personal office to meet with patients. In others, she holds group classes in waiting rooms at times when there are no other patients—an approach that affords the privacy mandated by federal law.

Thus far, she has scheduled initial visits for 90 minutes and return visits for 45 minutes. Her approach exemplifies the trend

in diabetes education, away from didactic programs to sessions aimed at getting patients engaged in setting goals, changing behaviors, and solving problems.

Most patients decide to return for 2-4 group sessions per year—most of which fall within Medicare's allowed coverage of 10 hours in the initial year (including 9 hours of group education) and 2 hours each subsequent year. The physician is responsible for maintaining the plan of care in the patient's medical record.

It will become easier for physicians to get ADA certification for education programs as the association becomes more flexible. For example, the ADA is now allowing programs to apply for "expansion site" recognition, an arrangement that could apply to a partnership between a primary care practice and a hospital, Dr. Siminerio said. ■

Reimbursement Issues Pose Challenges

The finances of the program are a work in progress—and, not surprisingly, reimbursement is the most challenging issue the project leaders face. "Insurer issues," as Ms. Emerson calls them, are at the forefront.

"Many insurers were concerned that DSME in primary care was being provided by the physicians and/or staff as opposed to an ADA-recognized program," she said at the meeting. "They just thought it was a physician-driven program and they weren't going to pay for it, no matter how we explained it."

In the first quarter of 2006, the three practices that had begun billing by that point together billed for \$31,560; this covered 109 encounters (61 group sessions and 48 individual) in 19 days, with 70 different patients and 20 insurance plans. Community Medicine's reimbursement: \$5,907. Of this, \$4,197 went to the University of Pittsburgh's Diabetes Institute.

"We were actually quite pleased with how much we were able to charge, and we weren't displeased with the reimbursement, though we need to recover more to make the program sustainable," Ms. Emerson said. Recouping even 50% of the charges would make a difference, she said.

Dr. Solano, however, thinks it's going

to take more to be truly "cost-effective for primary care."

"The question is, how can you get it funded by insurers—really, fully underwritten by insurers—but have diabetes educators do true education and not just the 'disease management' that insurers [have touted]?" said the internist, who, in addition to practicing, serves as medical director of the Center for Quality Improvement and Innovation at the University of Pittsburgh Medical Center.

"Even with better reimbursement levels, the amount of money people get paid certainly is not going to support their salary," he said.

A model that builds on the CDE model and uses a practice-based educator for a broader swath of education—asthma education and depression education, for example, in addition to the diabetes education—may be more cost effective, he said.

Dr. Siminerio, however, expects reimbursement for diabetes education to increase as insurers realize that CDEs can deliver services in physicians' offices effectively—and particularly, as insurers see outcomes data from the sources such as the Community Medicine practices. "At this point, it's such a new model," she said. ■

Sleep-Disordered Breathing Tied to Hyperglycemia in Type 2

BY MIRIAM TUCKER

Senior Writer

COPENHAGEN — Sleep apnea seems to have an immediate elevating effect on nighttime blood glucose levels in people with concomitant type 2 diabetes, said Dr. Maria Pallayova at the annual meeting of the European Association for the Study of Diabetes.

Previous data have shown the independent association between

sleep-disordered breathing (SDB) and abnormal glucose metabolism. These findings provide a look at the immediate glycemic response to apneic episodes.

Medtronic/Minimed's continuous glucose monitoring system (CGMS) was used for several days in 30 patients with type 2 diabetes on diet or oral hypoglycemic therapy. Eight of the patients had severe SDB and a mean hemoglobin A_{1c} level of 7.4%. The 22 who did

not have SDB, had a mean HbA_{1c} level of 6.5%. Those with SDB were referred to a sleep laboratory for overnight polysomnography, and the CGMS data were compared between the two groups, said Dr. Pallayova of PJ Safarik University, Kosice, Slovakia.

In the group without SDB, the CGMS revealed stable normoglycemia throughout the night. Those with severe untreated SDB had frequent episodes of sleep ap-

nea/hypopnea (mean apnea-hypopnea index 57.64 episodes/hour) with severe oxygen desaturation (oxygen saturation 83%, minimal oxygen saturation 49%), followed by significant increases in blood glucose of up to 12.3 mmol/L (221 mg/dL).

The nocturnal increment in blood glucose was 1.11 mmol/L (19.98 mg/dL) in the SDB group, significantly greater than the 0.2 mmol/L (3.6 mg/dL) seen in the

patients without SDB, and was strongly correlated with severe oxygen desaturation. The researchers found significant differences in both overall mean nocturnal glucose values—8.24 mmol/L (148.3 mg/dL) in the severe SDB group, compared with 6.15 mmol/L (110 mg/dL) in those without sleep apnea—and morning fasting glucose levels (8.01 vs. 6.6 mmol/L [144.2 vs. 118.8 mg/dL]). ■