Diabetes and Managed Care

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Although there has been a great deal of research confirming the high cost of diabetes, there has been relatively little published medical literature directly addressing ways to manage these costs. This has, however, been an area of great concern for the many enterprises now involved in offering "managed care." On September 12, a symposium sponsored by the Juvenile Diabetes Foundation and Becton Dickinson addressed the topic of "Disease State Management: Diabetes as a Model for Managed Care." Barry Ginsberg, Medical Director of Diabetes at Becton Dickinson, NJ, and conference organizer said, "It is certainly an interesting time for the health care profession." Diabetes, according to Ginsberg, has become a "make or break model for managed care and managed competition."

Janice Cannizzo, Director of Market Planning at Becton Dickinson, defined managed care as "a set of contractual relationships between providers, practitioners, employers/payers, and insurers to provide organized health care to a specific group of consumers, with the goal being to control costs and, now increasingly, to control quality as well." Cannizzo asserted that "improvements in quality actually [can] come at very low cost," without presenting evidence in support of this assertion. The "health care dream" of combining universal access, freedom of choice, and cost control is not, however, itself achievable, as the former two aspects lead inevitably to increased costs. Thus, current directions in managed care are moving in the direction of controlling "access" with use of primary physicians as "gatekeepers" to achieve "appropriate use of resources," with the guiding principle being that "care should be delivered by the lowest cost provider." Cannizzo referred to there being a direct correlation between "control of cost" and "control of choice." She stressed the importance of information technology, saying, "The organizations that succeed will be those that have good information." In general, this is particularly true of the largest plans.

One of the interests of the managed-care enterprises is "disease state–specific management." There has been increasing focus on those patients who incur the greatest costs. The most ill 1% of the population use 30% of health care resources, while the least ill 50% use 1% of these resources. Under these circumstances, treatment of those chronic conditions particularly associated with increased health care costs becomes crucial in determining "the bottom line." Diabetes, while affecting 2.8% of patients, directly accounts for 5.8% of health care costs, and by virtue of its associated illnesses accounts for 12% of total health care expenditures, or over $100 billion annually. This is second only to cancer in chronic disease cost, and ahead of hypertension, asthma, arthritis, and a variety of other conditions. Under the new systems being developed by managed care enterprises, particularly costly (i.e. ill) patients may be assigned "case managers," usually nurses, who try to oversee the care of these individuals in order to decrease costs. An example of the patient care functions that these managers perform would be to maintain frequent telephone contact with individuals who have shown poor compliance with medications. Cannizzo pointed out that, for example, "in organ transplants over 40% of patients don't take the drugs on a daily basis."

The new programs rely extensively on "practice guidelines." Cannizzo pointed out that "in the future [HMOs will develop] detailed rather than broad guidelines." Further, she discussed the impression among these organizations that physicians "really don't know how to follow guidelines." The important ethical and medical issues related to participation in patient care by the HMOs does not seem to have been addressed. She asserted that "long-term, it will be very good for diabetes," but did acknowledge that "in the short-term—now—a lot of organizations are looking only at cost."

Don Etzwiler, president of the International Diabetes Center in Minneapolis, MN, agreed that "the next decade is really going to be turmoil." Achieving a level of care similar to that in the DCCT, where intensively treated patients were called weekly—an intervention not promoted by the current health care system—will be a tremendous challenge. Interestingly, Bill Herman, of the Division of Diabetes Translation, CDC, Atlanta, in discussing the economic aspects of the DCCT, was able to present data suggesting that intensive treatment was preferable to conventional treatment, but only after 18–20 years. "It may not," he commented, "be in an HMO's interest to pay for intensive treatment if they don't have to pay for the late complications." This is, of course, the current situation, where it is politically unlikely that Medicare insurance will be changed substantially, representing a safety net not only for individuals with potential disability, but also for the HMO industry.

Currently, Etzwiler pointed out,

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only 2.5% of diabetes treatment is given by diabetologists and endocrinologists, 21.2% by other specialists, and the remaining 76.3% by primary care physicians. Given the general direction of managed care, it is unlikely that there will be an emphasis on increasing specialty care. HMOs have decreased health care costs by 12% in Minnesota, and they have been most interested in price and cost control, with patient satisfaction rather than the level of patient care per se, being a concern from the perspective of "marketing" their services. Capitation and global budget limits have had tremendous adverse effects on health care professionals. From the health care provider perspective, Etzwiler stressed that tremendous efforts have been needed to reduce costs while maintaining quality. Many groups were unable to "stay in business" with these pressures, and treatment approaches such as patient education have not been encouraged by the managed care providers in Minnesota. Health care administrators suffer from "the short horizon," so that cutting costs has become paramount, and it is very difficult to encourage patients to, for example, perform frequent home blood glucose monitoring, as this clearly increases short-term costs.

Roger Mazze, also from the International Diabetes Center, discussed "staged diabetes management as a model for managed care." He mentioned that before the advent of managed care, academic medical centers were regarded as centers of excellence, and they were allowed to establish what constituted good care, as well as to establish fees for their services in providing such care. Now, neither of these determinations is made by the academic center. Less than half of individuals with diabetes in Minneapolis perform home blood glucose monitoring, and only one quarter have glycated hemoglobin levels in the "good control" range. Costs, however, are high. Mazze asked why cost does not equate with quality. He speculated that this is due to the lack of workable criteria for good care, and that practice guidelines, to be modified at each locality, are necessary for such criteria to be usable. He described the implementation of "a staged diabetes management" method, an algorithm-governed approach to the medical care of individuals with diabetes. With such an approach, targets such as glycemic control, lipids, and blood pressure are predefined for various categories of patients, with manuals of operation used to achieve uniformity of care among "providers."

