

# Connected Healthcare Consumers

## Engaging Empowered Consumers in a Connected Health Partnership

### Author

Frances Dare

Healthcare Practice

Cisco Internet Business Solutions Group

October 2008



Cisco Internet Business Solutions Group (IBSG)

---



# Connected Healthcare Consumers

## Engaging Empowered Consumers in a Connected Health Partnership

### Introduction

Who are empowered health consumers? For many, the idea evokes images of patients armed with health information found on the Internet, acting as freelance care managers. As a result, these consumers push forward, demanding specific medical treatments and taking responsibility for when, where, and how they access health services, while carefully guarding their personal health information.

The time has come to challenge this stereotype. While research shows that consumers do, indeed, rely on the Internet for health information, the reality is consumers have a different vision for how online information and services can become part of their health experience.

There is a powerful, yet overlooked, opportunity to engage consumers in a “Connected Health” partnership. In a Connected Health relationship, consumers collaborate with their healthcare providers using mobile phones, personal computers, video technologies, personal digital assistants, or other devices from which they can receive health information and services nearly anywhere, anytime. Connected Health means more than just going online to find medical information. It is about connecting with others, especially primary care physicians (PCPs), to reduce healthcare costs and inefficiencies while creating healthier, more satisfied consumers.

### What Healthcare Consumers *Really* Want

How do consumers want to be involved in their health? What do they say about a new and improved healthcare experience? From consumers’ point of view, what is the role of health information technology (HIT)? Here is what respondents had to say in a Cisco-commissioned, web-based survey of more than 4,000 consumers.<sup>1</sup>

First, they want to be informed and involved in their health and healthcare. Of those surveyed, 37 percent want to be better informed about available treatment options, and 28 percent want to know more about available medication options. Twenty-seven percent want to remain healthy and active, while 23 percent want to take a preventive approach to health management.

1. “Consumers and Health Management.” Cisco, 2007. The study was conducted by Illuminas, which interviewed 4,105 U.S. consumers between January 29 and February 14, 2007. Respondents reflect the larger U.S. population from an education, age, and ethnic perspective.



Second, they want to use information technology with their doctors to communicate and access services. When asked about their motivations to use technology, their second-most-common response was that they want to be active partners with physicians—followed by their desire to be informed about healthcare options. Sixty-one percent of the respondents strongly prefer their doctors as the primary source for medical information and advice; 47 percent cited their PCP as the first choice for receiving online information and services, compared with 25 percent who cited a hospital or health system as their preferred source for online health services.

When it comes to the stereotypical image of the empowered health consumer—those who download health information from the Internet and take control of their healthcare—the reality is quite the opposite. Based on the Cisco survey, only 9 percent of the respondents stated a desire to “take control of where and how I receive health services.” Consumers do not want to navigate healthcare waters alone; 16 percent of the survey’s respondents said they want to be an equal partner with healthcare providers.

Third, it is clear that consumers want to use the Internet as part of the healthcare experience, not only for information but also for health services. Thirty-three percent said they use online tools to find information about symptoms and diagnoses. A similar number go online to find general wellness and fitness information. Just more than half of the respondents said they have experienced some level of improvement with health management using technology. Respondents said they have used online services ranging from health self-assessments, to support groups, to scheduling and coordinating medical appointments, to managing prescription refills.

## Cisco’s Answer for Consumers

Cisco’s vision for Connected Health consumers and their providers is a connected partnership that transforms the patient-provider relationship. Today, patients are often passive recipients of advice from providers during office visits, with limited say in care decisions. With Connected Health, in-person visits—focused on illness and disease—shift from passive to active, where interactions between patients and providers become ongoing communications about health and wellness. In addition, certain illnesses can be managed using cell phones, emails, and “virtual” visits between patients and physicians. When connected, physicians and patients communicate as the need arises and in the most convenient way for both—verbally, in writing, or even “in-person” through the power of video—using Internet-enabled technologies. This new Connected Health relationship creates shared collaboration and responsibility.

