Diabetes is a disease that affects every part of the body, including the mouth. According to the Centers for Disease Control and Prevention (CDC), diabetes affects 25.8 million people in the United States, 7 million of whom are unaware that they have the condition. Ever-increasing research indicating an oral-systemic link is helping clarify the relationship between diabetes and oral health. For people with unstable blood glucose levels, there is an increased risk of developing serious complications due to poor oral hygiene. Yet a recent study conducted by dLife and SoundView Research, Inc., revealed that 66 percent of active diabetes managers have not changed their oral care habits since being diagnosed.

"Diabetes is an epidemic ... that patients really don't understand the significance of," said JoAnn Gurenlian, RDH, PhD, former chair of the Pharmacy, Podiatry, Optometry, and Dental Professionals (PPOD) Work Group of the National Diabetes Education Program (NDEP). She said that part of the reason is because many people go through a ‘honeymoon period’ where they don't have any recognizable symptoms of diabetes. "There’s nothing screaming, 'I have diabetes.' They may have symptoms, but they’re subtle ... If you have a heart attack, you know you have a problem, but you don’t always feel sick with the initial stages of diabetes. So it’s easy to ignore, while all this is going on, the damage that’s occurring in your body. And it’s easy not to take it seriously, because you don’t feel that bad."

"If you have a heart attack, you know you have a problem, but you don’t always feel sick with the initial stages of diabetes. So it’s easy to ignore, while all this is going on, the damage that’s occurring in your body. And it’s easy not to take it seriously, because you don’t feel that bad."

—JoAnn Gurenlian, RDH, PhD

Gurenlian explained that the relationship between oral health and diabetes is bidirectional. According to an April 2006 supplement to Access she wrote, while diabetes increases the probability of developing periodontal disease, periodontitis also increases the risk of poor glycemic control in people with diabetes compared to individuals with diabetes without periodontitis. She added that poor glycemic control also contributes to a patient's A1C, blood pressure and cholesterol level, and those relationships are bidirectional as well.

Gurenlian and Maria Emanuel Ryan, DDS, PhD, professor of Oral Biology and Pathology at Stony Brook University, agreed that there are two main reasons many patients don’t change their oral care routine after being diagnosed with diabetes. First, the patient is unaware of the extent of the disease and the impact it has on their entire body. The patient might understand the disease’s connections to their weight or feet, but don’t typically think about their mouth. The connection between mouth and body is not readily identified by the patient or health care provider.

"Patients aren’t being assessed for the connections between the two and the oral signs or symptoms of the disease," Gurenlian said. "They are not treatment-planned comprehensively to address this disease condition, because the providers don’t think there is anything different about these patients that requires their attention."

The second factor is a general lack of knowledge in the health care community about the relationship between diabetes and oral health, despite substantial research addressing this point. Ryan believes the transfer of knowledge—from researchers to practitioners and from practitioners to patients—is very slow. Gurenlian added that at least 25 percent of people with diabetes don’t know they have the disease, a point she tries to impress on her oral health colleagues.

"If we were doing a really good medical history, taking vital signs and doing thorough assessments, we could perhaps identify some of those individuals and help them get care," she said. "I really want my oral health colleagues to be on top of their game and to be doing that. Part of what we do as health care providers is to try and identify other health problems. This is one area [where] we could be a tremendous help."

Gurenlian described signs that may raise the dental provider’s index of suspicion, such as a suddenly higher level of gingival inflammation or bleeding, more decay than expected, dry mouth, ropey saliva or other oral symptoms that are not part of the patient’s classic history. Gurenlian takes the time to talk with patients about any changes that may have occurred and suggest that they have their blood glucose checked. She is especially aware of these symptoms for patients who say they are faithful about their home care routine.

"Now that they have a problem, I have to think there must be a systemic problem going on that we have to investigate further," Gurenlian said. "Lo and behold, the patient has diabetes, and that explains some of what I’m seeing in their mouth. Now I know I need to approach it more aggressively, and that I will monitor them more frequently to make sure we have it under control."

