

# Medtronic's Grand Opera

Interview by Greg Freiherr

**A**fter a decade of growth during which revenues quintupled to \$5 billion, Medtronic has laid claim to the title of world's largest manufacturer of medical devices. The company has done so through internal expansion and external acquisition, with a workforce that has ballooned from 7500 workers to 25,000. The changes have thrilled investors, whose shares have risen 1400% on the heels of six stock splits between 1991 and 2000.

Orchestrating this corporate growth has been Bill George, who joined the firm in 1989 as president and COO, then was elected CEO two years later by the board of directors. George embraced the mission and philosophy of Medtronic, imbuing the company ranks with his own sense of purpose and dedication. He broadened corporate horizons, leading Medtronic beyond pacemakers—the technology on which the company was founded—to become a maker of implantable and invasive therapies.

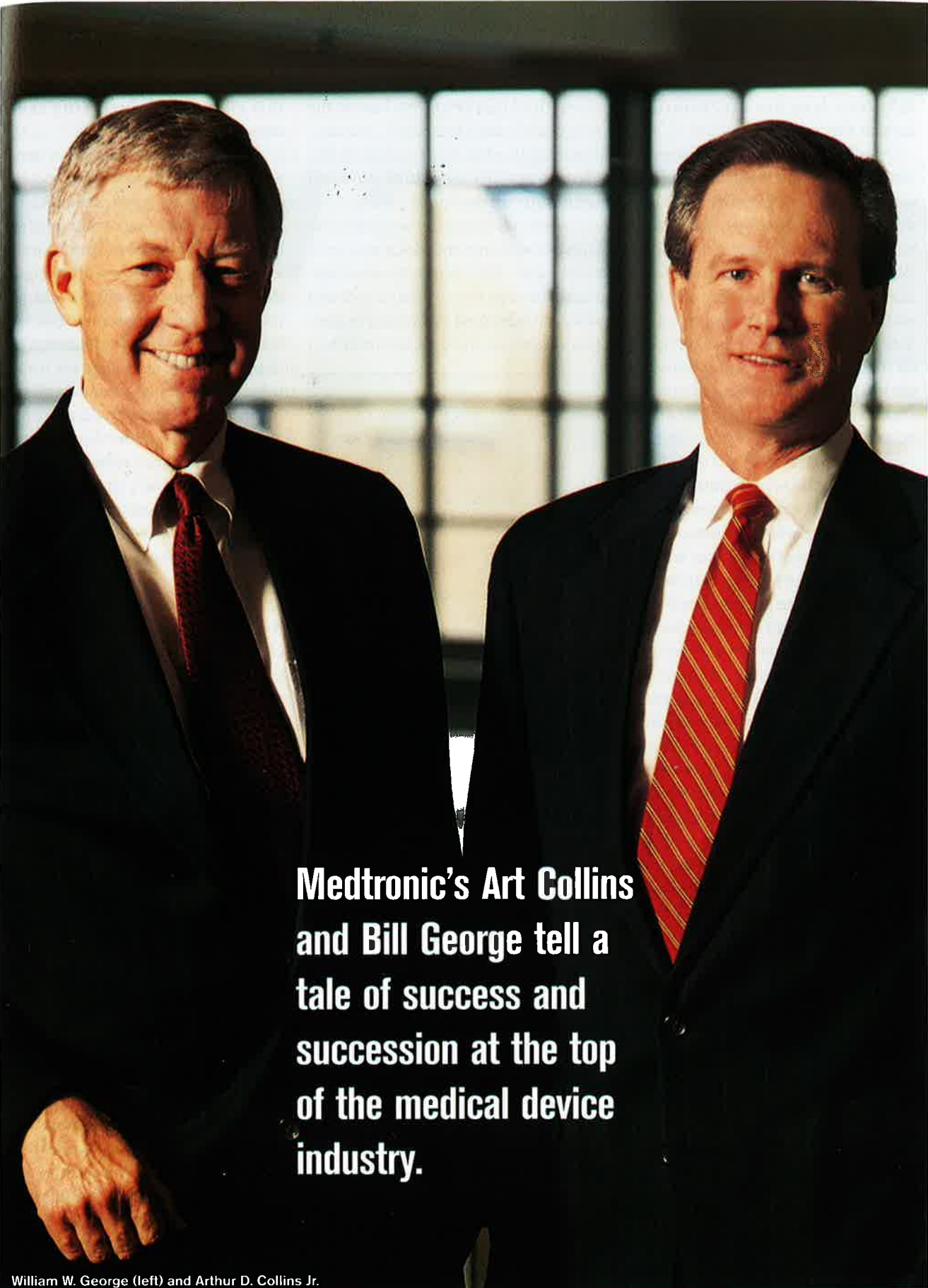
Although the cardiovascular system has remained a defining focus for Medtronic, conditions addressed by the company's devices have broadened from just bradyarrhythmia (slow heartbeat) to include tachyarrhythmia (fast heartbeat), atrial arrhythmia, and heart failure, as well as vascular pathologies. The company has expanded further into monitoring devices designed to record cardiac events that might otherwise go unnoticed, and surgical treatments designed to resolve at least some of these problems. Joining the heart as an engineering focus is the central nervous system, for which Medtronic engineers now design devices to help patients cope with chronic pain, back injury, and muscle spasticity, as well as neurological disorders, including Parkinson's disease.

