

Why Are We Surprised By Our Failures? The Bewildering Complexity of Diabetes Care

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THE ARTICLE BY PORTERFIELD, Reaves, and Patrick-Wubben in this issue of the *North Carolina Medical Journal* nicely outlines recent approaches—especially from the public health perspective—in medical care and self-management for those with diabetes in North Carolina. We have certainly made great strides in dealing with the burden of diabetes in this state, thanks to recent powerful new therapies, a greater understanding of the pathophysiology of insulin resistance and of the link between type 2 diabetes and obesity, and key accomplishments by the state's diabetes control program.

Working Collaborations to Improve Diabetes Care

With major support from the North Carolina Department of Health and Human Services (NC DHHS) and the federal Centers for Disease Control and Prevention (CDC), the state's diabetes control program is now working with a wide range of stakeholders, professional organizations, public and private educational institutions, governmental agencies, civic and church groups. These collaborative efforts not only should have a significant impact on the public health approach to reducing the burden of diabetes, but should strongly influence healthcare providers dealing directly with diabetes patients and their families. One of their key accomplishments that should shape the provision of medical care and self-management is the production of *Patterns of Care*, American Diabetes Association and CDC-compatible guidelines to improve the delivery standards for care providers. To facilitate systematic approaches to provision of best-practice diabetes care, these guidelines also contain sample office aids, such as flow sheets, tools for documenting foot and eye exams, self-management blood sugar logs,

etc. These have been widely promoted and distributed to primary care groups with the assistance of the state's Area Health Education Center network; their presentation at state and local continuing education events has further facilitated distribution. Passage of such bills as House Bill 97-5 and adoption of the *Patterns of Care* guidelines as the state standard of care by the North Carolina Commission for Health Services and all of the state's largest health plans should have had a major impact on diabetes care delivery.

These are only broad brush-strokes to describe current efforts to reduce the burden of diabetes; what is actually being experienced by those engaged in the undertaking? I offer the following commentary from the perspective of a primary care physician, but my experience on the North Carolina Diabetes Advisory Council, with its broad representation of stakeholder providers, leads me to believe that my observations are common ones.

Pharmaceutical Companies—Important Sources of Information

North Carolina's healthcare providers have become well versed in the more aggressive guidelines for the diagnosis and management of diabetes and its associated complications—especially vascular co-morbidities. Professional education has come not only from the state's diabetes control programs but also as a result of appropriate marketing by nearly every major pharmaceutical company offering treatment for diabetes, insulin resistance, and the deadly quartet of hypertension, obesity, dyslipidemia, and glucose intolerance. Over the last decade nearly every manufacturer with antihypertensive, antihyperlipidemic, weight-loss, oral hypoglycemic, and insulin products has launched educational campaigns that not only help position their respective prod-

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ucts in the market place, but provide useful—and often unbiased—information on diabetes care to physicians, nurses, diabetes educators, etc. I believe this has been a very positive contribution. As controversial as the issue is, the plain truth is that, without the support of educational programs by the pharmaceutical industry, much of our direct continuing education, at least to physicians, would not occur.

Not All Payers Are Good Players

I have no doubt that these new product lines have greatly improved our ability to improve glycemic, blood pressure, dyslipidemic and, to a lesser degree, weight control. Research findings, especially from the United Kingdom Prospective Diabetes Study,¹ the Diabetes Control Trial,² and the Diabetes Prevention Program,³ are well known to our providers. Only recently has it become widely accepted that, in many cases, multiple therapies must be combined with the basic essentials of medical nutritional therapy and physical activity to achieve adequate diabetic control. But very real barriers persist that prevent large segments of our diabetic population from achieving ideal diabetes control. Informed healthcare providers and their therapeutic armamentarium are no longer the rate-limiting barriers to diabetic patients achieving control of their disease. In spite of passage of House Bill 97-5, I believe many healthcare payers, including federal, state agencies, and insurance plans—especially those offering managed care-type products—have in many cases effectively prevented subscriber patients and families from receiving diabetes education, glucometers and reagent strips, etc. The result is reduced opportunities for diabetes patients and families to achieve effective self-management of their disease.

