

# Creating a Healthy Difference with a Network-Based Medical Concierge Service

Developers can make their communities more attractive – and generate new revenue streams – by offering telemedicine services to residents

By Rob Scheschareg ■ *MedConcierge*

**Y**ou can't watch the news or read an article these days without hearing about the rising cost of health care, the challenges of caring for an aging population, and the need for better exercise and nutrition to prevent chronic diseases. As the financial and decision-making responsibility for managing health increasingly falls on consumers, and as timely access to doctors and specialists becomes more difficult, products and services that offer personalized care are experiencing exceptional growth.

Nowhere is this more evident than in the booming segment referred to as "concierge" or "executive" physician practices. Consumers who subscribe to these practices spend anywhere from \$3,000 to \$30,000 annually, out of their own pockets, to receive private, more immediate access to doctors who limit the number of patients they serve. In addition to annual membership fees, members pay for consultations and appointments with the physician and referred specialists, as well as for technology-enabled home health devices and services. Why are they doing this? Convenience and service.

## CONSUMER DEMAND FOR HIGH-END MEDICAL CARE

The average consumer paid more than \$11,000 out of pocket for medical ex-

penses in 2006, a figure that is growing by more than 12 percent every year. And what does the he or she get in return? Doctors' appointments that last, on average, seven and one half minutes and are interrupted within the first 23 seconds. For this experience, the consumer

**The average consumer paid more than \$11,000 out of pocket for medical care in 2006 – and what does he or she get in return? Doctors' appointments that last, on average, 7 1/2 minutes and are interrupted within the first 23 seconds.**

has taken time off from work, driven to and from the physician's office, and spent 45 minutes filling out redundant forms while waiting for the appointment.

When urgent medical situations occur outside of normal office hours, fami-

lies unsure of what to do next head for the emergency room of the local hospital, and deal with *that* experience.

For consumers of all types – the mother of young children; the daughter caring for an elderly parent dealing with a number of medical conditions; or the busy executive – the result is significant financial, emotional and physical costs.

To ease this burden, consumers are increasingly turning to Internet resources, such as *WebMD*, *Google*, *MedLine*, and *Revolution Health*, to better understand symptoms, conditions, medications, diets, routines and alternative treatments. It is not uncommon for health information seekers to spend four to five hours online per week seeking support and guidance. However, gathering information is a far cry from making sense of it all and applying it to their needs.

Consumers don't just want information – they want to feel better. As a result, and to their physicians' chagrin, patients often arrive at appointments armed with inappropriate information and their own conclusions, undermining the intended purpose of the office visit, however truncated it may be.

But the Internet can do far more than deliver generic – and dubious – information to consumers. It can deliver the doctors themselves. Using videoconferencing and Internet-based diagnostic

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and monitoring devices, doctors can make "virtual house calls," examining and consulting with patients in their own homes.

Of course, telemedicine isn't new. But until now it has been used mainly to allow remote hospitals and clinics to consult about difficult cases with specialists in large teaching hospitals. When the patients themselves have limited Internet access, that's the only telemedicine model that makes sense. But fiber-connected communities provide opportunities to connect consumers directly with medical professionals.

### CONCIERGE TELEMEDICINE

Consumers with fiber-to-the-home and webcams may be ready for home-based telemedicine, but today they would have trouble finding doctors to make virtual house calls. Most physicians still seem to be content with their full waiting rooms, and they haven't rushed to invest in telemedicine equipment.

But the growing popularity of concierge-style medical practices suggests that this may be an appropriate model for home-based telemedicine—one that could work given today's health care needs, technologies and economic realities.

My company, MedConcierge, recently launched just such a concierge telemedicine practice. We have gathered a national network of leading family care physicians and internal medicine

specialists who are willing to provide on-demand videoconferencing consultations and counseling to consumers in the comfort, privacy and convenience of their own homes. The service is available 24 hours a day, seven days a week, 365 days a year.

In addition, we have developed all the infrastructure to make the service possible: network facilities and videoconferencing hardware for the physicians; scheduling and medical records systems; malpractice insurance; licensing requirements and regulatory adherence for delivering these telepresence consultations and counseling.

Depending on the service package offered, MedConcierge can also provide subscribers with videoconferencing hardware, vital sign monitoring equipment, exercise equipment, or other health and wellness components integrated to enhance the end-user experience and deliver premium support and care.