## Industry Dynamics Hindering HIT Adoption

It is clear that health consumers want to use HIT to access information and communicate with their physicians. In fact, findings from the Cisco survey are echoed in similar studies conducted by other healthcare organizations. So why has the Connected Health relationship not been realized?

A major obstacle stands in the way: too many consumers report not having a PCP, such as an internal medicine or family practice doctor. This is a critical element of Connected Health because physicians and patients are at the center of the healthcare universe. In fact, physicians influence 80 percent of all healthcare spending through direct services and referrals. A 2008 study from *Health Affairs* reports that “people with a PCP, rather than a specialist as a personal physician, have 33 percent lower health services spending annually due to more cost-effective care management and less use of health services.”<sup>2</sup> Unfortunately, in the Cisco survey, only 40 percent of the participants reported having a PCP, although 83 percent said they prefer to have a family practice or internal medicine primary care provider.

For those consumers who have a PCP, a critical gap still remains: few physicians offer online information or services to patients. Only 11 percent of survey participants said that their PCP offers patients the ability to send and receive email. Only 9 percent of respondents’ PCPs offer online appointments and 7 percent offer secure web access to lab and test results.

Current reimbursement models and regulatory concerns impede physician adoption of HIT and thwart the proposed Connected Health partnership as well. In a Commonwealth Fund survey, more than 60 percent of physicians in a solo practice cited IT start-up costs as their top barrier to HIT adoption.<sup>3</sup> Reimbursement levels are insufficient to provide capital for IT investments, and reimbursement is reserved for in-person visits and fails to recognize new ways for patients and providers to interact.

The industry’s current focus on Personal Health Records (PHRs) is another issue overshadowing immediate opportunities for other HIT solutions that connect and engage patients and physicians. Many healthcare professionals believe PHRs are the best way to empower and engage consumers. PHRs enable consumers to compile information from a variety of sources and contribute information about lifestyle and treatment choices to their healthcare program. PHRs are widely available through insurance plans, employers, providers, and commercial vendors with an array of features and functions. Despite broad promotion of PHR adoption, only 2.7 percent of U.S. adults have a PHR, according to a recent Markle Foundation survey.<sup>4</sup> The truth is most people are not ready to use this tool.

2. “Primary Care Physicians and Specialists as Personal Physicians: Health Care Expenditures and Mortality Experience,” P. Franks and K. Fiscella, 1998, Vol. 47, No. 2, pp. 105–109, reported in *Health Affairs*, 2008, Vol 27, No. 1, p. 151.

3. “2003 National Survey of Physicians and Quality of Care,” The Commonwealth Fund, March–May 2003.

4. “Connecting for Health,” Markle Foundation, June 2008 ([www.connectingforhealth.org/resources/ResearchBrief-200806.pdf](http://www.connectingforhealth.org/resources/ResearchBrief-200806.pdf)).

Concerns about health information privacy are another barrier to HIT adoption. Thirty percent of the solo practitioners who responded to the Commonwealth Fund study and 39 percent of the respondents to the Cisco survey said they worry that private information will be released. A better understanding of health-information privacy practices, combined with adoption of security technologies among the healthcare community, will help alleviate concerns and accelerate use of online health tools.

Despite these barriers, it is time for all healthcare stakeholders to cut through the chaos, confusion, and constraints. It is time to focus on what consumers want and create a powerful Connected Health partnership.

## Emerging Trends that Encourage HIT Adoption

A number of emerging trends will enable healthcare stakeholders to make the Connected Healthcare Consumer vision a reality. Two major trends are:

**Information Prescriptions.** Information prescriptions are physician-provided sources of current, reliable, online information for a specific topic or health condition. They are becoming commonplace in England and have had some recognition in the United States. Early information prescription pilots in the United States date back to 2003, when Iowa physician Michael Kienzle, M.D., wrote one of the first prescriptions for U.S. Senator Tom Harkin.<sup>5</sup>

In another example, a pilot program in Georgia between the American College of Physicians-American Society of Internal Medicine Foundation and the National Library of Medicine provided doctors throughout Georgia with special “information prescription” pads to provide patients with quality, health-related information such as references to websites.<sup>6</sup>

In recent years, England’s National Health Service (NHS) has made information prescriptions a priority, following a successful pilot at 20 care sites across England from January 2007 to January 2008. NHS’s current goal is to provide information prescriptions to people who need long-term healthcare or social care.<sup>7</sup> To succeed, NHS has changed its contract with general practitioners to provide financial incentives to physicians for health management and monitoring.

