

January 11, 2006  
Bad Blood

## In the Treatment of Diabetes, Success Often Does Not Pay

By [IAN URBINA](#)

With much optimism, Beth Israel Medical Center in Manhattan opened its new [diabetes](#) center in March 1999. Miss America, Nicole Johnson Baker, herself a diabetic, showed up for promotional pictures, wearing her insulin pump.



Vincent Laforet for The New York Times

Dr. Gerald Bernstein directed Beth Israel's diabetes center, with its focus on education.

In one photo, she posed with a man dressed as a giant foot - a comical if dark reminder of the roughly 2,000 largely avoidable diabetes-related amputations in New York City each year. Doctors, alarmed by the cost and rapid growth of the disease, were getting serious.

At four hospitals across the city, they set up centers that featured a new model of treatment. They would be boot camps for diabetics, who struggle daily to reduce the sugar levels in their blood. The centers would teach them to check those levels, count calories and exercise with discipline, while undergoing prolonged monitoring by teams of specialists.

But seven years later, even as the number of New Yorkers with Type 2 diabetes has nearly doubled, three of the four centers, including Beth Israel's, have closed.

They did not shut down because they had failed their patients. They closed because they had failed to make money. They were victims of the byzantine world of American health care, in which the real profit is made not by controlling chronic diseases like diabetes but by treating their many complications.

Insurers, for example, will often refuse to pay \$150 for a diabetic to see a podiatrist, who can help prevent foot ailments associated with the disease. Nearly all of them, though, cover amputations, which typically cost more than \$30,000.

Patients have trouble securing a reimbursement for a \$75 visit to the nutritionist who counsels them on controlling their diabetes. Insurers do not balk, however, at paying \$315 for a single session of dialysis, which treats one of the disease's serious complications.

Not surprising, as the [epidemic](#) of Type 2 diabetes has grown, more than 100 dialysis centers have opened in the city.

"It's almost as though the system encourages people to get sick and then people get paid to treat them," said Dr. Matthew E. Fink, a former president of Beth Israel.

Ten months after the hospital's center was founded, it had hemorrhaged more than \$1.1 million. And the hospital gave its director, Dr. Gerald Bernstein, three and a half months to direct its patients elsewhere.

The center's demise, its founders and other experts say, is evidence of a medical system so focused on acute illnesses that it is struggling to respond to diabetes, a chronic disease that looms as the largest health crisis facing the city.

America's high-tech, pharmaceutical-driven system may excel at treating serious short-term illnesses like coronary blockages, experts say, but it is flailing when it comes to Type 2 diabetes, a condition that builds over time and cannot be solved by surgery or a few weeks of taking pills.

Type 2, the subject of this series, has been linked to [obesity](#) and inactivity, as well as to heredity. (Type 1, which comprises only 5 percent to 10 percent of cases, is not associated with behavior, and is believed to stem almost entirely from genetic factors.)

Instead of receiving comprehensive treatment, New York's Type 2 diabetics often suffer under substandard care.

They do not test their blood as often as they should because they cannot afford the equipment. Patients wait months to see endocrinologists - who provide critical diabetes care - because lower pay has drawn too few doctors to the specialty. And insurers limit diabetes benefits for fear they will draw the sickest, most expensive patients to their rolls.

Dr. Diana K. Berger, who directs the diabetes prevention program for the City Department of Health and Mental Hygiene, said the bias against effective care for chronic illnesses could be seen in the new popularity of another high-profit quick fix: bariatric surgery, which shrinks stomach size and has been shown to be effective at helping to control diabetes.

"If a hospital charges, and can get reimbursed by insurance, \$50,000 for a bariatric surgery that takes just 40 minutes," she said, "or it can get reimbursed \$20 for the same amount of time spent with a nutritionist, where do you think priorities will be?"

## **Back in the Pantsuit**

Calorie by calorie, the staff of Beth Israel's center tried to turn diabetic lives around from their base of operations: a classroom and three adjoining offices on the seventh floor of Fierman Hall, a hospital building on East 17th Street.