The tutelage that has brought Medtronic to this point, however, ended on May 1, 2001. On that day, Bill George stepped down. The power to shape Medtronic's future is no longer his. Art Collins, the number two man at the company for the past five years, has taken charge.

The changeover was one of the smoothest in corporate history. George began grooming his successor nearly a decade ago, recruiting Collins in 1992 to be corporate executive vice president of Medtronic and president of Medtronic International. Two years later, at the urging of George, Collins was elected COO and a member of the board of directors. Collins took the next step in 1996, becoming Medtronic president at the same time George was elected chairman of the board. Collins and George shared duties, leading staff in their own but complementary ways.

With the end in sight, in August 2000 Collins was elected to succeed George. Collins has the advantage of being a known quantity within Medtronic; of having met and worked with staff, customers, patients, investors, and Wall Street pundits. He knows the markets. And he has a game plan, called Vision 2010. This white paper, authored primarily by Bill George, outlines the expected opportunities that will punctuate the remainder of this decade.

In separate interviews with *MX*, Collins and George describe the planning behind the succession, what Collins will do to keep Medtronic growing, the opportunities that each believes are just around the corner, and how Medtronic can capitalize on these opportunities. Together they tell a story of teamwork and individual success, leadership, and expectations waiting to be fulfilled.



**Medtronic's Art Collins  
and Bill George tell a  
tale of success and  
succession at the top  
of the medical device  
industry.**

William W. George (left) and Arthur D. Collins Jr.

Photo courtesy MEDTRONIC

## Art Collins: A Smooth Transition to the Future

**MX:** *How long has this transition been in the works?*

**Collins:** It was formally codified last August, when the board of directors elected me CEO effective May 1 this year, but it has really been in the works for a long period of time. When I joined Medtronic, I knew there was a high likelihood that I would eventually be a leading candidate for president and CEO, assuming all went well. So you can almost say that Bill started to think about this transition when he hired me nine years ago.

*Even though this transition was foreshadowed and expected, are there still challenges in making it a smooth one?*

There are a whole series of challenges and opportunities that we have dealt with in the past and will continue to deal with in the future. Medtronic is a growth company. It is also a high-tech medical company. Approximately 70% of our revenue comes from products that have been introduced during the past two years, and we are continuing to invest heavily in research and development. We will spend half a billion dollars this year to ensure that the flow of new products continues. It is very important that we continue to develop new products and new technologies that will enable us to grow the company. That is not only a challenge, but a great opportunity.

*What do you do to keep the momentum going?*

There are a lot of very important elements to consider, but the most important is to ensure that we have a very talented and motivated employee group around the world. That is an area that Bill and I have spent a lot of time on over the years. We currently have over 25,000 employees, and we operate in 120 countries around the world. The collective

strength of that employee base is the real reason for Medtronic's success, not simply what Art Collins or Bill George or any other small group of senior executives does.

Very important in this is the mission of the company, which was written back in 1960, before mission statements were in vogue. That statement stands unchanged today and is central to what we do, to the commitment



that employees express toward the corporation, and to how we view our customers and the patients we serve.