According to Ryan, patients with diabetes, or even prediabetes, often experience changes in their oral cavity. "For prediabetes ... increased inflammation is a newly identified risk factor for the development of diabetes. An ounce of prevention to address inflammation is worth a pound of cure," Ryan said. "I can’t imagine that any well-informed person wouldn’t make an effort to slow the onset or even prevent the development of diabetes, and improving on oral health may be an easy place to start."

Gurenlian explained that often providers do not understand their role in prevention and control of diabetes. Patients with diabetes see different specialists for various reasons, but often these providers do not explain how one aspect of the disease, in one part of the body, and can affect the others.

"Our health care workers, whoever they are ... whoever is interacting with the patient, they hear someone has diabetes and just say ‘okay,’ and keep doing what they would normally do," Gurenlian said. She added that health care providers have a responsibility to provide and reinforce good prevention and control messages, help patients understand
their disease process, help patients understand how that systemic disease relates to different body parts, and help get them the best possible care by coordinating their care. "That’s the missing link in all of the care we are providing our [patients with diabetes]. We all work within our specialty, but at some point, somebody has to say, ‘Wait a second, this is the big picture. Let’s make sure all the pieces are being put together.”

Gurenlian and Ryan both stressed the importance of implementing customized treatment protocols, but said that often dental providers do not change their treatment plans for patients at higher risk, like patients with diabetes. Ryan said there is reluctance to changing conventional dental practice, to incorporate risk assessment and reduction strategies as well as the use of adjuncts (antiseptics, antibiotics, host modulatory therapies) to our mechanical therapies (scaling and root planing or surgery), allowing providers to better customize periodontal care and manage patients with diabetes. She added that the changes are happening, but very slowly.

Gurenlian explained that because many patients are unaware of the connection between mouth and body, coordinating care with other health providers is extremely important in dealing with patients with diabetes. She said that recently diagnosed patients might not take in the connection and don’t think they have to do anything differently because they don’t feel so bad and are more concerned with their heart or kidneys than their mouth. Gurenlian added that often, health care providers unrealistically expect patients to absorb everything they are being told at once. This makes it even more important that health care providers, no matter their specialty, be aware of the disease’s effects on the entire body. For this reason, Gurenlian takes time to talk with her patients about what their doctors have told them, reinforcing key points about the disease’s effects on their entire body. She also recommends other forms of care, like balanced nutrition and exercise, in practical ways like walking.

“You have that patient in your chair for a given period of time, and each time they’re with you, you should convey these subtle messages,” she said. She suggested that dental practitioners talk to patients about other diabetes-related topics like nutrition, eye care or foot care, because the provider can reinforce the oral health side while addressing the patient’s overall health. “I want my patients to understand that this is a bidirectional relationship, so that if we improve their oral health, we can improve their glycemic control. If we improve their glycemic control, we improve their oral health. I want them to know that if they lower their A1C, their mouth health will be better. And if they work on their mouth health with me, and do the home care procedures that I recommend, then it will help them control their blood glucose. I really like for patients to get on board with that as fast as possible. I like for them to call and say, ‘I noticed my gums are bleeding,’ and not wait for their next scheduled appointment.”

But getting proper treatment is not always as simple as calling a dental office. Ryan explained that many patients struggle with the costs of dental treatment, especially if they don’t have dental insurance. For a patient with diabetes, a referral from a physician to a foot care expert is covered under medical insurance, but a referral to a dentist is not. If a patient does not have dental insurance, it may be cost-prohibitive for the patient to start improving oral care to help with their overall health care. Dental insurance carriers are beginning to look at people with diabetes as a population that requires more extensive oral care than the average population, Ryan said. Some of the new focus is trying to create new insurance programs that will provide expanded care to higher risk populations such as people with diabetes, because prevention costs less than treatment of long-term complications such as cardiovascular disease and end-stage renal disease that have been associated with severe periodontal disease in people with diabetes. Gurenlian said there are some dental and medical insurance companies that want patients with diabetes to be seen more frequently, which might alleviate the patient’s concern about cost of treatment.