The stark, white-walled classroom did not look like much. But it was functional and clean and several times a week, a dozen or so people would crowd around a rectangular table that was meant for eight, listening attentively, staff members said.

Claudia Slavin, the center's dietitian, remembers asking the patients to stand, one by one.

"Tell me what your waking blood sugar was," she told them, "and then try to explain why it is high or low."

People whose sugars soar damage themselves irreparably, even if the consequences are not felt for 10 or 20 years. Unchecked, diabetes can lead to kidney failure, blindness, [heart disease](#), amputations - a challenging slate for any single physician with a busy caseload to [manage](#).

One patient, Ella M. Hammond, a retired school administrator, recalled standing up in the classroom one day in 1999.

"Has anyone noticed what's different about me?" Ms. Hammond asked.

Blank stares.

"Now, come on," she said, ruffling the fabric of a black gabardine pantsuit she had not worn since slimmer days, years earlier.

"Don't y'all notice 20 pounds when it goes away?" she asked.

Ms. Slavin, one of four full-time staff members who worked at the center, remembers laughing. There were worse reasons for an interruption than a success story.

Like many Type 2 diabetics, Ms. Hammond had been warned repeatedly by her primary care doctor that her weight was too high, her lifestyle too inactive and her [diet](#) too rich. And then she had been shown the door, until her next appointment a year later.

"The center was a totally different experience," Ms. Hammond said. "What they did worked because they taught me how to deal with the disease, and then they forced me to do it."

Two hours a day, twice a week for five weeks, Ms. Hammond learned how to manage her disease. How the pancreas works to create insulin, a hormone needed to process sugar. Why it is important to leave four hours between meals so insulin can finish breaking down the sugar. She counted the grams of carbohydrates in a bag of Ruffles salt and vinegar potato chips, her favorite, and traded vegetarian recipes.

After ignoring her condition for 20 years, Ms. Hammond, 63, began to ride a bicycle twice a week and mastered a special sauce, "more garlic than butter," that made asparagus palatable.

She also learned how to decipher the reading on her A1c test, a periodic blood-sugar measurement that is a crucial yardstick of whether a person's diabetes is under control.

"I was just happy to finally know what that number really meant," she said.

Many doctors who treat diabetics say they have long been frustrated because they feel they are struggling single-handedly to reverse a disease with the gale force of popular culture behind it.

Type 2 diabetes grows hand in glove with obesity, and America is becoming fatter. Undoubtedly, many of these diabetics are often their own worst enemies. Some do not exercise. Others view salad as a foreign substance and, like smokers, often see complications as a distant threat.

To fix Type 2 diabetes, experts agree, you have to fix people. Change lifestyles. Adjust thinking. Get diabetics to give up sweets and prick their fingers to test their blood several times a day.

It is a tall order for the primary care doctors who are the sole health care providers for 90 percent of diabetics.

Too tall, many doctors say. When office visits typically last as little as eight minutes, doctors say there is no time to retool patients so they can adopt an entirely new approach to food and life.

"Think of it this way," said Dr. Berger. "An average person spends less than .03 percent of their entire life meeting with a clinician. The rest of the time they're being bombarded with all the societal influences that make this disease so common."

As a result, primary care doctors often have a fatalistic attitude about controlling the disease. They monitor patients less closely than specialists, studies show.

For those under specialty care, there is often little coordination of treatment, and patients end up Ping-Ponging between their appointments with little sense of their prognosis or of how to take control of their condition.

Consequently, ignorance prevails. Of 12,000 obese people in a 1999 federal study, more than half said they were never told to curb their weight.

Fewer than 40 percent of those with newly diagnosed diabetes receive any follow-up, according to another study. In New York City, officials say, nearly 9 out of 10 diabetics do not know their A1c scores, that most fundamental of statistics.

In fact, without symptoms or pain, most Type 2 diabetics find it hard to believe they are truly sick until it is too late to avoid the complications that can overwhelm them. The city comptroller recently found that even in neighborhoods with accessible and adequate health care, most diabetics suffer serious complications that could have been prevented.