*So there is a foundation that goes beyond personalities. Does it provide a kind of reference point for the transition?*

That's correct. There is a strong commitment to the mission of Medtronic, which requires us to innovate and reinvent ourselves. This has been in place for a long time and it is a very important ingredient of success.

### A Resounding Nonevent

*You have been the heir apparent for some time, so there has probably been no internal jockeying for this job. But were there other issues in*

*this changeover involving senior managers?*

The senior management group operates as a very cohesive and supportive team. Everyone is encouraged and willing to speak their piece on key issues facing the corporation, but at the end of the day we all recognize that we are much stronger collectively than we are individually. Everyone is too busy working in their own particular areas—dealing with how to maximize the performance of their business and serve their customers well—to worry about internal politics. And, as you indicated, there is both a process and a unique set of circumstances surrounding this transition so that we didn't create a horse race among people vying for the CEO position.

*Are there no concerns about the changeover inside the company?*

Very honestly, I think it will be a nonevent inside the company. I have not announced what I will be doing with respect to organizational modifications after May 1, but I don't think there is a tremendous amount of preoccupation with this transition internally, or for that matter among our customer groups or other outside constituencies. I think they view this as one of the smoothest corporate transitions that has taken place.

*It would seem the transition has not worried stockholders. Over the past year, in a market that has been extraordinarily volatile, Medtronic has been relatively stable, staying mostly within the range of \$50 to \$60.*

The company has a long track record of both top-line and profit growth. We spend a lot of time focusing on the fundamentals of the business. We have good, open communication with the investment community, and we try to minimize any surprises. There is a premium



## Bill George: Looking Back, Looking Forward

**MX:** *When you look back on your years at Medtronic, what has the most significance to you?*

**George:** Taking a company from a maker predominantly of heart pacemakers to what we now consider to be the world's leading medical technology company. We've certainly expanded the company well beyond its original pacing roots. We have brought out some outstanding therapies for people with cerebral palsy and head injury. We've broadened the company tremendously in new ways of treating cardiovascular disease.

I'm particularly proud of the number of new therapies that we've been able to develop that really impact patients' lives. Many of those, in such areas as heart failure and Parkinson's disease, are just coming to market now as a result of research and development programs we've had under way for a number of years.

*You've been credited with having the smarts to know which markets to enter, particularly through mergers and acquisitions. How did you come to acquire these smarts?*

I can't say I have the smarts. These decisions were developed through a lot of dialog with others. Glen Nelson, our vice chairman, has played a tremendous role in helping Art Collins and me think through what medical markets are emerging and which ones we want to get into.

Let me give you an example. For many years we stayed away from the orthopedic business because we felt that the whole area of joint replacement was slow growth. However, a few years ago we had a chance to get into the spinal surgery business. Glen urged us to take a look at Sofamor Danek, because he felt this

was the high-tech side of the orthopedic business. It turned out that he was right and we did acquire this company, and it was one of the best mergers we've ever done—a company that's been growing better than 30%, compared with the general orthopedic business growing in the single digits. So, you see, I have a lot of very good advice on these things.



*I understand that most of your ideas for new products come from practicing physicians. Has much of your job involved uncovering those kinds of opportunities?*

One of the things we have tried to do over the past 12 years is to get the company to be very outward looking. When I came here I thought that a lot of our engineers were concentrating a great deal on what was going on inside the company. We tried to get our engineers and scientists, along with our marketing and sales people, into the field to work with the doctors and really listen to their ideas.

A principle of our customer-focused quality strategy was that we wanted to listen as closely to the doc-

tors in India and China and Austria as we did to physicians at the Mayo Clinic or the University of Minnesota. The point is, we had to get out and scour the world to find the doctors with the most creative ideas and bring them into R&D programs here at Medtronic.

*What role have you played in this?*

I try to meet with physicians all around the world, and my being out there serves to get other people from the company more involved with customers. When I visit a country I always have a significant number of physician meetings at diverse sites. I also attend for several days all the major medical meetings. Both of these activities give me a great opportunity to listen to physicians, hear their ideas, and try to get them into a dialog with our people.

