

# Cisco HealthPresence™

## Transforming Access to Healthcare

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### Introduction

Healthcare in the 21<sup>st</sup> century presents enormous challenges worldwide. The need for services is increasing rapidly. Improved standards of living, aging populations, advances in medicine, and people living with chronic conditions have strained healthcare systems globally. At the same time, emerging middle classes in developing countries are demanding better access to health services.

The typical response to this increased demand for services has been to add human capital to healthcare systems, but this is not a sustainable solution. Even if it were fiscally feasible, there aren't enough sufficiently trained healthcare professionals to address the growing demand for general or specialty services.

Breaking the dependency on scarce human capital requires increased investment in health information technologies, as well as communication and collaboration tools to optimize the use of skilled human resources. Combining diagnostic devices with communication / collaboration tools and health information offers exciting alternatives to traditional care-delivery modalities. Services can be made available to almost anyone, at any time, at any location. Besides traditional health service outlets, locations as varied as retail stores, community centers, office buildings, hotels, shopping malls, rural outposts, and homes can become effective care-delivery points.

This is the promise of Cisco HealthPresence, a transformative patient care-delivery concept that combines Cisco TelePresence with Cisco IP Call Center technologies and physiological information from diagnostic devices to create a live, "face-to-face visit" experience for patients and clinicians who might be hundreds or even thousands of miles apart. (Cisco TelePresence combines life-size, ultra-high-definition video images [720p and 1080p], spatial audio, and interactive elements to create the feeling of being "in person" with participants in remote locations.) Using the network as the platform, Cisco HealthPresence breaks the boundaries of geography and eases pressure from the increasing demand for expert services in any healthcare system—regionally, nationally, or globally.



## Trends Driving the Need for a New Healthcare-Delivery Model

- Populations are aging in most developed economies. Global average life expectancy has increased by 20 years, to 66, since 1950<sup>1</sup>, and the median age in Europe has increased from 38 to 49 years.<sup>2</sup>
- Emerging economies are struggling to keep pace with the demand for services, especially with the growth of large middle classes.
- Healthcare costs are increasing at rates that frequently far outpace nations' gross domestic product (GDP).
- Rural areas frequently have poor access to healthcare services, particularly specialty services.
- Consumers are increasingly demanding easy access, convenience, and better healthcare service at a lower cost.
- Funders of healthcare services expect better, lower-cost delivery capabilities.
- Green living necessitates almost ubiquitous access to services to offset the carbon footprint associated with the unnecessary movement of people.
- The fragmentation of healthcare is putting pressure on providers to differentiate themselves more effectively and to reach new markets.

## Opportunity to Extend Healthcare Boundaries

Because Cisco HealthPresence uses the network as the platform for service delivery, it has unsurpassed potential to extend geographic boundaries. A clinical expert on the HealthPresence network can connect to any location where a HealthPresence "Pod" is available. This represents an enormous opportunity to optimize the use of scarce expert resources while containing costs and offering a live, "face-to-face visit" experience.

Self-contained HealthPresence Pods can be placed in public or commercial locations to allow access to remote healthcare services and specialists.

**Figure 1.** Cisco HealthPresence "Pod"



Source: Cisco IBSG, 2009

Medical diagnostic devices integrated with the Cisco HealthPresence Collaboration and Communication Platform (HCCP) allow the secure transmission of data or images (static or streaming) from various FDA-cleared medical devices to a remote workstation operated by a healthcare provider. Healthcare providers, in turn, can be associated with a “virtual” call center, allowing the HCCP to route sessions to the first available provider or to the provider who best meets the criteria requested by the patient. For example, a patient could ask to be connected to the first available primary care doctor, or a Spanish-speaking dermatologist, or a specific Cisco HealthPresence-enabled doctor. In turn, the remote healthcare provider can view data from the medical devices and the patient in real time, and interact with the patient very much as he or she would during an in-person office visit.

- Healthcare providers can be available full time, part time, or on demand, based on their specific deployment and business needs.
- Healthcare providers can expand their opportunities by reaching new markets and providing services that previously would have been limited by geography.
- Public and private healthcare organizations can offer a multitude of services, such as primary, specialty, or mental health services, while optimizing the use of scarce resources.
- Cisco HealthPresence Pods accommodate a variety of cost-efficient staffing options, depending on the spectrum of services offered and the specific regulatory environment.
- Funding models can be extended beyond insured patients to include the uninsured, or for self-directed health plan members on a pay-as-you-go basis.
- In the not-so-distant future, the Cisco HealthPresence platform can extend to the home, using devices such as televisions for video communications and home networks for diagnostic-device data transmission.