This grim reality persuaded hospital officials in the 1990's to try something different. The new centers would provide the tricks for changing behavior and the methods of tracking complications that were lacking from most care.

Instead of having rushed conversations with harried primary care physicians, patients would discuss their weights and habits for months with a team of diabetes educators, and have their conditions tracked by a panel of endocrinologists, ophthalmologists and podiatrists.

"The entire country was watching," said Dr. Bernstein, director of the Beth Israel center, who was then president of the American Diabetes Association.

By all apparent measures, the aggressive strategy worked. Five months into the program, more than 60 percent of the center's patients who were tested had their blood sugar under control.

Close to half the patients who were measured had already lost weight. Competing hospitals directed patients to the program.

"For the first time in my 23 years of diabetes work I felt like we had momentum," said Jane Seley, the center's nurse practitioner. "And it wasn't backwards momentum."

## **Failure for Profit**

From the outset, everyone knew diabetes centers were financially risky ventures. That is why Beth Israel took a distinctive approach before sinking \$1.5 million into its plan.

Instead of being top-heavy with endocrinologists, who are expensive specialists, Beth Israel relied more on nutritionists and diabetes educators with lower salaries, said Dr. Fink, the hospital's former president.

The other centers that opened took similar precautions.

The St. Luke's-Joslin diabetes center, on the Upper West Side, tried lowering doctors' salaries, hiring dietitians only part time and being aggressive about getting reimbursed by insurers, said Dr. Xavier Pi-Sunyer, who ran the center.

Mount Sinai Hospital's diabetes center hired an accounting firm to calculate just how many bypass surgeries, [kidney transplants](#) and other profitable procedures the center would have to send to the hospital to offset the cost of keeping the center running, said Dr. Andrew Drexler, the center's director.

Nonetheless, both of these centers closed for financial reasons within five years of opening.

In hindsight, the financial flaws were hardly mysterious, experts say. Chronic care is simply not as profitable as acute care because insurers, and consumers, do not want to pay as much for care that is not urgent, according to Dr. Arnold Milstein, medical director of the Pacific Business Group on Health.

By the time a situation is acute, when dialysis and amputations are necessary, the insurer, which has been gambling on never being asked to cover procedures that far down the road, has little choice but to cover them, if only to avoid lawsuits, analysts said.

Patients are also more inclined to pay high prices when severe health consequences are imminent. When the danger is distant, perhaps uncertain, as with chronic conditions, there is less willingness to pay, which undercuts prices and profits, Dr. Milstein explained.

"There is a lesser sense of alarm associated with slow-moving threats, so prices and profits for chronic and preventive care remain low," he said. "Doctors, insurers and hospitals can command much higher prices and profit margins for a bypass surgery that a patient needs today than they can for nutrition counseling likely to prevent a bypass tomorrow."

Ms. Seley said the belief was that however marginal the centers might be financially, they would bring in business.

"Diabetes centers are for hospitals what discounted two-liter bottles of Coke are to grocery stores," she said. "They are not profitable but they're sold to get dedicated customers, and with the hospitals the hope is to get customers who will come back for the big moneymaking surgeries."

Indeed, former officials of the Beth Israel center said they anticipated that operating costs would be underwritten by the amputations and dialysis that some of their diabetic patients would end up needing anyway, despite the center's best efforts. "In other words, our financial success in part depended on our medical failure," Ms. Slavin said.

The other option was to have a Russ Berrie.

Mr. Berrie, a toymaker from the Bronx, made a fortune in the 1980's through the wild popularity of a product he sold, the Troll doll, a three-inch plastic monster with a puff of fluorescent hair. Mr. Berrie took more than \$20 million of his doll money and used it to finance the diabetes center at Columbia University Medical Center in memory of his mother, Naomi, who had died of the disease. The center was also helped by a million-dollar grant from a company that makes diabetes drugs and equipment.