In addition, last spring and summer I visited the leading cardiovascular centers in the United States as part of an effort to weld together our cardiac rhythm business with our interventional vascular business. This gave me a great opportunity to hear what the top cardiovascular physicians are thinking about, what they're planning, and where they're going.

### Building Corporate Culture

*Medtronic has become noted for its own distinctive culture. You've had a big part in building that culture.*

I give credit to our founder, Earl Bakken, for creating the culture by establishing the company's mission back in 1960—a company totally dedicated to restoring people to full life and health. The culture is really about keeping that mission foremost in everyone's mind, both inside the company and outside. We talk about

## The Medtronic Boom

Medtronic Inc. (Minneapolis) defines success in terms of people as well as profits. The efforts of the company's 25,000 employees, working in 120 countries, helped more than 2.5 million patients throughout the year 2000. The financial rewards have been just as impressive. Over the past 15 years, net sales rose at a compound annual growth rate (CAGR) of 19%. Net earnings topped a 25% CAGR, with R&D spending keeping pace at 18%.

The hard numbers accompanying these percentages rank Medtronic among the most successful companies in the world. Revenues for fiscal year 2000 were \$5.015 billion; net earnings were \$1.11 billion.

Deteriorating economic conditions, however, have softened the Medtronic boom. In March 2001, the company announced expected fourth-quarter growth in the high single digits over the fourth quarter of the previous year. The company estimated revenues from the fourth quarter to reach between \$1.5 and \$1.75 billion. Added to reported sales in the first three quarters of the year, Medtronic will reach about \$5.6 billion in revenues—a growth rate of just 11%.

Results this fiscal year have been further moderated by nonrecurring charges stemming from the wave of acquisitions that Medtronic made in the last 24 months, during which the company vastly expanded its operations and product offerings. These adjustments bring net earnings down to about 15%. Medtronic acquired six major companies in 1999 and 2000. Altogether, these acquisitions account for about 35% of the company's total revenues.

Much of Medtronic's success depends on expansion and innovation, either externally or internally. Approximately 70% of revenues are generated by the sale of products

and upgrades introduced in the last two years. These products hail from four general areas. Cardiac rhythm management generates the lion's share, accounting for about 47% of the company's revenues. Next in line are neurological, spinal, and ear, nose, and throat (ENT) devices, which generate about 27% of overall revenues. Trailing behind are vascular treatments, which account for 17%, and cardiac surgery, which generates 9% of total revenues (see Figure 1).

Medtronic is the worldwide leader in cardiac rhythm management products with a 52% market share. The company's GEM-series implantable cardioverter defibrillators are primarily responsible for this commanding lead over its competitors. Key to the product's success is proprietary software that senses the start of an arrhythmia, determines the type of arrhythmia, and paces the heart when appropriate.

Technology for pacing slow heartbeats provided the basis upon which Earl Bakken founded the company some 40 years ago. A resurgence in demand for these products during 2000 resulted in an increase of nearly 10% in corporate revenues. External manual and automatic defibrillators are also bolstering revenues.

In addition, the company's Reveal Plus, an insertable loop recorder that can record electrocardiograms for more than a year, is showing real promise for the future.

Medtronic's vascular business includes products for cardiovascular disease, peripheral vascular disease, abdominal aortic aneurysms, and neurovascular disease. The company holds more than 30% of the coronary stent market.

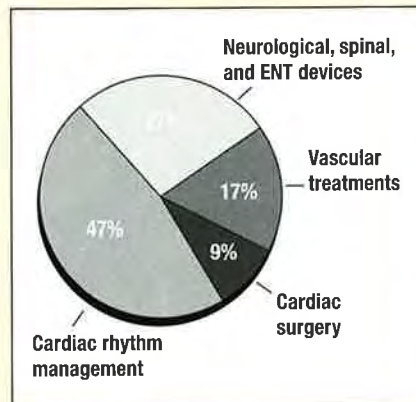


Figure 1. Revenue split among the major Medtronic businesses.

paid for consistently strong performance, and that drives the value of Medtronic stock much more than any focus on this transition.

### *Have you taken any special measures to reassure the investor community about the transition?*

Nothing special. Our focus has really been on how to continue doing what we have done historically—to

serve our customers well and continue the growth of the company. If we do those things, the stock price will take care of itself.