## The Cisco HealthPresence Solution

The ability to transform healthcare through new delivery models exists right now. Through a Connected Health ecosystem, we can expand access and manage secure and reliable information access.

By using the network as the platform, Cisco HealthPresence provides an effective alternative care-delivery modality. Of course, individuals still will have in-person visits to the doctor, hospital, or clinic. But solutions such as Cisco HealthPresence offer the ability to augment and optimize the capacity and reach of care-delivery systems in a patient-friendly and convenient way.

Face-to-face visits with a doctor via Cisco HealthPresence can take place in community centers, with or without scheduling. Remote or medically underserved areas can enjoy access to primary or specialty services. Educational and corporate campuses can offer convenient, expedient, and effective care management to students and employees.

## HealthPresence Benefits

Cisco HealthPresence offers many benefits—financial and otherwise—to doctors, patients, and employers.

### *Doctors / Providers*

- Healthcare professionals can anticipate new business or improved productivity, eliminating downtime and making themselves available for remote consultations and better customer service.
- A “teaching hospital” model can be employed to improve communication among healthcare providers. Patients can be seen by referring physicians and specialists at the same time to develop effective treatment plans.
- The integrated IP Contact Center provides for effective utilization of resources wherever they happen to be, creating a “virtual” care-delivery network.
- The Cisco HealthPresence Communication and Collaboration Platform enables real-time health information and electronic medical records, creating an improved operating environment while decreasing institutionalized inefficiencies of traditional care-delivery models.

### *Doctors and Patients*

- As healthcare professionals become more scarce in many markets, solutions such as Cisco HealthPresence can draw on qualified resources regionally, nationally, or globally to deliver virtual care in a high-quality setting.
- New financing models can be developed and supported for patients who are insured, those who are publicly funded, the uninsured, or the privately funded (self-pay).
- One-stop convenience can be accommodated, with patients being referred to specialists on the spot, thus reducing inefficiencies and loss of productivity associated with referrals and follow-up visits.
- Cisco HealthPresence can extend care delivery to rural or hard-to-reach sites, reducing patient travel costs and improving the quality of life for many patients in medically underserved areas.
- Cisco HealthPresence is a “green” solution, allowing patients easier access to healthcare. This is a particular benefit in remote areas or congested cities, where it can take hours to travel a short distance.

### *Employers*

- With Cisco HealthPresence, employers can expect increased productivity in corporate health settings.
- Provides employees with a quick and convenient way to consult privately with doctors about a wide range of medical issues, such as cold and flu symptoms, sinus infections/allergies, and blood pressure screening/management.
- Employees save time and receive expert medical opinions without having to drive to the doctor’s office.

## Cisco HealthPresence: Real-world Results

Cisco HealthPresence pilot programs have delivered the following results:

- Participating doctors said they would be “completely” confident about using Cisco HealthPresence alone in 85 percent of the cases.
- Among patients, 99 percent said they were satisfied, and 93 percent said they would recommend that this type of consultation be developed further.
- Staff members stated:
  - “I like being able to consult no matter the distance, no matter where the person is.”
  - “It’s got huge potential. Because Cisco HealthPresence brings together technologies that are already proven, we knew we could use it to treat patients at a distance.”
- Patients said:
  - “I really was amazed. It was so brilliant—it was absolutely wonderful.”
  - “Once the consultation started, it was just as if the doctor were across the table from me.”
- In general, interviewed staff found the consultation via Cisco HealthPresence to be good, and doctor-patient interaction to be similar to a face-to-face consultation.

**Figure 2.** Ninety-nine percent of pilot patients said they were satisfied with Cisco HealthPresence.



Source: Cisco IBSG, 2009

## Conclusion

The network as the platform allows for new care-delivery models that improve access, contain costs, and offer convenient alternatives to an in-person consultation. The technologies required to transform the healthcare industry are available today. Now the industry must formulate, evaluate, select, and deploy innovative models enabled by new forms of network-based communication and collaboration capabilities. Cisco HealthPresence addresses access, cost, and convenience in a highly secure environment that preserves the quality of interaction to which patients and providers doctors are accustomed.

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## Endnotes

1. Organisation for Economic Co-operation and Development (OECD), 2006; Cisco IBSG, 2008.
2. Report of the Second World Assembly on Ageing, Madrid, accessed on July 28, 2007.

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### 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.

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