Vincent Laforet for The New York Times

Dr. Maudene Nelson delivering a lecture to diabetes patients at the innovative Naomi Berrie Diabetes Center in Manhattan.

for multiple visits with doctors and educators on the same day because it needed to take advantage of the limited time it had with its patients. But every time a Medicaid patient went to a diabetes education class, and then saw a specialist, the center lost money, she said. Medicaid, the government insurance program for the poor, will pay for only one service a day under its rules.

The center also lost money, its former staff members said, every time a nurse called a patient at home to check on his diet or contacted a physician to relate a patient's progress. Both calls are considered essential to getting people to change their habits. But medical professionals, unlike lawyers and accountants, cannot bill for phone time, so more money was lost.

Even with its stable of generous donors, even with more than 10,000 patients filing through the doors each year, the Columbia center struggles financially, said Dr. Robin Goland, a co-director. That, she said, is because the center runs a deficit of at least \$50 for each patient it sees.

Without wealthy benefactors, Beth Israel's center had an even tougher time surviving its financial strains.

Ms. Slavin said the center often scheduled patients

And the insurance reimbursement for an hourlong diabetes class did not come close to covering the cost. Most insurers paid less than \$25 for a class, said Denise Rivera, the secretary for the center.

"That wasn't even enough to pay for what it cost to have me to do the paperwork to get the reimbursement," she said.

Beth Israel was not alone in this predicament. Dr. C. Ronald Kahn, president and director of the Joslin Diabetes Center in Boston, the nation's largest such center, with 23 affiliates around the country, said that for every dollar spent on care, the Joslin centers lost 35 cents. They close the gap, but just barely, with philanthropy, he said.

"So you have the institutions, which are doing much of the work in dealing with this major health epidemic, depending on charity," he said. "In the long run, this is definitely not a tenable system."

## **Plastic Strips and Red Tape**

Sidney Schonfeld was not a patient at Beth Israel, but he ran into his own set of financial obstacles in trying to manage his disease.

"Controlling my condition isn't that hard," said Mr. Schonfeld, 82, a retired businessman from Washington Heights. "The hard part are the things outside my control, like getting the test strips and the medicines."

Test strips are not complicated pieces of medical equipment. They are inch-long pieces of plastic with tiny metal tabs that diabetics use to measure the sugar in their blood. After pricking their finger, diabetics place a drop of blood on the strip and then insert it into the side of a handheld meter that analyzes their sugar levels.

Each strip costs only about 75 cents, but many diabetics are poor and, over the course of a year, those who test their blood frequently, as instructed, will spend more than \$500 on strips.

Mr. Schonfeld, like many diabetics, is supposed to test his blood at least twice a day so he can make adjustments to his diet and medications that can ward off serious complications. But many insurers cover only one strip per day unless a patient obtains written justification from a doctor. Even with letters from his doctor, Mr. Schonfeld has had a tough time getting insurers to pay for his strips, his doctor and nurse said.

"Fighting the disease is only half of this job," said Mr. Schonfeld's doctor, Dr. Goland. She held up a manila folder thick with letters that she had sent to his insurer explaining Mr. Schonfeld's case. Mr. Schonfeld had his own pile of letters: the rejection notices he got back.

Dr. Goland says that Mr. Schonfeld has good reason to be vigilant. His mother lost her left foot to Type 2 diabetes. She died several months later after gangrene spread to her right. Mr. Schonfeld's six uncles and aunts on his mother's side had the disease. Three of them underwent amputations. His son, Gary, is also diabetic.

"You can't get a more textbook high-risk case than Sidney," Dr. Goland said.

Though the health care system asks diabetics to become rigorously involved in daily management of their conditions, red tape and the cost of drugs and supplies put self-management out of reach for many patients. As a result, many diabetics either do without or pay out of their own pockets. Some resort to other means to get their supplies.

In Indiana, hospital workers organized Diabetes Bingo Night last May to collect money for strips and supplies. In California, F.B.I agents found that diabetics were buying stolen strips on eBay. Last year, the agents charged a couple with mail fraud and accused them of having sold \$2.5 million worth of stolen test strips and supplies.

