Healthcare Without Bounds: Point of Care Computing for Nursing

TITLE:	Healthcare Without Bounds: Point of Care Computing for Nursing
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INTRODUCTION	**Point of Care Computing for Nursing** presents the findings of an end-user market study focused on the current state of computing adoption by **nurses** 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 enhance patient safety, reduce the risk of medical errors and improve nursing productivity. **Point of Care Computing for Nursing** is an outgrowth of a similar study published by Spyglass in June 2004 entitled **Mobile Computing for Nursing**. Throughout this report, Spyglass will compare and contrast interesting trends identified across both studies. Content for **Point of Care Computing for Nursing** was derived from more than 100 in-depth interviews with nurses working in acute care and ambulatory environments nationwide. Nurses interviewed were technically competent and representative of a broad range of nursing 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 poised to revolutionize the way nurses practice and deliver patient care enabling access to clinical information quickly and securely from any location, at any time to enhance patient safety, reduce the risk of medical errors and improve nursing productivity.

Nurses are mobile workers. There are 2.9 million registered nurses in the United States representing the single largest healthcare professional group with approximately 4 nurses for every physician. Nurses are a scarce resource that work in high-stress, data-intensive environments dominated by inefficient paper-based processes. They are continuously on-the-go and have a constant need to access relevant clinical information and to collaborate with colleagues and patients.

Patient acuity levels on the rise. Patients are sicker with more physical and cognitive impairments than a decade ago requiring more complex nursing care involving multiple medical specialties. Nurses are taking care of more patients who are staying for shorter periods. They are under pressure to coordinate, communicate and document patient care more effectively across a wider array of care team members.

Healthcare organizations have made significant investments upgrading their clinical information systems and technical infrastructure to extend the reach of existing systems enabling nurses, physicians, and other allied health professional access to patient health information at- or near- point of care. Organizations have deployed fixed location terminals and wide variety of mobile computing devices including Smartphones, laptops, TabletPCs and mobile clinical carts.

Point of care computing devices is inadequate. Nurses interviewed are concerned about the usability and portability of computing devices deployed at point of care. Business class computers are not well suited to meet the heavy demands of a healthcare environment.

Point of care clinical solutions is not well integrated with nursing workflow. Nurses interviewed are concerned about the usability and complexity of clinical information solutions. Clinical information systems are being using BUT not necessarily in real-time nor at the point of care. Nurses are documenting first on paper at point of care and then re-entering the patient information into the electronic medical record later on during their shift.

Technical infrastructure is immature to support point of care computing. Nurses interviewed believe their organizations lack the appropriate technical infrastructure to support point of care computing including reliable networks, systems interoperability across the continuum of care, and security requirements that do not impede nursing productivity.

ABOUT SPYGLASS CONSULTING GROUP	

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 realties 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** **Holycross 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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