The Burden of Diabetes (Care)

Irl B. Hirsch, MD

Now that there is a plethora of clinical trial data with clinically meaningful end points proving that the burden of diabetes can be improved by a variety of interventions, including glycemic, blood pressure, and lipid control; the use of statins, ACE inhibitors, and aspirin; appropriately timed laser therapy for diabetic retinopathy; and screening of feet at high risk for neuropathic ulcers, it is now time to evaluate just how well we do with our current level of care. Over the past few years, there have been a variety of surveys indicating that despite our evidence-based clinical trial data, diabetes care in the U.S. has been abysmal. Several of these reports have focused on levels of diabetes care comparing how providers of different specialties (and their patients) performed when compared with each other (1–4) in addition to the national standards. The ensuing discussions and controversies did not really address the major problem: all of the providers provided less-than-optimal care, and although there are many reasons for this, perhaps the most important one is the fact that our current systems of diabetes care make outstanding management for all difficult, if not impossible. Unfortunately, many providers confuse the “burden of diabetes,” which refers to diabetes-related morbidity and mortality issues, with the “burden of diabetes care.” This latter concept is all too prevalent for too many physicians. These patients are complex, often do not take the best care of themselves, require multiple medications, and, importantly, often require follow-up between visits. For a primary care provider who may be allowed 10 or, at the most, 15 min to see this patient (an impossible task even with twice as much time), seeing many of these patients is truly burdensome. In a managed care environment or with a large number of Medicare patients where, even under the best of circumstances, it is difficult to keep a practice profitable, it is virtually impossible to provide state-of-the-art diabetes care with these time constraints. Therefore, many times it is necessary to “cut corners” and provide less care than is recommended by national agencies.

In the March issue of Diabetes Care, the article by Suwattee et al. (5) makes several other important points. In this survey of quality of care indicators at an urban academic medical center, patients were divided into three groups depending on where they received their diabetes care: a diabetes clinic, a primary care resident clinic, or a faculty clinic staffed by hospital staff physicians. Although one of the points of the report was that patients in the diabetes clinic received the best quality of care, while those in the faculty clinic the worst, the reality was that except for documentation of at least one yearly A1c level and a yearly foot exam by the providers in the diabetes clinic, none of the groups performed exceptionally well. Even “process measures,” which have less influence of the socioeconomic group of the population than treatment targets, were disappointingly low. For example, in the best clinic (the diabetes clinic), less than two-thirds of the population had a dilated eye exam. In the same clinic, less than two-thirds of the population had a blood pressure <140/90 mmHg (target: <130/80 mmHg), while in the faculty clinic, less than half reached this blood pressure target. Amazingly, 43% of patients in the faculty clinic had A1c measurements >9.5%.

Certainly, the main reason often quoted for why we do so poorly, lack of time, was not relevant in this study. Physicians in the faculty practice saw on average six to seven patients per half-day. This compares to four to five patients for the residents. The problem of time deficits, a common complaint by both patients and their physicians, does not appear to explain the results of this study, especially with regards to process measures. Certainly, the multidisciplinary nature of the diabetes clinic providers may help to explain why they did better with the process measures in particular.

If time constraints were not the major problem for these providers, what problems could explain the poor results for them and others? Again, it seems to me that one main problem is that we don’t have the correct systems in place to care for patients with diabetes. Without the appropriate infrastructure to manage a large population, it is unlikely that we will be successful in providing the appropriate frequency of A1c testing, let alone maintaining the A1c level below the target of 7%. Unfortunately, there are many other well-known barriers. Reimbursement for diabetes services is often too low to make it worthwhile for the physician or health care system to provide state-of-the-art care, which would include diabetes education. The other major hurdle is simply the fact that many physicians are simply not aware of the frequency of the process measures or the nature of the treatment targets. I am always amazed that surveys ask for any A1c measurement (as opposed to quarterly for insulin users) or LDL cholesterol levels <130 mg/dl when the evidenced-based guidelines support stricter control.

What are some of the solutions? Perhaps most importantly, it seems to me that the first priority is a change of attitude for both endocrinologists and non-specialists. As a group, we need to appreciate the fact that our current systems do not work. A group of primary care physicians cannot afford to bring in an entire team of diabetes educators with the current reimbursement rates, and many endocrinologists have realized that the only way to allow their business to survive is to either cut back or eliminate the educators already there. Happens, however, if we take the “burden of care” away from the physicians and move it to the talented advanced practice nurses, clinical nurse specialists, pharmacists, and nutritionists trained in diabetes care.
care? This part of the care does not require a physician for day-to-day glycemic management of the patient, and in fact I would suggest this model would likely provide better care than we physicians currently provide. Indeed, the Diabetes Control and Complications Trial (DCCT) was largely a study proving that nonphysicians could do an outstanding job in providing outstanding glucose control to a population of patients with type 1 diabetes. Furthermore, we have shown that a pharmacist-led team using a system of staged diabetes management could improve HbA1c levels, as compared with usual care (6).

This is not to be interpreted to mean that we do not require physicians for diabetes management. What is suggested is that we provide a larger role for nonphysicians in the glycemic management of our diabetic patients. This was successful in the DCCT, and it is successful in the clinic where I see patients. The fundamental problem with this solution is that reimbursement does not support the nonphysicians, just like it does not support the physicians. On the other hand, by supporting the concept of a physician-supervised nurse- or pharmacist-led diabetes program, in theory more patients should be able to be cared for at a lower cost. Certainly, it would also allow the physician to be involved with other more complicated aspects of care, particularly in relation to treating diabetes-related complications. At the very least, no one can suggest that our current system is well-functioning, suggesting that some type of major change is needed. In this new paradigm, we would still be required to find ways to pay for the new system, but in the long run it should be more cost-effective and efficient to care for a large population of patients.

All too often I hear from colleagues that they would never allow a nutritionist to change an insulin dose or a pharmacist to initiate a new oral agent. For the nutritionist, a change in a carbohydrate ratio is a change in the insulin dose. That is what they are trained to do. Also, many pharmacists have prescription authority. Why would any physician not agree with this, particularly if we all agree our current system does not work?

I would suggest that the major burden is on us—we must appreciate that our current system is nonfunctional, if not dysfunctional. Surveys of diabetes care clearly show that we are not anywhere close to translating clinical trials into routine practice, no matter what the specialty of the physician. It is time for us to take a close look at our current systems of diabetes care and to research better ways to more effectively care for this growing population.

References