In East Harlem, doctors at Mount Sinai were mystified by a number of cases in 2002: patients came into the hospital asserting that they had been testing themselves daily and were sure that their blood sugar was under control. Hospital tests, however, showed just the opposite.

"We finally figured out," said Dr. Carol R. Horowitz, an assistant professor at the Mount Sinai School of Medicine, "that patients who could not afford the strips for their blood monitor were buying cheaper strips that were incompatible and that were giving false reads."

At least they knew they had the disease. A third of diabetics do not, in part because doctors do not screen as often as they should, studies show. Since symptoms do not appear for 7 to 10 years on average, the effects of the elevated sugars begin to build and become irreversible.

Mr. Schonfeld has known about his diabetes for more than 20 years and prides himself on keeping it in check.

"I've seen what it can do," he said. "So I know better than to ignore it."

When Dr. Goland told him to limit the chocolate mousse and frankfurters, he did.

When she told him to start walking two miles a day, he did that, too. But her instructions to test his blood at least twice a day were not as easy to follow.

Mr. Schonfeld runs out of strips even though he tries to plan ahead by ordering extras, said Kathy Person, his nurse. "The insurance reps say they don't want the strips to end up on the black market, so they don't let people preorder extras," she said.

The Naomi Berrie Diabetes Center has a full-time staff member who tries to do the clerical work associated with insurance coverage. "Still, it's a struggle to keep up with the paperwork," Dr. Goland said.

Some doctors simply do not have time and patients are left to haggle with insurers - usually unsuccessfully - on their own.

Although a recent federal study found that an increasing number of health insurers cover strips, few cover more than one a day, according to strip manufacturers. In fact, a study last year by Georgetown University found that insurance restrictions on strips and other services for diabetics were reducing the quality of care.

"I was a businessman for more than 40 years," said Mr. Schonfeld, a former food importer. "What I just don't understand is how these insurance companies can operate the way they do and keep their customers."

## **Sick Patient? Expensive Patient**

As it turns out, keeping customers who are diabetic is not the goal of most health insurance companies, experts said. Avoiding diabetics is actually more the point.

Understanding why, the experts said, requires an appreciation of one of the crucial obstacles to better diabetes care.

Most insurers do not operate the way Mr. Schonfeld did in the import business, luring additional customers by advertising a good product at a fair price. Were they to operate in that fashion, health plans looking to grow might advertise better coverage for diabetics, such as a wide choice of blood-sugar monitors.

But in the insurance business - and virtually all businesses based on risk - the point is not to attract the most customers but rather the best ones. As businesses, not charities, insurers need to attract healthy customers, not sick ones, said David Knutson, a former insurance executive who studies the industry's economics for the Park Nicollet Institute, a health research organization in Minneapolis.

As a result, experts say, insurance executives usually think twice before bolstering their diabetes benefits, for fear they will attract the chronically ill.

In a 2003 survey, 87 percent of health insurance actuaries queried by Mr. Knutson said that if they were to improve coverage with richer drug benefits or easier access to specialists, they would incur financial problems by attracting the sickest, most expensive patients.

"Insurers are as eager to attract the chronically ill as banks are interested in loaning to the unemployed," Mr. Knutson said. "The chances of losing money are simply too high."

Insurers are not alone in these concerns. Large employers, many of which devise and finance their own employee health plans, know that their allotted reserves are jeopardized if too much of their work force is seriously ill. Last year, for example, a Wal-Mart executive suggested in an internal memo that the company could reduce costs by discouraging unhealthy people from applying for work.

Even when insurers are simply third-party administrators, processing claims but not covering the actual medical expenses, they try to keep claims down by attracting healthier patients to their plans, Mr. Knutson said.

Similarly, coverage for Medicaid recipients, though underwritten by the government, can be subject to the same private-sector pressures. More than 70 percent of Medicaid recipients in New York now receive their health care through private health maintenance organizations that operate under government contract. These H.M.O.'s get the same annual flat fee from the government, regardless of whether the patient is robustly healthy or chronically ill, thus creating an incentive to attract the healthiest customers.