A program of this type of "nurse clinician management of diabetes in managed care" was described by Mayer Davidson, UCLA, Los Angeles. The program was based on the concept that "appropriate diagnosis and treatment can be made with a minimum of physician time if a well-trained nurse intervenes with patients." Prior to institution of the program, only 5% of patients in the UCLA clinic had an eye examination, 22% an ophthalmologic referral, and 6% a foot examination each year. The nursing intervention included education, dietary counseling, glycemic control, lipid management, obtaining (and often, he mentioned, actually reading) retinal photographs, and instituting foot care. Blood pressure control was referred to the primary physician, but both the physician and the patient were given written notification if the blood pressure was elevated. Nurses saw the patients three times yearly, with the program physician seeing the patient yearly. The nurses' examinations include blood pressure and pulse measurement with assessment for orthostatic change, assessment of the feet, deep tendon reflexes, and vibratory sensation, and fundus photography. Laboratory assessment includes fasting blood glucose and glycated hemoglobin measurement at 2-month intervals and lipid profile, urine analysis, urine albumin, and serum creatinine assessment yearly.

Davidson described the detailed written protocols upon which all treatment is based. Listing the various treatment plans gives a flavor of the level of complexity of the system, which includes separate plans for diet treatment, submaximal sulfonylurea treatment, maximal stable sulfonylurea treatment, initiation of insulin treatment, split/mixed insulin treatment, premeal regular with NPH or ultralente treatment, lipid treatment, gestational diabetes treatment (insulin or diet), pregestational diabetes treatment, etc. Decisions regarding referrals are also based on specific algorithms. These include both emergency and nonemergency programs for retinopathy, foot care, renal failure, and impotence. Davidson presented data (not from concurrently studied control patients, but rather from groups felt to be roughly comparable) suggesting that this program resulted in lower hospitalization rates and greater falls in glycated hemoglobin levels than in other HMO settings.

Are these approaches being extended to larger populations? Ray Favius, medical director for US Healthcare of Blue Ball, PA, spoke on the current efforts of his organization to develop a Diabetes Health Care Program, which is being called "US Diabeticare." He described US Healthcare as an "IPA-HMO" with 1.7 million members, in which primary physicians were capitated, while specialists were reimbursed on a fee-for-service basis. Apparently, a recent survey by the National Committee for Quality Assurance (NCQA) found that US Healthcare was comparable to Kaiser and United Health, two other large HMOs, in most areas of health care treatment, but that an important marker of quality care, yearly eye examinations for diabetic patients, showed a frequency of 51% and 60% for Kaiser and United Health, but only 33% for US Healthcare. While Favius did not explicitly link this to the new program, it appeared that this deficiency was an important motivating force for his organization.

He described a three-part "medical management paradigm" of "identification, intervention, and impact assessment" that would be applied to the diabetes treatment program. First, individuals with diabetes are being identified, using laboratory data, pharmacy data, hospitalization claims, etc. Analysis of

utilization of medical resources, total costs, medications (e.g., insulin vs. oral agents), and laboratory data would then be used to determine the severity of illness for individuals so identified. In response to a question as to whether this violated patient confidentiality, Favius declared that the membership agreement specifically authorizes access to all aspects of the medical record by the organization. After identification and determination of disease severity, interventions on the part of US Diabeticare would include education, both of patients and of physicians, referral of patients to other providers when deemed appropriate, and initiation of comprehensive case management services to promote better access, coordinate home care, enhance medication compliance, refer to support groups, and even "promote flexibility in benefit design to meet treatment needs." For example, pregnant women with diabetes would be assigned to a case manager, a neonatologist, and a high-risk obstetrician. All diabetic women of childbearing age might be given counseling on preconception control. Diabetic patients with proteinuria might be referred to a nephrologist. An even more ambitious intervention, which might be implemented as a pilot program, would be to assign the most ill subgroup of diabetic patients to additional treatment.

Favius described a plan for a task force to address the possibility of "concentrating the diabetic population through a network of integrated specialists." US Healthcare plans to measure the effectiveness of these programs by assessing clinical outcome, functional status, and laboratory results. Visits to the primary physician and to specialists (particularly ophthalmologists), glycated hemoglobin, cholesterol, and urinary albumin measurements, and patient knowledge and satisfaction might be specific measures. Favius explained how the program might affect primary physicians. "They know how US Healthcare works," he said. "In the beginning we just send reports. Once we have confidence in it," he explained, US Healthcare "creates incentives by adjusting provider reimbursement based on assessed performance."

The growth of managed care has been driven by the discrepancy between the 11% annual increase in health care costs on the one hand, and the 6% annual increase in GNP and 1% annual increase in the population of the U.S. Despite these costs, the U.S. ranks 16th and 17th in female and male life expectancy and 20th in infant mortality among OECD countries. Gregory Schmid, an economist at the Institute of the Future in Menlo Park, CA, explains that the general trend in managed care has been to move to contractual relationships where there is a limited amount of money for each patient so there is incentive for cost savings. There is a parallel move for maximizing the profit. "By managing the incentive," Schmid further explained, "you also are changing the incentive to expensive care even when it might be appropriate. There is a real danger about that." "Quite often," said Cannizzo, "doctors are measured on medical and pharmaceutical costs, with penalties for overuse." Etzwiler stressed that the claims that "It isn't going to happen here" and "We won't let it" are "non-options." Managed care will have tremendous effects on our ability to treat diabetes over the coming decades. It will be crucial to pay close attention to these developments.