

Conversation Maps Focus on Diabetes Management

BY PATRICE WENDLING
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CHICAGO — Health care professionals are trying a new tack to better engage diabetes patients in the self-management of their disease.

The American Diabetes Association (ADA) and Healthy Interactions Inc. are launching an initiative centered on a series of visual aids called U.S. Diabetes Conversation Maps. The 3-by-5-foot “maps,” which depict symbolic images that can be used as conversation starters to help small groups explore a variety of diabetes-related facts and issues, are designed to be used in conjunction with a structured series of questions and activities.

The aim is for the maps to shift diabetes education from a one-way lecture to an interactive discussion that increases patients’ ability to understand and manage their illness, said diabetes educator Martha M. Funnell, R.N., past president of health care and education for the ADA, and member of the ADA team that helped develop the content for the maps.

“One of the reasons I’m so excited about these maps is they provide an opportunity to be truly patient centered in our delivery of education,” Ms. Funnell said at a press briefing during the annual scientific sessions of the ADA, where the initiative was unveiled.

Roughly 150 training sessions are planned for 2007, with a goal to have more than 10,000 health care professionals incorporate the maps into their diabetes education programs within the next 3 years. The U.S. Diabetes Conversation Maps initially are being promoted to the 2,800 ADA-recognized education programs, but also will be available to other health care professionals conducting group education including physicians, nurses, and pharmacists. The five Conversation Maps will be provided free to those who go through the 3-hour training program, thanks to corporate sponsorship from Merck & Co., Peter Gorman, president of Healthy Interactions, said at the press briefing.

The five maps—diabetes overview, healthy eating, blood glucose monitoring, natural course of diabetes, and gestational diabetes—are designed for either type 1 or type 2 diabetes. They contain up-to-date clinical content, and address a wide range of topics, from food and exercise to ways to talk more effectively about the emotional and behavioral component of the disease.

Each map comes with a guide and a set of questions that is used as a framework by the facilitator to lead the discussion. For example, the first question patients are asked when using the diabetes overview map is to explain their understanding of what diabetes is and the difference between the two types of diabetes. For women using the gestational diabetes map, much of the discussion centers on diet and exercise plans, as well as on what to expect after childbirth and with subsequent pregnancies.

“A lot of people don’t even believe they have diabetes,” Mr. Gorman said in an interview. “So we have a lot of conversations and activities that get them to look at their assumptions and [whether] those assumptions are correct.

“It’s through those questions and answers that they come to their own conclusions and [to] conclusions they are willing to act on,” he added.

All patients are asked to identify near- and long-term goals and to write out an action plan detailing how they will engage their health care team and family to support their accomplishment of those goals. “People can talk about things they want to do, but until they take an active step of writing things down, it doesn’t get done,” Mr. Gorman said. The action plan also provides educators with something concrete to follow up on at the next session.

A similar approach to diabetes education was introduced last year in Canada, and preliminary data showed high satisfaction among both patients and educators. At one pilot site with an already well-established diabetes education program, the patient return rate increased 15%



U.S. Diabetes Conversation Maps depict symbolic images that can help groups explore a variety of diabetes-related issues.

between the first and second education sessions, and by 50% between the second and third sessions, Mr. Gorman said.

The company has not evaluated how effective the Canadian maps have been in improving outcomes such as reaching target hemoglobin A_{1c} levels or medication compliance. A protocol is under development in the United States to evaluate such outcomes in the future, he explained.

The wide range of subjects addressed by the maps is particularly attractive to patient advocate Michael Weiss, past chair of the ADA board and member of the ADA content team, who said the only education he received in 1984 when diagnosed with type 1 diabetes was a single session devoted to how the pancreas works.

“This is the validation that patients have a seat at the table,” Mr. Weiss told reporters. “To my knowledge, this is the only educational product developed by physicians and patients working together, and I think that says a lot about the project.”

Sleep Apnea Assessment, Treatment Important in Diabetes Care

BY MIRIAM E. TUCKER
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ST. LOUIS — Sleep apnea assessment and treatment should be considered an integral part of diabetes management, Susan M. LaRue, R.D., said at the annual meeting of the American Association of Diabetes Educators.

