Maximize Your Opportunity; Reach for the Stars

Karmeen D. Kulkarni, MS, RD, BC-ADM, CD, CDE

Editor's note: This article is adapted from the address Ms. Kulkarni delivered as the recipient of the American Diabetes Association Outstanding Educator in Diabetes Award for 2002. She delivered the address in June 2002 at the Association's 62nd Annual Meeting and Scientific Sessions in San Francisco, Calif.

I never imagined that I might be so honored; I cannot envision any form of recognition that could mean as much to me as Outstanding Educator in Diabetes. I accept this award as one accepts a generous loan—it will remind me to aim higher and reach farther in order to be found worthy of the credit already advanced to me.

I am grateful to many family members and friends from every important stage and venue of my life who have supported and encouraged me through the whole progression of my career. My parents, who challenged me as a child and young adult and provided me with many opportunities to grow and learn. My husband and daughter, who have been my constant cheerleaders over the years. And friends, peers, and mentors from organizations such as the American Diabetes Association (ADA), American Association of Diabetes Educators (AADE), and the Diabetes Care and Education practice group of the American Dietetic Association.

After I was notified that I was to be the recipient of this award, I couldn't help but reflect on my career in the health care field. Today, I am the coordinator of an ADA-recognized program at St. Mark's Hospital in Salt Lake City, Utah. Yet it seems like only yesterday that I started my diabetes career with one of the first diabetes control programs funded by the Centers for Disease Control and Prevention in Lincoln, Nebr. I received training in diabetes care at the feet of Marion J. Franz, MS, RD, CDE, in the basement of what is now the impressive International Diabetes Center in Minneapolis, Minn.

My interest in diabetes began personally when my uncle died of complications from the disease. When I came to the United States at 19 to complete my master's degree in Food and Nutrition at Eastern Michigan University in Ypsilanti, I originally planned to return to my native India to lead grassroots efforts to improve the quality of life for underprivileged women and children. But my plans changed when I met my husband in graduate school. It is now 25 years later, and I have seen and participated in many facets of diabetes care as a certified diabetes educator and registered dietitian.

As diabetes care has evolved over the years, one thing has become increasingly clear: education plays a vital role in the successful management of diabetes. Few diseases are as influenced as diabetes by the daily choices patients make regarding their health. Many factors have shaped the care and education that people with diabetes receive today. These factors include scientific research, advanced technologies, and evolving health care systems. To fully appreciate the diabetes care provided to patients today, we need to revisit the past and look ahead to the future. By doing both, we can continue to help people with diabetes stay healthy and active.

The first written account of diabetes was in 1550 B.C. from the Ebers Papyrus in Egypt. These Egyptian medical writings advised that wheat grain, fruit, and sweet beer should be taken to drive away the passing of too much urine.

Diabetes really began garnering attention in 1921, with the discovery of insulin. Until then, the management of diabetes included various combinations of food that were frequently limited in quantity and taste. With the availability of insulin, the rigid, semi-starvation diets were replaced, food intake was increased, and nutritional status was improved.

In the 1960s, nutrition education and counseling began to be emphasized as essential components of nutrition intervention. The ADA addressed these concerns again in 1971 in its special report, "Principles of Nutrition and Dietary Recommendations for Patients with Diabetes Mellitus."

During this time, preplanned diets were used extensively and distributed from tear-off pads, much like a prescription pad. Exchange lists were divided by calories into meals and snacks. The calories often were evenly divided among three daily meals. And if a distribution weren't ordered, the registered dietitian would use a standard distribution, such as thirds, fifths, sevenths, ninths, or tenths, to allot calories throughout the day. An evening snack was always included if a patient was taking insulin, and a mid-afternoon snack was included because insulin peaked at that time. One injection of NPH per day was standard management.

People with diabetes during this era had many food restrictions. A person who wouldn't follow this regimen was termed "noncompliant." I always thought there was something wrong with this assumption. If I had

so many food restrictions imposed on me, I, too, would be "noncompliant." As Margaret Mead said, "I'd rather change a person's religion than their food habits."

By the late 1970s, many changes were taking place in diabetes care. New descriptive terms were emerging—the noun "diabetic" gave way to "person with diabetes," "compliance" was now "adherence," "diabetes management" became "diabetes care," and we abandoned the term "diet" to return to "meal plan," which had been used in the 1950s.

Common nutrition issues we needed to explain to patients included meals plans aimed at decreasing saturated fat and cholesterol intakes, research into high-fiber/high-carbohydrate intakes, use of fructose as an alternative sweetener, and bans on saccharin. In addition to nutrition issues, technological advances magnified the need for greater diabetes education. Self-monitoring of blood glucose was becoming accepted among health care professionals specializing in diabetes, and this required additional patient teaching.

