Innovative Approaches to Diabetes Education

Preface: The Diabetes Education Renaissance

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The Renaissance Period (1350–1650) is described as a time of renewal and rebirth. It served as the transition from the Middle Ages to modernism, with an end to feudalism and a rise of recognition of the individual. During the Renaissance, there were enormous intellectual and scientific accomplishments that enriched the developing world. In many ways, the influence of the Renaissance on society parallels the evolution of diabetes education.1

From the time that it was recognized that diabetes required complicated treatment and self-discipline, education became essential to its management. The earliest treatments involving starvation diets had to rely on the expertise of those who understood nutrition. Although it was an un sophisticated therapy, even that required an expertise akin to that of a dietitian to support nutritional needs. Later, with the discovery of insulin and the earliest attempts at facilitating appropriate delivery and care, the role of nurses was recognized. One of the first patients to receive insulin relied on a nurse who assisted with injections, nutrition, and activity plans. In the early days of insulin therapy, Elliott Joslin had the wisdom to introduce the concept of “traveling nurses.”2

After the discovery of insulin, when diabetes was considered for a time to be “cured,” the development of new therapies and educational interventions was stagnant. People soon realized, however, that diabetes complications were a serious consequence and that insulin therapy alone was not the final answer. Oral agents were introduced in the late 1950s. Blood glucose monitoring arrived in the 1970s and was heralded as the solution to the problem of complications.

At a 1986 American Diabetes Association (ADA) consensus conference on self-monitoring of blood glucose (SMBG), however, reports were disappointing.3 Although SMBG was received with great enthusiasm, blood glucose control did not improve. Investigators saw the need for improving blood-testing technology, but more importantly, they identified a missing link, namely, that people with diabetes did not respond to their test results. They lacked the education necessary to do so. Industry responded by improving SMBG technology with more sophisticated and user-friendly devices. But sadly, the number of people who receive the education necessary to adequately self-manage their diabetes remains disappointing.4–6

The 1970s had seen an awakening or “rebirth” of education, when Dr. Donnell Etzweiler spearheaded efforts to advance diabetes education. The American Association of Diabetes Educators was organized to support the role of educators, and a certification process was instituted. Other organizations, including the ADA and the American Dietetic Association, also brought diabetes educators into their fold.

The 1980s, however, brought scrutiny and criticism to the emerging field of diabetes education. Published studies suggested that diabetes education did not improve diabetes outcomes.7,8 At the time, measures of success were limited to improvements in knowledge and hemoglobin A1c (A1C) levels. Just as the Renaissance Period is now recognized for its scholarship, diabetes investigators then directed their efforts to the study of diabetes education. Educators and behavioral scientists recognized that
the traditional measures of knowledge and A1C levels were not enough. We learned that behavior change is an appropriate outcome for measuring the effectiveness of diabetes education. Behavioral and psychosocial outcomes should be viewed as having equal importance to metabolic parameters in the measurement of success.2

Just as the Renaissance signaled the breakdown of feudalism and recognition of the role of the individual, diabetes self-management education (DSME) has required a similar shift with changes in both providers’ approaches and patients’ roles. Traditional paternalistic/directive approaches have been shown to be ineffective,10 and now the team approach, with patients at the center of the care team, is a widely accepted model for the provision of quality diabetes care.

In our diabetes education renaissance, we have also gained an appreciation of the roles of professionals in many disciplines in supporting the team approach. Major trials such as the Diabetes Control and Complications Trial and the Diabetes Prevention Program have depended on and recognized the role of educators in all disciplines.11-14 Educator responsibilities have transitioned, and roles have been expanded and elevated. Once facilitators of physician directives, educators are now key decision makers on the diabetes health care team.

Strategies to promote DSME are crucial as the rates of diabetes continue to rise. Diabetes education needs to keep in step with societal trends to meet the challenges of the diabetes epidemic. Experts recommend that new programs be developed and evaluated that can be implemented in a variety of settings, that include behavioral interventions, and that use innovative delivery methods to reach more people as the incidence of diabetes grows.15 This Diabetes Spectrum From Research to Practice section offers exciting insights into creative delivery methods for and novel approaches to diabetes education.

Because > 90% of patients with diabetes receive their care from primary care providers,16 it is crucial to create resources and develop systems specifically for primary care practices. Sharlene Emerson MSN, FNP, CDE, of the University of Pittsburgh in Pennsylvania, offers an approach to the delivery of DSME at point of service in primary care offices (p. 79).

Effective implementation of educational interventions in primary care requires the participation of medical office staff. Diabetes educators Sonya Celeste-Harris, MSN, MBA, RN, and Melinda Maryniuk, MED, RD, CDE, of the Joslin Diabetes Center in Boston, Mass., present a comprehensive program that uses office staff for diabetes improvements in primary care processes and patient outcomes (p. 84).

Health care costs associated with diabetes are rising, and employers in the United States are responsible for their employees’ health care costs. In an effort to keep employees healthy and thereby contain costs, employers are seeking worksite solutions. Initiatives such as those facilitated through the International Diabetes Center (IDC) in Minneapolis, Minn., and described here by Margaret A. Powers, MS, RD, CDE, and her IDC colleagues (p. 90) provide opportunities for people to learn about diabetes self-care in a conducive, accessible environment.

People with diabetes must be empowered to successfully self-manage their disease. Tricia Tang, PhD, and her colleagues at the University of Michigan Diabetes Research and Training Center in Ann Arbor describe their group self-management education programs implemented in high-risk African-American communities in Detroit, Mich. (p. 99).

Electronic health records are replacing paper charts and will be the standard for health care management in the future. Electronic charts provide timely and valuable information to providers. Rachel Hess, MD, MSc, and her colleagues, also at the University of Pittsburgh, describe a unique system that links people with diabetes directly to their own electronic records through a secure computer portal (p. 106). This diabetes portal helps people with diabetes self-manage by giving them direct online access to monitoring tools, information, their providers, and their laboratory test results.

As technology advances, people with diabetes will come to expect that technologically advanced systems will be available to meet their health care needs. For example, teens growing up in the computer age already expect and depend on computer technology as a health care resource. Denise Charron-Prochownik, PhD, CPNP, and her colleagues at the University of Pittsburgh describe their use of CD-ROMs to address sensitive topics such as sexuality and preconception counseling with adolescents with diabetes (p. 110).

The final contribution to this research section (p. 116), from Michael A. Weiss, who served as 2002–2003 Chair of the ADA Board of Directors, is evidence that we have finally moved fully into an era in which the patient’s perspective is sought and valued. As a person living with the challenges of diabetes and also an advocate of DSME, Weiss delivers a message that epitomizes our renaissance theme: our greatest innovation to date has been in the art of listening.

The quality of diabetes care depends on those who provide and support diabetes education efforts. This research section provides valuable information and innovative strategies that can help us meet the societal challenges and educational needs of those living with diabetes both today and in the future.

References
9Glasgow RE, Osteen VL: Evaluating diabetes education: are we measuring the most important outcomes? Diabetes Care 15:1423–1432, 1992