For insurers, the high cost of attracting the sick is far from a hypothetical problem, said David V. Axene, president of Axene Health Partners, a consulting firm that advises these companies. For each additional session of nutritional counseling, he said, an insurer must account for the likely cost of luring sick patients away from its competitors.

Mr. Axene cited an example from several years ago when, he said, an insurer became puzzled about why a provider network that it had set up at a Boston hospital was consistently over budget. Mr. Axene's company found that two-thirds of the hospital's diabetics had chosen to enroll in that network over others.

The reason? The insurer had mistakenly listed an endocrinologist on its network's primary care physician list, he said.

"These patients no longer needed to get a referral to see the endocrinologist, and with one visit they could get their general and their diabetes needs filled," Mr. Axene said. Within months, the network had redrafted its lists, dropping the endocrinologist, he said.

Mohit Ghose, a spokesman for America's Health Insurance Plans, an industry trade association, said insurers were working to improve chronic care coverage. Many have created disease management programs to track their sickest patients and pay bonuses to doctors who show results in treating the chronically ill.

"Is there still a long way to go? Yes, definitely," Mr. Ghose said. "But we're on the right track."

Some preventive measures would, at first glance, seem sure money savers for health insurers since they might eliminate or forestall expensive diabetes complications down the road. But many insurers do not think that way. They figure that complications are often so far into the future, insurance analysts say, that many people will have already switched jobs or insurers, or have even died, by the time they hit. As a result, any savings from preventive measures will only go to their competitors anyway, analysts say.

In fact, experts say, people generally change their health insurance about every six years.

"It's perverse," Mr. Knutson said. "But it's the reality of there being a weak business case for quality when it comes to handling chronic care."

## **'Jerry, We Need to Talk'**

It usually took Dr. Bernstein seven minutes to walk from his office in Fierman Hall to the hospital president's office across 17th Street. On Jan. 4, 2000, he had a bounce in his step, and it took him half that time, he recalled.

He had a good story to tell, and graphs and tables to back it up. The Beth Israel center was an unqualified medical success. In fact, patient loads were growing by 20 percent each month as its reputation spread.

When he arrived, Dr. Fink, then the hospital's president, asked the three other executives to take their seats. Dr. Bernstein began talking before he had reached his chair.

"Things are really coming along well," he said as he handed out a spreadsheet. "Patients are starting to turn their lives around."

Pausing, Dr. Bernstein looked around the table. He was struck by an awkward silence.

"Jerry, we need to talk about what is happening at the hospital," Dr. Fink said. "We're going to have to close your program."

Dr. Bernstein cannot say which was more jarring: the news or the way it arrived.

Numb, he kept his composure for 25 minutes, he said. The administrators explained that the hospital was running a deficit. The diabetes program was not helping matters.

"It was really not about the medicine but the business," Dr. Fink said recently about the meeting. "That didn't make it any easier to deliver the news, especially since I had been one of the main advocates behind getting the center started."

After the meeting, as Dr. Bernstein walked back to his office, he wondered where he would direct the program's 300 or so patients. Still, he remained sympathetic to the hospital's plight.

"I was not of the belief that we should save the center only to end up losing the hospital," he said.

For many of the patients, the news was a second strike of lightning. They had come to Dr. Bernstein only after being cut loose by the closing of the St Luke's diabetes center earlier that year. Now they were being cut loose again, to drift back to a life of limited care options: understaffed and overwhelmed clinics; general practitioners with too little time; a city with about 100 overbooked diabetes educators surrounded by 800,000 patients; and a shortage of endocrinologists, the specialists who are often critical providers of diabetes care.

Since endocrinology is one of the lower-paying specialties, there is a national shortage of such doctors. In New York, with its armies of diabetics, patients must often wait months for an appointment with one of fewer than 200 endocrinologists. The poorest patients face the biggest problem, as only a fraction of the specialists accept Medicaid.

Once the center had closed, Dr. Bernstein continued to teach at Beth Israel, but he began to devote more and more time to a side project. He was working on an inhaler that delivers insulin in the form of a mist. The product is being developed by Genex, and it is designed to appeal to patients who are reluctant to use insulin because they do not like the idea of injections or needles.