Information prescriptions are part of a larger trend toward “Information Therapy,” or “Ix,” a term coined almost 20 years ago by HealthWise ([www.healthwise.org](http://www.healthwise.org)), a U.S. nonprofit focused on helping people make health decisions. HealthWise defines Information Therapy as “The prescription of evidence-based medical information to a specific patient, caregiver, or consumer at just the right time to help the person make a specific health decision or behavior change.” When prescribed by a physician, the medical information has the potential for even greater impact.

5. [www.nlm.nih.gov/news/press\\_releases/IAhealthRX03.html](http://www.nlm.nih.gov/news/press_releases/IAhealthRX03.html)

6. “2003 National Survey of Physicians and Quality of Care,” The Commonwealth Fund, March–May 2003.

7. “Connecting for Health,” Markle Foundation, June 2008 ([www.connectingforhealth.org/resources/ResearchBrief-200806.pdf](http://www.connectingforhealth.org/resources/ResearchBrief-200806.pdf)).

**Patient Centered Medical Home.** In the United States, leading associations such as the American College of Physicians and the American Academy of Family Physicians are transforming care with the Patient Centered Medical Home (PCMH) model. PCMH revises how physicians are paid and the relationship between physicians and patients. Health information technology is at the heart of this model. With PCMH, patients have an ongoing relationship with a personal physician responsible for coordinating all of their health needs and services. Within the model, physicians are paid both for the time they spend coordinating patient care from all providers and for monitoring patients' health status, in addition to in-person patient visits. Physicians are supported by a range of IT to help them manage information and provide patient reminders. North Carolina's Medicaid program, for example, saved US\$215 million in one year with physician-led primary care networks and a model that reimburses doctors for time spent managing patients' care.<sup>8</sup>

In another example, Denmark placed PCMH at the core of its healthcare system and achieved some of the highest patient satisfaction ratings in the world.<sup>9</sup> Denmark is notable among Western nations for some of the lowest health expenses per capita, along with the highest primary care rankings.

The PCMH movement in the United States will accelerate if legislation currently before Congress passes. The legislation calls for Medicare and Medicaid PCMH pilot programs, providing physician reimbursement for time spent coordinating patient care, as well as for HIT costs. Passage of bills that contain these provisions, however, is far from assured and broad-based industry support is needed. Equally important, private-sector insurance plans must also revise their reimbursement practices. Inadequate reimbursement is causing PCPs to quit their practices, leaving millions of Americans without preventive medical care. Primary care must be an attractive specialty, and reimbursement must support care management and HIT adoption.

## Realizing the Vision

Healthcare stakeholders—insurers, employers, providers, and public health organizations—who are concerned about controlling costs and optimizing health management must promote the importance of patient-physician relationships and help connect individuals with PCPs.

Online or phone-based physician referral services are one option. Most referral services profile a physician's training, office location and hours, and areas of practice. What is also needed is information about physicians' use of IT. Thirty-nine percent of respondents to the Cisco survey expressed a preference for a doctor who uses IT to manage care. Guiding patients to connected providers will help accelerate the trend toward Connected Health partnerships.

There are a number of actions stakeholders can take now to help realize the Connected Healthcare relationship.

8. [www.nlm.nih.gov/news/press\\_releases/IAhealthRX03.html](http://www.nlm.nih.gov/news/press_releases/IAhealthRX03.html)

9. "Learning from High-Performance Health Systems Around the Globe," Karen Davis, The Commonwealth Fund, Senate HELP Committee Hearing, January 10, 2007.