“Sleep apnea is highly prevalent in people with diabetes, people with hypertension and obesity, all of which we see in huge numbers in our patient population,” said Ms. LaRue, a certified diabetes educator with Amylin Pharmaceuticals.

What’s more, data suggest that the vast majority of obstructive sleep apnea (OSA) cases among people with and without diabetes are undiagnosed. “There is a large population of untreated OSA sufferers,” she said.

Because sleep apnea is so common among people with diabetes—concomitant with obesity and hypertension—the Scripps’ Whittier Institute for Diabetes, La Jolla, Calif., has instituted a “best practice” in which every patient is screened for OSA, and those found to have the condition are referred for treatment and follow-up.

In a study published by the Whittier’s Dr. Daniel Einhorn and his associates, 72.4% of 279 adults with type 2 diabetes

were found to have some degree of sleep apnea, defined as an apnea-hypopnea index (AHI) of five events or more per hour. Over a third of the patients (35.8%) had an AHI of at least 15 events per hour, a more severe apnea level associated with a doubling of the risk for the development of hypertension after adjustment for comorbidities such as body mass index (BMI), alcohol use, and cigarette smoking (*Endocrine Practice* 2007;13:355-62).

The proportion of those with an AHI at or above 15 events per hour was much higher among men than women (49% vs. 21%). Other significant risk factors included age 62 years and older, a BMI of 30 kg/m² or greater, snoring, and reports of stopped breathing during sleep, said Dr. Einhorn, also with the University of California, San Diego, and his associates.

That study and the symposium in which Ms. LaRue spoke were both sponsored by the ResMed Corp., which manufactures continuous positive airway pressure (CPAP) devices for treatment of OSA.

Diabetes is among several cardiovascular-related conditions that are strongly associated with OSA. Data suggest that OSA is present in about 80% of individuals with drug-resistant hypertension (35% of all hypertension), in 50% of those with congestive heart failure, and in 50% of those with atrial fibrillation. It is also

found in 77% of the morbidly obese population.

The mechanism for the association is not known, but theories focus on the increased sympathetic nervous activity resulting from repeated apneas. The resulting higher cortisol levels are related to insulin resistance, which predisposes to impaired glucose tolerance and other cardiovascular risk factors, said Ms. LaRue, formerly with the Whittier Institute.

A study in which the results of overnight polysomnography and oral glucose tolerance testing were compared in 30 obese (but not diabetic) patients with OSA and in 27 equally obese individuals without OSA demonstrated that those who had OSA were more insulin resistant, independent of the degree and distribution of adiposity. The authors hypothesized that the worsening in insulin sensitivity in the OSA patients could reflect the hypoxic state and would account for the increased vascular risk (*Clin. Endocrinol.* 2003;59:374-9).

Treatment of OSA with CPAP not only reduces apneic episodes and improves sleep quality, but also appears to improve the cardiovascular and metabolic abnormalities. In a German study of 60 patients with moderate to severe OSA, those who were given “therapeutic” levels of CPAP for an average of 9 weeks had a 95% reduction in apneas and hypopneas and a de-

crease in mean arterial blood pressure of 9.9 mm Hg.

That level of decline would be predicted to reduce coronary heart disease event risk by 37% and stroke risk by 56%, the investigators said (*Circulation* 2003;107:68-73).

Insulin sensitivity was significantly improved at 2 days and at 3 months of CPAP therapy among 40 patients with an AHI greater than 20, more so among those with BMIs less than 30 kg/m² than among those with higher BMIs (*Am. J. Respir. Crit. Care Med.* 2004;169:156-62).

Another study of 25 patients with type 2 diabetes and sleep-disordered breathing demonstrated that an average of 83 days’ treatment with CPAP significantly reduced postprandial glucose values, by about 60 mg/dL after each meal. Hemoglobin A_{1c} (HbA_{1c}) levels also dropped significantly among those with a baseline level greater than 7% (from 9.2% to 8.6%). Reduction in HbA_{1c} was significantly correlated with days of CPAP use among those who wore the device for more than 4 hours per day (*Arch. Intern. Med.* 2005;165:447-52).

Ms. LaRue noted, “When sleep apnea is treated appropriately, look at the benefits that can happen. ... It’s another tool to help our patients live healthier with their diabetes.”