But the device will probably cost about 15 percent more than traditional insulin and is likely to be too expensive for many of the poorest diabetics, who are often the patients who need it most because their illness is most severe.

"The center was a way to really make a dent in this epidemic," Dr. Bernstein said. "The inhaler is a promising breakthrough. But it's mostly a business opportunity."

Other pharmaceutical innovations are likely to soften the toll of diabetes for many patients in coming years, doctors said. With an average diabetic spending more than \$2,500 per year on

drugs and equipment, pharmaceutical companies have good reason to focus their attention on the more than \$10 billion market in controlling the disease's complications.

But there is only so much the drugs can do, they add, if they are not accompanied by the sort of changes in patient habits that the centers fostered through education and monitoring.

Health economists suggest that if these preventive measures were practiced on a wide scale, complications from diabetes would be largely eliminated and the American medical system, and by extension taxpayers, could save as much as \$30 billion over 10 years. The experts disagree on what such an effort would cost. (How much nutrition counseling does it take to wean the average person from French fries?) Nonetheless, many of them believe the cost would be largely offset by the savings.

Dr. Bernstein says the lone hope on the horizon is a restructured reimbursement system that puts the business of chronic care on a more competitive footing with acute care. Experts say this restructuring could start if government insurance programs like Medicaid began paying more for preventive efforts like education, a move that the private sector would be likely to follow.

"Until we address the financing and the reimbursement structure, this disease is going to rage out of control," Dr. Bernstein said.

Not everyone believes the centers were the best answer to diabetes care. Even with their demise, many hospitals, clinics and endocrinology practices say they are providing cost-effective, quality treatment.

"The care we provide now is on the par with what was offered before," said Dr. Leonid Poretsky, who became director of Beth Israel's endocrinology division after the diabetes program closed. "The main difference is that we are financially viable because half of our patients are not diabetic."

These facilities, though, often find themselves in the same position the centers did: financing prevention efforts with profits from the very kidney transplants and amputations that preventive care is meant to deter.

It is tough to convince a former patient like Ms. Hammond that the closing of the Beth Israel center was anything but a mistake. She had started to make critical changes in her lifestyle after just a few weeks there. She did not find out it had closed, she said, until several months after the doors had shut, when she called looking to sign up for a refresher class. She was starting to fall back into old habits.

"I needed reminding," she said.

With the center gone, Ms. Hammond said she has had to try to muddle through. She goes to the podiatrist once a year, but she said she could not remember the last time she visited an eye doctor. She has gained about 40 pounds.

Some days she wakes up and her blood sugar is high. Other mornings she doesn't bother to check, she said.

"I couldn't get to where I was before," she said.

Two years ago, she said, she took a last look at that favorite gabardine pantsuit she had once modeled for her class. Then, she said, she gave it to her cousin.

## Good Care, Bad Business

Some diabetes centers have been forced to close because they lost money. Here is the care a patient typically received at a New York center and its estimated costs and insurance reimbursements for that care. The estimates were provided by specialists who directed such centers. They used reimbursement rates for Medicare, which typically pays more than Medicaid and less than private insurance and is used by an estimated 40 percent of diabetics in New York State.

	ENDOCRINOLOGIST	OPHTHALMOLOGIST	DIABETES EDUCATOR	NUTRITIONIST	PODIATRIST
LENGTH OF VISIT	40-60 minutes	40-60 minutes	60 minutes	50 minutes	35 minutes
COST OF CARE	\$200	\$300	\$70	\$70	\$150-200
REIMBURSEMENT	\$100	\$225	\$15-30	\$15-30	\$30-90
CUMULATIVE AMOUNT LOST BY CENTER	\$100	\$175	\$215-230	\$255-285	\$315-455

### ENDOCRINOLOGIST



LENGTH OF VISIT  
COST OF CARE  
REIMBURSEMENT

Establishes a baseline of the diabetic's condition with a battery of blood tests. Checks blood pressure, heart rate, allergies, medications. Determines patient's exercise, eating and work habits. Discusses the risks of complications and of prescribed medicines.