## Payers

Payers must help physicians adopt HIT. A small number of leading payers and employers are setting the example. The Silicon Valley Pay-for-Performance Consortium is one group making inroads in this area. Started in 2006 by Cisco, Intel, and Oracle—along with several large California physician organizations<sup>10</sup>—the Consortium's primary goal is to accelerate the use of technology for quality healthcare. One year after it was launched, seven physician organizations—representing 25 practice sites and more than 1,800 doctors—qualified to earn financial rewards for instituting new HIT systems designed to improve patient experiences and outcomes. Among the technologies adopted, patient scheduling and appointment reminder systems were implemented by 57 percent of the physician groups, and same-day appointments and data mining technologies for advanced patient-information management were adopted by 43 percent of the physician groups.

In addition to offering incentives to physicians through pay-for-performance programs and making other changes to reimbursement practices, payers can provide incentives to consumers who show a pattern of being responsible for their health. Consumers who demonstrate increased understanding of health issues, comply with care plans, and sustain relationships with a PCP can be rewarded through financial bonuses, discounts on premiums, or lower copayments. Today, payers base premium rates and copayment costs on variables such as previous use of health services, and demographic profiles such as age and gender. Imagine health knowledge as a new variable in setting insurance rates for individuals or groups.

## Physicians

Primary care physicians can provide patients with online health services and solutions. According to the Cisco survey, exchanging secure email with their doctors, receiving lab and other test results through a secure website, and scheduling medical appointments online are the top three health services consumers want. These services are relatively easy to implement and create the foundation for a connected consumer-provider relationship that can help build a practice and establish productive, long-term relationships with patients.

People use email in almost every part of their lives because it is convenient. They want this same convenience when communicating with physicians—with assurance that the privacy of their information is protected. Cisco's own experience as a major employer has confirmed these findings. A pilot program between Cisco and Sutter Health affiliate Palo Alto Medical Foundation (PAMF) in Northern California tested the effectiveness of secure physician-patient messaging. With secure messaging, patients and

---

10. The seven Bay Area-based physician organizations participating in the Silicon Valley Pay-for-Performance Consortium are Camino Medical Group, Kaiser Permanente, Palo Alto Medical Foundation, Stanford Hospital & Clinics, San Jose Medical Group, Santa Clara County Individual Practice Association, and Santa Cruz Medical Foundation.

providers log in to a secure website to write their message, which is transmitted using security technology and delivered only to authorized providers. More than 500 Cisco employees signed up for the pilot, as did all 650 PAMF physicians. After experiencing the service, employee participants voiced a strong preference for secure messaging with physicians.

Online lab results provide important information to patients quickly. Rather than wait for results to be delivered through the mail or by phone, patients can sign on to a secure website any hour of the day or night to find test results as soon as they are available, alleviating worry and frustration. Leading providers such as Henry Ford Health System<sup>11</sup> in Detroit, Michigan and PAMF offer this service.

In addition to specific test results and other personal health information online, more than 20 percent of Cisco survey respondents said they want their PCP to offer a website with health-related information. This does not mean that physicians must shoulder the burden of posting new content. Instead, physicians can link their websites to other sites that have quality, current health content. MEDLINEplus (medlineplus.gov) is one example. Created by the National Library of Medicine, MEDLINEplus is widely considered a credible source of health information for providers and consumers.

The ability for patients to schedule appointments online is the third-most-desired PCP service. Imagine not having to play phone tag with medical office staff or having to remember the physician's office hours. With online scheduling, a patient can find a convenient date and time to see the physician and push "select" to make the appointment. Beyond the convenience of online scheduling, automated reminders from the PCP's office—whether online, by phone, or as a text message to a mobile device—can also be used to help patients remember appointments and schedule regular health screenings such as mammograms.

## Consumers

As physicians begin to make these changes, consumers must do their part to enable and embrace the Connected Health partnership. There are five steps consumers can take right now:

- 1) Each person should establish a long-term relationship with a PCP, taking advantage of referral services to identify the provider that best fits his or her individual preferences and needs. Websites such as [www.healthgrades.com](http://www.healthgrades.com) provide feedback about physicians and a physician-locator service. Consumers should favor physicians who incorporate HIT into their practice and patient services.
- 2) People can keep an electronic health diary to record questions or changes in their health. Tracking changes over time is the best way for patients to present a comprehensive view of their health to all providers.