MedConcierge has also formed strategic partnerships with local home system integrators across the country to provide in-home installation, tech support, and integration services to each customer.

### A COMMUNITY-BASED SERVICE

Traditional concierge physician practices generally sell their services directly to consumers. However, MedConcierge is taking a different approach: We are marketing to FTTH service providers, property developers and property managers who can resell the service to residents, deliver it over fiber communication lines from a data center, and manage the billing, and bundling, if any, with the other services they provide.

MedConcierge took this approach for several reasons. First, our potential clients are concentrated in FTTH communities. Not only do these developments cater to active adults with busy professional lives who are likely to be interested in concierge-style medical services; they also provide the bandwidth sufficient for rich videoconferencing experiences and for pushing real-time medical data to the physician.

Second, the FTTH service providers and property developers are in an ideal

position to customize the service for the needs of their residents, and to make decisions such as whether and how much to charge for annual activation fees, recurring monthly subscription charges, and on-demand "pay-per-view"-style consultations (above what is included in the service package). They will have a good idea what types of home-based equipment residents are likely to want, and how much help they will need with installation and troubleshooting. And they will be able to bring in local health care providers who might appeal to their particular communities.

Finally, MedConcierge was conceived as a community-level amenity, both because of the economics of the service,

### CONCIERGE TELEMEDICINE AS A MARKETING OPPORTUNITY

Imagine being able to market a new development this way:

Not feeling well right now? Say goodbye to waiting to see a family physician and say hello to seeing one when you want to... now, tonight or tomorrow... at [your community].

Why wait for the referral and eight weeks until the next available appointment to see a specialist? Talk to him now from your new condo at [your community].

Have you spent four hours in the emergency room only to find out you could have taken aspirin, or waited until the morning to see a doctor? If you lived here, that wouldn't have happened.

Want to better manage your diabetes, stress level, workouts, or diet? Don't leave work early every month, or spend hours finding generic information online. Receive personalized care right at home here in [your community].



which is more capital-intensive than an office-based practice, and because it can be used not only from individual homes but from community facilities like the gym or clubhouse (for example, to let residents have virtual consultations with their personal trainers while working out in the gym).

### HOUSE CALL AMENITY AS A PROPERTY DIFFERENTIATOR

Two years ago, fiber to the home was a property differentiator. Today, it is the norm in new master-planned communities. The new differentiators will be the services that are delivered over fiber. Developers and sellers of active adult communities are looking for amenities that promote an active, healthy and independent lifestyle. Along with walking paths, Pilates classes and golf, think about personalized health services offered in the convenience, comfort and privacy of home.

Especially in areas of the country such as Florida, Texas, Georgia and the Carolinas, which have been hit hardest by the “perfect storm” of doctor shortages, overcapacity at health care facilities and a growing older population, home-based telemedicine services can help developers differentiate their properties to accelerate and increase sales.

In addition, they can build customer loyalty, generate more revenue per unit, and drive the adoption of other service offerings like video, voice and data.

By providing telemedicine as an in-home experience, FTTH service providers and community managers show the power of fiber to enrich and improve residents’ quality of life. Benefits to residents include:

- Eliminating unnecessary mid-night trips to the emergency room or physician waiting rooms.
- Waiting minutes, not weeks, to see a specialist about their condition, treatment and potential

alternatives . . . *while remaining at home.*

- On-demand feedback on pain, medication reactions and environmental conditions.
- Consultation on individual vital sign trends and results.
- A personal gerontologist to provide guidance and support on caring for an elderly parent when and where it’s most needed – *at home.*
- Motivation and instruction from a nutritionist and personal trainer while working out or cooking.

As consumers’ needs, conditions and health care responsibilities change, FTTH providers, developers and apartment building managers can adapt to those changes by offering a service that competitively differentiates their properties and networks, fosters tremendous customer loyalty and generates considerable per-unit revenue. ■

### ABOUT THE AUTHOR

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## PHILIPS ACQUIRES TELEMEDICINE COMPANY

In a sign of the growing strategic importance of telemedicine, Philips Healthcare, a division of Royal Philips Electronics, recently acquired VISICU for \$430 million, a premium of about 35 percent over its publicly traded share price. Baltimore-based VISICU supplies systems for remote monitoring of patients in hospital intensive care units. Its eICU Program, which is used by more than 180 hospitals serving over 250,000 patients annually, provides real time, 24/7 patient monitoring.