“If people with diabetes were offered the option of having expanded dental care, I believe that many of my patients who have diabetes would opt for expanded coverage because they recognize that they require comprehensive care, and that frequent maintenance visits are essential to proper management,” Ryan said. “It’s also important for employers to understand these connections so that they also opt to provide employees with diabetes their necessary dental benefits, especially since there is data to suggest that there are cost savings that will occur on the medical end when necessary dental care is provided. During these tough economic times, I fear that many people are making very tough decisions as to what they can afford to pay for, and it is important for people with diabetes to understand the value of optimal oral care as part of their overall health investment.”

Ryan said that in addition to the lack of knowledge on the part of patients and providers, the other barrier to dental professionals implementing changes for screening and management of diabetes is reimbursement. There are no established norms for reimbursement relative to diabetes needs including appropriate risk assessment, checking blood glucose or A1Cs (which can be done point-of-care), spending more time with the patient to provide preventive and treatment services, and seeing the patient more frequently. It takes more time for proper risk assessment, care coordination with physicians and getting a reading of the patient’s level of control. So while a dental professional may be willing to take these steps, they may not be reimbursed for their time and effort. Ryan said implementation is very important—especially when looking at data that exists on not managing the periodontal condition of people with diabetes—since patients with severe periodontal disease in people with diabetes—since patients with severe periodontal disease in people with diabetes...
Dental professionals need to develop individualized treatment plans that, like Individual Education Plans for students with special learning needs, are comprehensive and address both the oral health and the systemic needs of patients with diabetes.

"Ninety-nine percent of the time, [this information is] a revelation to my colleagues in dental hygiene and dentistry," she said, adding that while all practitioners know to look out for patients with diabetes, and that they are at risk for an emergency hypoglycemic problem in the practice, some are still not assessing and treatment-planning these patients the way they need to be. "It requires more assessment and thinking about things like, 'These are patients who are at greater risk for periodontal disease and for caries. So what are we going to do differently for them?' You can't just tell patients to do a better job brushing and flossing."

She added that most of her colleagues are surprised that patients with diabetes should not be put on a six-month recall; no more than three months are recommended for people with diabetes, because their bodies can't manage the challenge of the bacterial onslaught of periodontal disease as well as someone who is healthy. Gurenlian also tells her students to re-evaluate patients every six weeks or so to gauge how patients are responding to certain treatments. She suggested that practitioners, especially oral health providers, need to expand their preconceived notions of treating patients and spend more time educating patients.

"We need to break out of our 15- to 45-minute mold. We need to recognize that our patients with diabetes may need more time for their appointments, assessment, education, treatment—all of those factors have to be taken into consideration, and sometimes it just does not fit that mold," Gurenlian said. "We need to customize our time frame for these patients. There's a quote I use in my diabetes course that a doctor said, 'If you don't individualize your care, you're not effective in your care.' I want my patient for the long term. I'm looking at this as, 'We're in it together for the long haul, and my job is to keep you as healthy as possible through that.' I don't have to accomplish everything in one visit."

While working with NDEP and the PPOD Work Group, Gurenlian and other health professionals started teaching continuing education courses on diabetes. Members of the work group taught the courses to get these messages out to their respective professions. In her diabetes course, Gurenlian teaches dental professionals about the different elements of diabetes and their link to oral health care, and how to change your practice to address the concerns of someone with diabetes. She emphasized working with other health care providers when treating a patient with diabetes, especially by reaching out to specialists to keep the patient educated on how to maintain better overall health.

"With the economy being so bad, everybody's worried about if they can postpone that dental appointment or that dental hygiene appointment, or if they have the resources to get the kind of care they need," Gurenlian said. "Patients with diabetes can't afford not to have their health care. I encourage our practitioners and patients to stay on top of their disease management and control."

References


Mariam Pera is Access’ editorial and graphics assistant.