# Healthcare Without Bounds: Point of Care Computing for Physicians

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<th>Healthcare Without Bounds: Point of Care Computing for Physicians</th>
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| AUTHOR: | Spyglass Consulting Group  
Gregg Malkary, Managing Director  
gmalkary@spyglass-consulting.com  
www.spyglass-consulting.com |
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## INTRODUCTION

Point of Care Computing for Physicians presents the findings of an end-user market study focused on the current state of computing adoption by physicians across the United States. The report uncovers strong opinions regarding the market opportunities and challenges for adopting computing solutions at the point of care to improve physician productivity, enhance patient safety and reduce the risk of medical errors.

Point of Care Computing for Physicians is an outgrowth of a similar study published by Spyglass in January 2005 entitled Mobile Computing for Physicians. Throughout this report, Spyglass compares and contrasts trends identified across both studies.

Content for Point of Care Computing for Physicians comprises more than 100 in-depth interviews with physicians working in acute care and ambulatory environments nationwide. Clinicians interviewed were technically competent and representative of a broad range of medical specialties and institution sizes.

Spyglass conducted the telephone interviews over a four-month period beginning April 2007. The purpose of the interviews was to identify the needs and requirements for point of care computing through discussions about:

- existing workflow inefficiencies in accessing clinical information,
- current usage models for computing devices and solutions, and
- barriers for widespread adoption.

Spyglass also evaluated key vendor product offerings and identified early adopter organizations that have successfully deployed point of care solutions.

## TARGET AUDIENCE

- **Software and hardware vendors, systems integrators and management consulting groups** who are selling hardware, applications and services into the healthcare industry
- **Healthcare administrators and IT executives** who are making strategic decisions to fund clinical information technology solutions
- **Clinicians** who are involved in informatics and clinical system evaluation and selection
- **Investment banking and private equity investors**
ABSTRACT: Point of care computing is changing the way physicians deliver and practice medicine enabling them to access and aggregate patient clinical information quickly, efficiently and securely from any location, at any time. With these solutions, physicians can make more informed patient care decisions to improve physician productivity, enhance patient safety and reduce the risk of medical errors.

Physicians work in high-stress data intensive environments that are dominated by inefficient paper-based workflow processes. They are under extreme time pressures and have a constant need to communicate with colleagues and to access patient clinical information as they travel between offices, exam rooms and corridors of affiliated hospitals.

Healthcare organizations are deploying a wide variety of computing devices to extend the reach of existing clinical systems to the point of care including Smartphones, laptops, TabletPCs, mobile clinical carts and desktop computers.

Point of care computing is changing the physician/patient relationship. Physicians interviewed were concerned point of care computing devices can interfere with the physician/patient relationship. Patients are not used to seeing physicians use computers during exams or treatments.

Physician clinical systems usage at point of care is accelerating. Physicians interviewed are increasingly using clinical systems at point of care to access patient information, use productivity tools, and browse the Internet for healthcare related issues. They are taking advantage of multi-year, multi-million dollar IT investments their organizations have made upgrading their clinical information systems and infrastructure.

Point of care computing devices pose infection control risks. Physicians interviewed thought point of care computing devices pose significant infection control risks due to poor physician hand washing habits, multi-tasking at the bedside and ignorance of the potential risk.

Right computing device is situation dependent. Physicians interviewed believe the right point of care computing device is dependent upon a physician’s physical location, urgency of the situation, tasks to be performed, complexity of the applications required and most importantly physician’s personal preferences.

Digital images captured at point of care can support clinical documentation. Physicians interviewed believed digital images and video captured at point of care could be relevant and useful to support patient clinical documentation stored in the electronic medical records.
Spyglass Consulting Group is a market intelligence firm and consultancy focused on the nexus of information technology and healthcare. Spyglass offers products and services in customer and market intelligence, strategic partnership development, product marketing and investment due diligence. Spyglass’ current research is entitled Healthcare without Bounds that focuses on the current and future potential of mobile computing and wireless technologies within the healthcare industry.

Spyglass customers include more than 100 leading high technology vendors, management consulting organizations and healthcare providers including Cisco, IBM, Microsoft, Intel, Hewlett Packard, Oracle, Johnson & Johnson, Pfizer, Siemens, GE Healthcare, Philips Medical, Sprint, and Kaiser Permanente.

Gregg Malkary is the founder and Managing Director of Spyglass Consulting Group. He has more than 20 years experience in the high technology industry working with Fortune 2000 companies to help them use information technology for competitive advantage. Malkary has domain expertise in mobile computing, wireless and broadband technologies with direct experience in the healthcare, hospitality, manufacturing, communications and entertainment markets.