---

11. [www.henryford.com](http://www.henryford.com)

- 3) Consumers can increase their health literacy by reading materials or viewing health-information videos online, and then use this content when preparing to speak with providers. People should also research key topics following their medical visits, feeling free to discuss any information with their doctors. Patients must take shared responsibility for, and participate in, making decisions about their health, rather than just obtaining information without using the new knowledge.
- 4) Consumers should use secure messaging to ask questions about their health when symptoms arise, rather than waiting to see if symptoms worsen before scheduling a medical appointment.
- 5) Finally, responsible consumers must follow the care plan agreed on by all providers. This includes filling prescriptions and taking medication as prescribed. It is important that patients call or write their physicians in a timely manner for refills. Patients should also encourage their physicians to prescribe medications electronically to reduce the chance of errors caused by pharmacists misreading physicians' handwriting or by physicians inadvertently making errors when prescribing medications. Patients should also follow the preventive care aspects of their healthcare program by getting regular screenings for diabetes, cholesterol, cancer, and other diseases. Consumers can take advantage of online health-profile tools to determine personal health risks and create a lifetime care plan with the help of their PCP.

### **All Industry Participants**

Together, all industry stakeholders must address the concern noted earlier about private information being released or personal identities being stolen. Policymakers at all levels continue to work for laws and regulations that establish clear standards for health-information privacy and security. Innovative HIT solutions improve the safety of patient data. Audit trails, authorization and authentication tools, and firewalls are all important HIT solutions for a medical practice.

## Conclusion

Connected Health empowers consumers with information and knowledge, engages them in the provider relationship, and provides them with convenient access to health expertise and care, along with personalized health services.

For PCPs, the Connected Health partnership is the most promising path to increased revenue. Public-sector reimbursement from Medicare and Medicaid, along with private-sector reimbursement from health insurers, is likely to increase rewards for better patient care management using HIT. Physicians want to make a good living, provide quality care, support their patients, and have a good quality of life. A connected partnership with patients supports these goals.

For payers, when consumers and providers together focus on lifetime health management and wellness, the rising incidence of chronic disease and expensive medical interventions should decline. Obesity, diabetes, heart disease, and other illnesses are heavily influenced by lifestyle choices including diet, exercise, and smoking. Informed patients who take responsibility for their health and work effectively with a PCP are likely to become less-expensive beneficiaries.

The journey to a connected patient-provider relationship, when enabled by payers, providers, and policymakers, can lead to a Connected Health partnership. Stakeholders must focus on healthcare services and solutions consumers want most and connect patients with PCPs using Internet-based technologies. Once this happens, patients will become empowered and engaged health consumers living *their* vision of the Connected Health experience.

---

### More Information

The Cisco Internet Business Solutions Group (IBSG), the global strategic consulting arm of Cisco, helps CXOs and public sector leaders transform their organizations—first by designing innovative business processes, and then by integrating advanced technologies into visionary roadmaps that address key CXO concerns.

For further information about IBSG, visit <http://www.cisco.com/go/ibsg>

---

### Cisco IBSG Healthcare Practice

The Cisco IBSG Healthcare Practice helps leaders in the healthcare and life sciences industries transform the way that their organizations design and deliver health and care to customers—by integrating innovative business processes with advanced technologies to contribute to the prevention of disease, improve access to and quality of care, and reduce costs. Healthcare Practice experts advise public sector and private industry executives about the impact of technology on public health and health policy issues that concern citizens, politicians, and industry leaders alike.

To learn more about the IBSG Healthcare Practice, visit <http://www.cisco.com/web/about/ac79/health/index.html>.



Americas Headquarters  
Cisco Systems, Inc.  
San Jose, CA

Asia Pacific Headquarters  
Cisco Systems (USA) Pte. Ltd.  
Singapore

Europe Headquarters  
Cisco Systems International BV  
Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at [www.cisco.com/go/offices](http://www.cisco.com/go/offices).