For example, it is all too common now for patients, even those with insurance coverage, to face a bewildering array of procedures for obtaining a glucometer and strips for participating in self-management. So convoluted is this process that many patients—and providers as well—who attempt to negotiate the obstacle course give up. This is precisely the outcome, I believe, that a few of the insurance companies hope for. While legally required to provide assistance, they vary their procedures from month to month, vendor to vendor, and pharmacy to pharmacy to such a degree that the “hassle factor” overwhelms nearly all of us, providers and patients alike.

How Well Does Managed Care Manage Chronic Disease?

Aside from some minimal efforts in case management among the highest utilizers of care, managed care—whether provided by insurance companies or Medicare and Medicaid—has not successfully contributed to true management of

chronic diseases such as diabetes. This failure is not due to lack of will. To a large degree the impediment is insufficient funding; an even greater limiting factor, I believe, is the difficulty in obtaining and managing the data required for such efforts. Most North Carolina medical facilities still do not have electronic medical records. Those that do rarely have interfaces that allow the coordination of data from ophthalmologists, podiatrists, endocrinologists, pharmacies, educators, nutritionists, and others who frequently are involved in providing diabetes care.

Reimbursement for provision of diabetes education is extremely poor. While the delivery of quality education is a goal, restrictions like Medicare's reimbursement of only ADA-recognized educational programs exclude patients—especially those in less urban areas—who have no access to such programs. They also do nothing for providers who can and do provide quality education but who are discouraged from qualifying for such recognition by the cumbersome required documentation and financial “hoops.” Even for those providers who do achieve recognition, the rate of reimbursement is in no way proportional to the time required to provide these services.

New Care Models for Chronic Disease Management

Our current fragmented health care system is ill-prepared to coordinate systematic approaches to chronic illness models, such as the one promulgated by Edward Wagner, MD,⁴ and championed by such institutions as the Robert Wood Johnson Foundation. From the health delivery portion of that model, our current primary care delivery system dictates short, 10- to 15-minute visits to overworked providers who work with less sophisticated data systems than do conventional auto repair shops. Patients find themselves waiting months for an appointment, all the while “saving up” issues they want to discuss with their provider, only to have a 15-minute visit during which only the most essential issues get addressed—and these cursorily, considering the complexity of interrelations diabetes has with other co-morbidities. Much of the capacity to change poor health behaviors (dietary indiscretions and sedentary lifestyle), or to consistently step up therapy for glycemic, hypertensive, or dyslipidemic care, depends on frequent follow-up and on in-depth, individualized lifestyle intervention/education—concepts not supported by over-booked schedules and short appointment times. Our experience indicates that successful behavior change requires several educational interventions with consistent follow-up and reinforcement strategies at regular, two-week intervals. A one-time, three-hour class is inadequate and educationally unsound since it overwhelms the learner with too much information in too little time. We and several other groups in the state have been experimenting with group care models, with some success

in providing opportunities for frequent follow-up and significant time at each session for meaningful education. These models appear to be financially viable, even in our current reimbursement system, and they provide paced instructional and reinforcement opportunities coupled with aggressive algorithms for stepping up glycemic control, etc.

Conclusion

Porterfield et al. ask the question, "Can we improve outcomes?" Epidemiological and clinical trial evidence clearly says "yes." Public health campaigns and programs, often supported not only by state, local, and national funds but by foundations such as the Kate B. Reynolds Charitable Trust and the Robert Wood Johnson Foundation, also allow us to state an emphatic, if hopeful, "yes." But, unless the delivery systems that determine the shape of direct patient care take the challenge of chronic disease care more seriously, our ability to improve care will be very slow and incremental. While

slow, positive change is better than no change at all, we are running out of time for addressing the future impact of diabetes. Type 2 diabetes and obesity (now referred to collectively by some as *diabesity*) have reached epidemic proportions in our state and nation. Many of us now have several young teenagers in our practices with obesity-related diabetes. Examination of the rapid rise in the epidemic curves for diabesity renews concern that a new epidemic of vascular complications will be close behind, striking larger segments of the population and manifesting itself at younger ages than ever before. Certainly the costs of these epidemics will be enormous, personally, as well as economically. Healthcare providers have the knowledge and the tools to address these problems now, but until we obtain cooperation from our delivery systems and the resolve of our citizenry, we will not be able to make the necessary changes, either in our delivery systems or in our own behaviors, to defeat "diabesity" at home, in our schools, at the work place, and in our community.

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