### *Any concerns with regard to alliances or partnerships?*

No. In many cases our alliances have been initiated and managed by our operating units, although we did enter into an alliance with a number

of major healthcare companies about a year ago, when we formed the Global Healthcare Exchange. We were one of the five founding partners in that development, along with Abbott, Baxter, Johnson & Johnson, and GE Medical Systems. I work closely with the heads of those businesses. We also struck alliances with IBM, Microsoft, and UU Net in regard to some of our communication technologies. Again,



the mission all the time, and I honestly believe that we have 25,000 employees who are passionate about their work to help restore other people to full health. We want to support our employees, so they in turn can really fulfill the mission of the company.

***Has this culture changed since you arrived at Medtronic?***

I think it's changed somewhat from 12 years ago. Back then, we were more inward looking. Today we're very much outward looking and very focused on patients and on physicians. When you're outward looking, when you're focused on your customers, you focus on your reason for being in business. You don't have time for internal politics or a lot of internal processes and systems that create a bureaucracy. Those things get in the way of people feeling empowered to carry out the mission of the company.

***Mergers and acquisitions have been a major building block for many companies, including Medtronic. Often the culture of the acquiring company comes as something of a shock to the one being acquired. Has it been a challenge to get the ideas that are so much a part of Medtronic's culture to be absorbed and adopted by the companies that Medtronic has acquired?***

That's a very important point with regard to acquisitions. Far too many acquisitions are made for financial purposes, and not nearly enough attention is paid to whether the two cultures will be productive in working together. One of the things I make a point of doing with every single acquisition that we consider is to sit down with the CEO of the other company and talk about



Glen Nelson, vice chairman of the board (left); Art Collins; his wife, Anne Collins; Bill George; his wife, Penny George; and Earl Bakken, founder of Medtronic (right) on stage at a company medallion ceremony, held when new employees hit their six-month mark.

our views on the corporate mission, values, and culture to determine the kind of organization we could have together. We go through that process for the first couple of sessions, and once we get agreement on the mission, on the strategy, on the values, and on the kind of culture that is going to exist, then putting the numbers together is a lot easier.

***Do acquired companies completely buy into the Medtronic culture?***

They don't have to. Acquired companies can continue with their own culture and organizational structure, or develop new ones, so long as they are consistent with the Medtronic mission. I don't think the culture of each organization should be the same—even internally. For instance, if you go to Medtronic in Japan or France, you'll find quite different cultures. But the values and the mission are the same, and that's what's really important. This has worked very well for us in acquiring companies.

***How do you make the mission real to the employees of these companies—***

***to get them to understand what Medtronic is about?***

I've visited each of the companies we've acquired for what we call a mission and medallion ceremony—to present the mission of the company and give each of the new employees a medallion symbolizing their purpose of working for Medtronic in restoring people to full life and health. That has had a very positive effect.

Last fall we conducted a survey of all our employees to see how they felt about the company. It was an 80-question survey and we got an 81% response rate. More than 18,000 employees who were working at that time responded to the survey. Of the 80 questions, the one with the highest positive response had to do with employee understanding of and commitment to the Medtronic mission. With all the new employees who had joined the company—more than 60% of the employees surveyed had joined the company in the previous two years—I was very pleased to see such a high level of commitment to the company's



Medtronic executives show the flag at the New York Stock Exchange (from left to right): Glen Nelson, vice chairman of the board; an NYSE representative; Bill George; Art Collins; and Robert Ryan, senior vice president and CFO.

I would say this transition has not affected those activities whatsoever.

***I take it that you expect minimal impact on sales?***

From this transition, as it affects the ongoing business, I do not see any impact.

## Opportunities for the Future

***Medtronic's Vision 2010 white paper paints a picture of what the company thinks the market will look like in the future. How does that paper figure into your own vision of where Medtronic is going?***

In some ways, Vision 2010 has confirmed the decisions we have made up to this point. It has helped focus some of the activities on which we spend time and resources. And it has enabled us to communicate to our employees—and, very importantly, to others on the outside—the changing dynamics that we see going

forward, and how Medtronic will respond to them.