Prior to founding Spyglass Consulting Group in August 2002, Malkary was an Associate Partner at Outlook Ventures, a venture capital firm focused on early stage investments in enterprise software and communications companies. Previously, Malkary was the Director of Strategic Planning for Exodus Communications where he was responsible for identifying, evaluating and executing growth initiatives for Exodus in the managed web-hosting marketplace. Malkary has also held consulting and senior management roles in business development, strategic planning and product marketing for public and private technology companies including IBM, Hewlett Packard, Accenture, Silicon Graphics and Skytel Communications.

Malkary frequently speaks at regional and national conferences focused on mobile computing, wireless technologies and healthcare related issues. Numerous industry publications have written about and quoted Malkary including the Wall Street Journal, CIO, Business 2.0, MIT Technology Review, Network World and eWeek.

Malkary is an honors graduate of Brown University having earned a MS and BA in Computer Science. He was awarded the prestigious North American Philips Corporation Fellowship for his graduate research work in graphical simulation environments.

For additional information about this study, please contact Gregg Malkary at gmalkary@spyglass-consulting.com.
# Customer Testimonials

**Spyglass Consulting Group** has provided the Cisco Healthcare Team with excellent, in-depth market research and analysis that clearly maps key healthcare related issues/trends to available mobile technologies and solutions. Spyglass has also been a key resource for Cisco’s healthcare channel partners with educational sessions providing partners with detailed and meaningful insights about healthcare customer requirements. Spyglass engagements with Cisco and Cisco partners have been extremely professional and have provided excellent value-add. I strongly believe Spyglass’ research could be useful for healthcare provider organizations and solutions vendors targeting healthcare industry.

**Kacey Carpenter**
**Healthcare Solutions Marketing**
**Cisco Systems**

**Trends in RFID** is an impressive and useful analysis of the current state of RFID technologies and solutions in healthcare. Its value to me and other hospital and health systems CIOs comes from the survey of operating managers and its analysis of opportunities for specific departments. Given our construction project and network infrastructure upgrades, the timing of the report’s publication could not be better. Creative CIOs of leading organizations will gain many useful insights from the report as they consider investments in RFID solutions targeted to patient safety and operational quality improvements.

**Walter Fahey, VP and CIO**
**Maimonides Medical Center**
**Brooklyn, NY**

**Spyglass Consulting Group’s reports** on technologies in healthcare are an absolute necessity to anyone in this business. I have learnt a terrific amount from his reports, Trends in Remote Patient Monitoring and Trends in RFID, and I refer to them constantly. The information that is provided is sufficient and succinct to provide the support for establishing our strategies. The reports are not a massive collection of everything to know about these topics, but rather a practical collection of the most relevant information with important directions for my group which is focusing on a new direction for Pfizer. These documents are wonderful and practical resources.

**David Lester, PhD**
**Director, Pfizer Human Health Technologies**
**Pfizer, Inc.**

**Mobile Computing for Physicians** and **Mobile Computing in Nursing** have become essential reference tools for the palmOne healthcare team as we develop our product and partner strategy for handhelds and smartphones. Because of the depth and breadth of the research, we are able to find answers to questions about a broad range of topics – from current and future usage patterns and preferences to workplace realities inhibiting adoption. What is particularly refreshing is the frank discussion of the gap between the panacea of e-health initiatives and the challenging environment in which our healthcare professionals must function today. I highly recommend their research for those seeking a comprehensive environmental scan of mobile technology usage among clinicians.

**Gail Moody-Byrd**
**Director, Business And Healthcare Marketing**
**Palm**

**Trends in Mobile Computing** is an excellent review. People of your caliber should be recognized at national meetings for your valuable contribution of legitimate end-user based research, so we can all better understand the market realities of mobile technology in healthcare. Your findings are both encouraging to those trying to advance the usage of mobile technologies, and words of caution to those who extrapolate or make assumptions solely based on anecdotal success stories.

**Andrew Barbash, MD**
**Chief of Neurology**
**Holy cross Hospital (Silver Spring, MD)**

**Mobile Computing for Physicians** provided the Microsoft TabletPC Group with unique insights and perspectives to better understand how physicians are using mobile computing solutions at the point of care within a wide variety of healthcare settings. As a result of this report, we were able to better fine tune our value proposition and messaging toward different constituencies within the healthcare community.

**Chris Barry, Group Product Manager**
**Windows Client PMG, Tablet PC Division**
**Microsoft**

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Gregg Malkary
gmalkary@spyglass-consulting.com
Point of Care Computing for Physicians

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Spyglass Consulting Group
Gregg Malkary, Managing Director
Menlo Park, CA

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