The system works on the same principle as an air-traffic controller’s command center, networking critical care physicians and nurses to ICU beds using voice and video. Using expert systems to alert staff to changes in patients’ conditions, the eICU has been shown to reduce patient mortality, length of stay and medical complications while lowering ICU costs.

Steve Rusckowski, CEO of Philips Healthcare, noting that Philips is the market leader in hospital patient monitoring systems, says that clinical IT solutions like VISICU’s will let Philips “offer customers more attractive patient monitoring solutions to improve hospital productivity as well as patient outcomes.” The transaction is expected to close in the first quarter of 2008.

# From Broadband to “Lifeband”: The New Relationship Between Broadband and Aging

A new class of broadband applications will help the aging baby-boomer generation remain independent and living at home a lot longer

By Herb Hauser ■ *Midtown Technologies LLC*

The success of the broadband revolution has been summarized by two metrics: capacity (in Mbps or Gbps) and the age at which a person first accesses broadband. The higher the capacity and the lower the age of first access, the greater the utilization of broadband. Accordingly, the broadband industry has focused on devices and applications that are bandwidth hungry, mobile, and appealing to the very young.

Since there is a limit (namely, birth) to how early a child can use broadband, and since the capacity of broadband will continue to grow based on a predictable rate, it would seem that the explosive and unpredictable bandwidth growth spurts experienced in the last 12 years will give way to “calmer” increases.

But there is another variable whose limit is yet to be fully explored and defined: the age at which broadband ceases to be used. As our longevity increases year by year, so does the opportunity to use broadband. The new success metrics of the broadband revolution are thus age of first use, bandwidth capacity and age of last use.

There are many similarities between growing and aging with respect to the use of broadband. Both are extremely sensitive to operations that depend upon manual dexterity. Children have not yet developed enough manual dexterity to use input devices effectively;

older adults may have lost the manual dexterity they once had. Similarly, the development and decline of cognition determine the curve of broadband experience; visual acuity and the capacity to experience satisfaction also grow and decline again.

But aging poses different issues for broadband use – most significantly, because the changes are going in reverse. Unlike a maturing baby who improves on virtually every measure of fitness, the fitness measures for the aging person show a steady decline. The developing newborn is cared for every hour of the day and constantly moves away from dependence, while the aging adult may not have fulltime – or any – care, but is moving towards dependence. So the experience of broadband is both quantitatively and qualitatively different for the developing and aging person.

In the next few years, approximately 80 million baby boomers will begin making their way into the retirement and aging segments of our society, and medical science is keeping them healthy and active for longer periods. At the same time, births will be averaging about 4.2 million per year. As a society, we are growing older faster than we are being replaced with newborn babies (aside from unpredictable factors related to immigration). Because of this demographic shift, broadband will be used by people who are older and older. How fortunate

that the 20- to 30-year period of their retirement will coincide with the greatest technology boom in history!

It’s time for us to begin thinking more systematically about the interaction of broadband and broadband applications with aging. I use the term

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“Lifeband” (a trademark of Midtown Technologies LLC) to refer to digital communications applications that enhance the social, cognitive and creative

aspects of an aging population. Some common examples are:

- **Communications:** The most prevalent use of broadband is for communications. As the younger generation adopts e-mail, instant messaging, webcams and other nontraditional forms of communication, the older population is being gently but firmly induced to use these new media systems to stay in touch with children, grandchildren and loved ones.
- **Cognitive enhancement:** Virtually all professionals involved in caring for aging clients agree about the importance of being creatively stimulated, socially engaged, intellectually tested and cognitively challenged. Broadband applications from Web surfing to e-learning, interactive games and virtual tours of cities and museums offer opportunities that were unheard of until recent years.
- **Shopping:** We are a consumer society. We always have been, and most likely always will be. One of the most disturbing moments for aging people is realizing that they cannot run out to the store to buy a present, or impulsively go on a shopping trip. Suddenly, things that were so simple a few years ago require military-like coordination and preplanning and, often, the kindness of others.