The medical environment was not immediately or universally accepting of the new self-monitoring tests. When first introduced, monitoring equipment was large and bulky. The first Ames Glucometer was about the size of a hardcover college dictionary and required patients to slash a finger with a large lancet. Today, meters are small, use very little blood, and give results in just a few seconds. Because self-monitoring tests involved blood and were invasive procedures, nurses were responsible for teaching their use.

At first, the additional blood glucose information was confusing. What was to be done with this information that had suddenly become available? New management skills for health care providers and for people with diabetes were required. But as blood glucose monitoring became more prevalent and the equipment became more user-friendly, educators and people with diabetes effectively used the information, and the era of pattern management began in earnest. Efforts shifted from trying to have patients change their entire lives to fit their diabetes regimens to fitting the diabetes regimens into patients' lifestyles.

Diabetes education received an additional boost in 1986, when the ADA approved a new position statement on nutritional recommendations, which covered topics including fiber, fat, the glycemic index, alternative sweeteners, and the use of vitamins and mineral supplements.

Along with the growing emphasis placed on patient education came an emphasis on developing knowledgeable educators. Two programs were developed to recognize the competence of diabetes teaching. In 1986, the first exam was given to certified diabetes educators. AADE was instrumental in establishing this credential program, which today is administered by the National Certification Board for Diabetes Educators. In addition, the ADA established its Recognition program for diabetes education programs and today continues to review diabetes education programs across the country to ensure that they meet standards set forth in the National Standards for Diabetes Patient Education Programs.

In the early 1990s, much of diabetes education still focused on the lifestyle changes required of people with diabetes. Group outpatient classes became popular. Hospital admission guidelines encouraged outpatient education. Results of the landmark Diabetes Control and Complications Trial, reported in 1993, demonstrated that metabolic control mattered and that the diabetes educator was a key figure in working with patients to help them achieve the best possible results. Computer-based education grew rapidly, gaining wide acceptance. Technological advancements in the form of insulin pumps, continuous glucose monitoring systems, and blood glucose meters that communicate via modem with computers in diabetes educators' offices set the stage for the provision of optimal care for people with diabetes.

Today, diabetes educators are active in all aspects of diabetes care and must consider the multiple influences on diabetes status rather than just isolating their focus to the areas of their own discipline and expertise. We review blood glucose records and make food, medication, and other management recommendations. We teach insulin injection and blood glucose monitoring procedures, as well as diabetes foot care. We make medication adjustments over the phone or in the office. In their expanded role, diabetes educators from nursing, nutrition, pharmacy, behavioral sciences, and other disciplines draw on medical, education, nutrition, and counseling skills.

As diabetes care providers, we should all:

- Encourage cross training with other diabetes care professionals to understand and appreciate the varying and overlapping roles of dietitians, nurses, and pharmacists, among others;
- Form multidisciplinary teams to provide continuous, supportive, and aggressive care for people with diabetes—a cost-effective approach, particularly when services include health promotion and disease prevention in addition to intense clinical management;
- Integrate skills of different health care professionals with those of patients and families;
- Seek opportunities to expand our role as educators to provide increased opportunities in the health care field;
- Seek to be a resource to patients by providing them with options regarding their care; and
- Never stop learning if we want to help patients.

Care is always evolving in this exciting, challenging, and stimulating field. Our reward is when patients do well and stay healthy.

Our role in translating evidence-based recommendations into meaningful terms for people to use in their daily lives is significant. Medical nutrition therapy has proven itself as an effective tool in improving clinical outcomes and decreasing costs.

As you well know, diabetes care is a great—and humbling—mission. Each advance is the product of persistence and commitment. The ADA has stayed the course throughout the history of diabetes care and education.

The fact that the association's research budget has increased threefold since 1995 is particularly impres-

sive. Research funding has contributed greatly to our understanding of diabetes pathology and treatment and of the behavioral and educational issues surrounding diabetes. I invite all of you to join the ADA Research Foundation's Pinnacle Society to help fund this crucial research.

In addition to more research, we also need further education of health care professionals in the areas of behavioral change, experiential learning, cultural diversity, and nutrition. As diabetes health care professionals, we must understand the uniqueness of each person with diabetes if we are to help our patients maximize all their opportunities and reach for the stars.

Karmeen D. Kulkarni, MS, RD, BC-ADM, CD, CDE, is coordinator of the Diabetes Center at St. Mark's Hospital in Salt Lake City, Utah.