Specifically, in terms of confirming our strategy up to this point, we recognize that we are well positioned in a number of very large markets that offer tremendous growth potential.

***Are there specific efforts under way now that reflect Vision 2010?***

We recognize that there will be a convergence of different technologies that, if used together, might provide better therapies. We are now in the process of looking at how we can combine medical devices with biologic approaches to come up with better total solutions.

For example, we have combined a morphogenic bone protein with a spinal cage that will allow for more-rapid healing and fusion in spine procedures. That product is targeted to be submitted to FDA this summer. We are working on coated coronary

stents that can further reduce the rate of restenosis—the rate of closure after a stent has been placed. And we are coating our tissue valves and oxygenators used in open-heart surgery to provide better performance.

In the future, I think we will see more such combined technologies. And our efforts in this area are an outcome of Vision 2010.

We have also spent some time looking at the emerging role of the patient. It is very clear that patients are taking a much more active role in managing their health than they were previously. In response, we are trying to recognize patients' needs and, in an appropriate way, provide needed information. We want to ensure that when patients seek to access data about their particular health conditions, that information is available in a timely, complete, accurate, and professional way.

***In the next few years, do you see any opportunities for Medtronic to pursue mergers and acquisitions, or to make strategic investments in certain areas?***

With regard to mergers and acquisitions, Medtronic has been fairly active. In the past two-and-a-half years, we have concluded six mergers and acquisitions—several very large ones, in the \$4 billion range, and some smaller ones. These were undertaken either to improve or expand our capabilities in areas where we were already present or to move us into the logical extension of a field where we were active. Collectively, those deals have strengthened and broadened the corporation. But we didn't enter into them just to get bigger. They were done for very specific reasons that would enable us to better serve our customers.

It is fair to say that we will continue to evaluate acquisition candidates, whether they be in the form of



## Medtronic's Crystal Ball

Vision 2010, Medtronic's look ahead to the end of this decade, describes a world in which chronic disease management is crucial and in which the company is well positioned. In one way, Vision 2010 is as much a continuation of the past as it is a look at the future—an affirmation of executive decisions made to date. In short, Medtronic expects few surprises.

"Vision 2010 has allowed us to take inventory and make sure we have been doing the right things. We feel, by and large, that we have been," says Medtronic CEO Art Collins. "It's also provided us a look into the future as to where we might have to fine-tune our strategy."

The document is the culmination of some eight months of research by five teams of Medtronic strategists. Medtronic examined healthcare issues and new medical and information technologies in the light of its current businesses. The final document was put together under the guidance of Bill George, who stepped down as CEO as of May 1, 2001, but will remain chairman of the board for the next 12 months.

"We haven't thought of ways to cure heart disease or many of the neurological diseases, nor do I think that we will in the next 10 years," says George. "But we can do a lot more than just being there at the initial implant of a pacemaker, defibrillator, or stent. We can remain with patients throughout the course of their diseases and provide them with solutions that extend their lives, as well as help give them a better quality of life."

According to George, patient empowerment is at the heart of Vision 2010. Crucial to achieving that vision is the integration of medical and information technologies. In preparation, Medtronic has allied with such companies as IBM, Cisco, Dell, and Microsoft. "Through these partnerships, we now have leaders in the IT field work-

ing with us to ensure that patients get the best therapy and the best treatment," says George.

Information technologies will allow Medtronic to have an impact beyond the capability of the device implanted. The health of the patient can be monitored throughout the course of a chronic disease. These data can then be transmitted and interpreted to adjust treatment appropriately. Medtronic executives foresee a time when information technologies, coupled with medical devices, will enable patients to leave the hospital or nursing facility and return home.

"The most cost-effective place to be—and the place that people want to be when they're suffering from a chronic disease—is home," says George. "If we can provide the electronic capability for physicians to manage patients from their homes, we'll have much happier patients who can be handled on a much more cost-effective basis."

If Medtronic's vision of the future comes true, the company will be transformed from an equipment vendor to a provider of information and services. Among the challenges that Medtronic faces in such a metamorphosis is the most basic of all—how to get paid. The methodology, says George, will likely be worked out as information services become an integral part of the healthcare equation, which he estimates will happen by 2010.