### OPHTHALMOLOGIST



40-60 minutes  
\$300  
\$225

Examines eyes and checks sight to prevent blindness, a common complication of diabetes, which often destroys the small blood vessels in the back of the eye. May also take retinal photographs and dilate the pupils to check for cataracts and glaucoma.

### DIABETES EDUCATOR



60 minutes  
\$70  
\$15-30

Discusses diabetes symptoms and complications. Trains patient in use of a blood-sugar monitor and about the side effects of medications. If insulin use is prescribed, explains how to inject the drug and to adjust doses depending on the amount of food eaten.

### NUTRITIONIST



50 minutes  
\$70  
\$15-30

Teaches patient how to control weight and blood sugar by devising a diet that limits portion sizes. Trains patient how to calculate the grams of carbohydrates in a meal and how to eat a more balanced diet.

### PODIATRIST



35 minutes  
\$150-200  
\$30-90

Checks feet for sores, a common consequence of neuropathy, or nerve damage, and for peripheral arterial disease, or poor circulation, to eliminate the need for an amputation. Teaches patient how to cut toenails and handle corns and calluses.

CUMULATIVE AMOUNT  
LOST BY CENTER

\$100



\$175



\$215-230



\$255-285



\$315-455



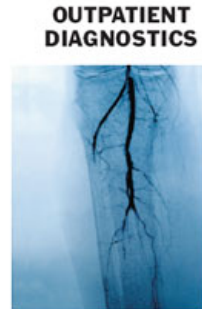
## Bad Health, Good Business

Though the medical system often loses money providing preventive care for diabetics, it usually makes money in treating their complications. Here is the care a foot amputee typically receives, what it often costs, and how much the medical staff is reimbursed.

Researchers estimated the costs of care and used Medicare reimbursement rates, averaged for several areas of the country. The American Hospital Association, which reviewed the hospitalization numbers, said the approach was reasonable. While some hospitals have a poorer, sicker, more costly population of patients, the researchers said the numbers were representative of the profits made on a typical amputation in most areas.



**DOCTOR VISIT**



**OUTPATIENT  
DIAGNOSTICS**



**HOSPITALIZATION**



**OUTPATIENT  
PHYSICAL THERAPY**



**PROSTHETIC**

COST OF CARE	<b>\$53</b>	<b>\$145</b>	<b>\$7,733-17,594</b> (to the hospital)	<b>\$160</b> per hour	<b>\$11,668</b>
REIMBURSEMENT	<b>\$81</b>	<b>\$214</b>	<b>\$19,093</b> (to the hospital)	<b>\$117</b> per hour	<b>\$12,923</b>
PROFIT	<b>\$28</b>	<b>\$69</b>	<b>\$1,499-11,360</b>	<b>Loss of \$43</b> per hour	<b>\$1,255</b>

The diabetic finds a sore on the ball of his right foot. It does not hurt because the diabetic already has nerve damage. But an infection is spreading, the foot is purplish and it smells bad. He goes to see his primary care physician, who finds no pulses, indicating a loss of circulation.

A vascular surgeon orders an angiogram, in which a dye is injected to check the circulation in the foot. He confirms the loss of circulation and finds that major vessels below the knee are blocked. He decides that the foot cannot be saved.

The right leg is amputated below the knee in an operation that takes close to three hours and involves two surgeons, a nurse anesthetist and an operating room team. In addition to the hospital's bill, the physicians earn a 5 percent to 10 percent profit, experts estimate.

After a week recovering in the hospital, the patient goes home and takes physical therapy three to five times a week for 10 weeks. He rebuilds muscle strength and learns to walk with crutches at the therapy center, which is often tied to the hospital where the amputation was performed.

Specialists make sure the limb has healed, prescribe pain medications and discuss the appropriate type of prosthesis. For five months after the surgery, the patient regularly visits a prosthetist who fits him for a temporary prosthesis — which is worn for 12 weeks — and then a permanent one.