With the Internet, shopping has become an at-home activity. Aging people can shop and have items delivered to their front doors – plus a human visitor when the delivery arrives. The doors of retail America have swung open for the aged, and with proper controls and security, the risk of losing money or identity can be minimized.

- **Social contact:** One of the more exciting applications of broadband is its ability to forge social contact. Regardless of what the interest is, there is always a forum or a social group that shares information and experiences about every topic. Even after an aging person has long lost the ability to go out antique hunting or rebuilding an old car, the emotional and social benefits of interacting

with others are maintained. Social health can often be as important as physical health.

### COMMUNICATING WITH THE CAREGIVER

What else can be provided through broadband, and how significant are these applications? We believe there is an opportunity for broadband to enhance the ties between aging persons and the individuals helping maintain their care and health. That person might be a son, daughter, nephew, niece or other family member, or even a neighbor, friend or guardian. Whoever it is, the aging need

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the comfort and stability of knowing they are being cared for and cared about by someone emotionally tied to them. And the caregiver, or concerned and responsible party, needs to know in real time what the status of the aging person is. Here is where broadband makes its greatest contribution. Here is where broadband morphs into Lifeband.

Sometimes, watching out for an aging individual may be as simple as a check-in phone call; at other times, it may require a physical visit. But in general, the amount of health-related information that a caregiver needs and an aging person provides

is based on that person's health status – the more infirm the person, the more information is needed. Lifeband applications can provide the caregiver with useful information. They also provide the aging person with a sense of security without invasiveness.

Lifeband applications can be designed to alert someone – child, relative, service provider or building manager – that something is not right, because the aging person has changed his or her normal behavior pattern.

A device in common use today allows the aging person to send an alarm from an appliance worn around the neck or wrist. These devices have helped many people in acute distress, and in some cases they have saved lives. However, they are most effective when something already has happened – a fall, for example – and the wearer presses the alert button. If the alert button is not pressed, then no emergency is noted and help is not dispatched. So if Dad falls and blacks out before he can press his life pendant, nobody knows there's a problem.

Now suppose the device is equipped with a motion detector. A motion-sensitive device could establish normal activity periods over a typical 24-hour period. If the wearer isn't moving when he ought to be, wireless sensors pick up the change in activity patterns and issue an alert, triggering a visit or a call. Intervention would come within hours, not days. Such a response would be critical in an illness that kept a patient bedridden and unable to communicate or move.

Another example: Mom says she's fine, but when her daughter flies in from another city to visit she finds her mother 20 pounds lighter because she hasn't been eating. A smart refrigerator that knew how often it should be opened could have sent the daughter text messages or e-mails saying it was being opened less often than usual, thus giving early warning to a potential problem.

These Lifeband applications can relieve the anxiety of the person living alone and of the person caring for him or her. They can also enable the aging person to stay in his or her home longer.

Other Lifeband applications may alert a medical monitor of changes in pulse rate and body temperature during sleep. Such applications are well under-

way through pioneering research being conducted by Intel and a network of university and not-for-profit organizations.

The next steps in the movement to extend the benefits of broadband in the aging community will be to use broadband to maintain health and make health care accessible without the daunting trek to the doctor's office.

**PROPERTIES THAT AGE IN PLACE**

Traditional retirement environments move aging people from retirement homes to assisted living facilities and ultimately to health care facilities. These real estate destinations make up the backbone of the "aging in place" model. Forward Living (another concept that Midtown Technologies has trademarked) can delay this process by allowing the home to change along with the person.

Forward Living environments adapt to the changing needs of the aging, as well as the needs of their family and caregivers, using technology to compensate for the physical and nonphysical changes of aging.

For example, aging persons require not only brighter light but different-colored light; the digital lighting in Forward Living homes allows residents to select any color in the spectrum that makes them comfortable.

Because aging makes it more difficult to bend down and attach small appliances to electrical and low-voltage outlets, Forward Living homes are equipped with easy-insert outlets that don't require as much bending or manual dexterity. They also provide environmental controllers based on easy-to-interpret and easy-to-use technology.

The baby-boomer generation invented – and adopted – the technologies that are used universally today for work, pleasure and convenience, from PCs to cell phones to iPods. Why would they settle for anything less than a retirement period supported and enhanced by broadband and its related technologies? ■

**ABOUT THE AUTHOR**

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