"The net result of these efforts will be the creation of a totally unique product offering, the Medtronic patient management system," says George. "Through these electronic means, we will have hookups with emergency medical services such as ambulances, so that if the patient has difficulties, we will be able to ascertain what those difficulties are and send signals to indicate the actions that need to be taken."



**Karen Kleckner, principal therapy systems engineer in the area of cardiac resynchronization, studies the placement of a left ventricular lead from the Attain line of lead systems.**

mission, and that the culture of serving patients and being externally oriented had continued through our various acquisitions.

### Succession at the Top

*It is very difficult to define the qualities associated with charisma and*

*leadership, which must be a part of the CEO's role. How do you ensure that your successor can keep the level of sincerity, intensity, and charisma that you have established?*

I think it's very important that one leader not suggest to another that he try to emulate a certain style. Values, yes. Values are very impor-

tant. But the way in which someone who leads has to reflect who he is as a person and how he can exemplify that through his actions. Art has his own management style, which in many ways is much better than mine. He has his own style of leadership and I think it will be very well received.



intellectual properties, products, technologies, or, in some cases, free-standing companies. They will be looked at from a strategic point of view, and they'll be carefully assessed with respect to what they will do for our patient populations, and also whether they would provide a good return to our shareholders.

***What opportunities do you see in product development?***

We have some fundamental opportunities that we are in the midst of taking advantage of right now. In the area of active implantable devices—pacemakers and implantable cardio defibrillators—a change that we helped to drive several years ago is now coming to fruition. Historically, pacemakers have been used to treat bradycardia—a heart beating too slow or suffering from heart block. While continuing to do that, these devices are now capable

of providing multiple therapies. They can provide therapy to treat some very large disease states, such as atrial fibrillation or heart failure. We will also see implantable cardioventricular defibrillators not only continue to treat ventricular tachycardia or ventricular fibrillation, but also to be able to treat atrial fibrillation and heart failure. These developments are good for patients. They offer cost-effective examples of what technology can do. And they will provide tremendous growth opportunities for the company.

A business we acquired a few years ago, Physio-Control, is now taking the base technology used in external defibrillators—heretofore used principally in hospitals or by trained emergency medical technicians—and expanding it into automatic defibrillators that are showing up in airports, on airplanes, and in

leisure-time and commercial settings. If you gamble in Las Vegas you're probably in one of the best places in the world to have a cardiac arrest, because all the casinos are outfitted with these automatic external defibrillators.

So there are a number of different platforms. We have been putting in place the building blocks to launch products into the markets around the world for opportunities that are just now emerging.

***What most excites you about this transition?***

As in all transitions, this is an opportunity to further improve on what we have been doing over the years. It's an opportunity for me and the senior executive team to look at all aspects of our business and ask if there are some things that we can do better. I am sure that there are. ■

***You played a significant role in choosing Art Collins as your successor, didn't you?***

Clearly, the board selected Art. I recommended Art to the board as someone who will not just keep the company going in its current directions, but who can take the company to the next level of sophistication and capability—someone who can cope with the major events that will surely take place over the next 10 years.

***You have been his mentor for nearly a decade.***

We have had a long time together and, as CEO and COO, we've also had a very close relationship. I feel very strongly that every CEO has an obligation to groom a successor who can not only replace him, but can take the company to the next level.

In Art, I think we have someone who has that capability and that is why I am so pleased with how this process has gone.

***When did you know he was right for the job?***

From the first time I met him.

***Did he meet some kind of criteria you had set up or was it just a gut feeling?***

It was apparent immediately that he was going to be CEO of a major company. He had great leadership capabilities, great business instincts, and a really good sense of how to build an organization through its people. Those are precisely the qualities that I thought my successor should have, as well as the vision to take the company to the next level.

***What's next for Bill George?***

I'm looking into writing a book and teaching, and taking on whatever is my next career. I certainly don't see myself as retiring. In fact, I hope I won't retire for another 20 years. I'd just like to go on to the next phase, whatever that is. But my 12 years at Medtronic has been the best time of my professional life. I can't imagine having spent 12 more enjoyable years in business. ■

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**More On-Line**

The full text of these interviews with Medtronic's Art Collins and Bill George is available on-line via the MX Web site at <http://www.devicelink.com/mx>.