
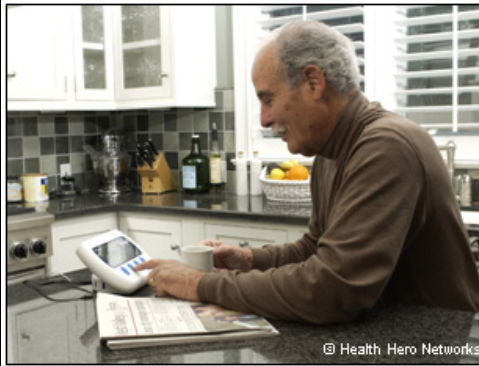


Healthcare without Bounds: Trends in Remote Patient Monitoring 2009

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INTRODUCTION	<p>Trends in Remote Patient Monitoring 2009 (RPM) presents the findings of an end-user market study focused on the current state of remote patient monitoring adoption by healthcare organizations across the United States. The report uncovers strong opinions regarding the market opportunities and challenges for deploying RPM solutions to reduce healthcare costs, improve patient outcomes and increase patient access to care.</p> <p>Trends in Remote Patient Monitoring 2009 is an outgrowth of a similar study published by Spyglass in April 2006 entitled Trends in Remote Patient Monitoring. Throughout this report, Spyglass traces remote patient monitoring over the past few years identifying important trends in the field.</p> <p>The content for Trends in Remote Patient Monitoring 2009 was derived from more than 100 in-depth interviews with healthcare organizations involved in telehealth/telemedicine including home health agencies, academic medical centers, regional hospitals, government agencies and disease management companies.</p> <p>The telephone interviews were conducted over a two-month period starting in October 2008. The purpose of the interviews was to identify the needs and requirements for remote patient monitoring through discussions about existing workflow inefficiencies in managing chronically ill patients, current telehealth/telemedicine initiatives, and potential impact for deploying remote patient monitoring in the future.</p> <p>Spyglass evaluated key vendor product offerings and identified early adopter organizations that have successfully deployed point of care solutions.</p>
TARGET AUDIENCE	<ul style="list-style-type: none"> • 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:



Remote Patient Monitoring (RPM) solutions enable healthcare organizations to remotely monitor and manage patients with chronic diseases such as congestive heart failure, diabetes, chronic obstructive pulmonary disease and asthma.

Early adopters of RPM solutions are capitated managed care organizations that have fiscal responsibility for their patients across the spectrum of care. These organizations

include health maintenance organizations, integrated delivery systems, home health agencies, hospices, disease management companies and government agencies like the Department of Veterans Affairs. With RPM solutions, healthcare organizations can:

- improve patient outcomes,
- reduce healthcare delivery costs, and
- increase access to care for patients living in rural/remote areas.

RPM provides significant benefits and outcomes to chronically ill patients. Ninety-seven percent of organizations interviewed using RPM have deployed these solutions to improve patient outcomes enabling them to identify patients before their condition(s) become more acute. Investment focus has been on patients who are at greatest risk of re-hospitalization and/or unnecessary trips to the emergency department.

Healthcare organization investments in RPM are primarily self-funded. Forty-eight percent of healthcare organizations interviewed have self-funded their home telehealth initiatives. Strong return on investment exists for healthcare delivery networks who are both the provider and the payer which includes organizations like Kaiser Permanente and Veterans Administration.

RPM solutions must be easier to use and less expensive. Convergence with consumer electronics products will enable patients to use devices they are already familiar and comfortable with including Smartphones, personal computers and cable set top boxes. Price point for RPM devices and associated peripherals needs to drop to the sub-\$500 range before being deployed to support patients with other chronic diseases.

Healthcare payers resistant to providing reimbursement for remote patient monitoring despite evidence of their efficacy by the Veterans Administration who has deployed more than 35,000 units. Payer reimbursement is still focused on an acute care delivery rewarding providers for quantity of procedures performed rather than quality of care delivered.

**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 120 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 Healthcare, 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.

<p>Customer Testimonials</p>	<p>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.</p> <p>Kacey Carpenter Healthcare Solutions Marketing Cisco Systems</p> <p>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.</p> <p>Walter Fahey, VP and CIO Maimonides Medical Center Brooklyn, NY</p> <p>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.</p> <p>David Lester, PhD Director, Pfizer Human Health Technologies Pfizer, Inc.</p> <p>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.</p> <p>Gail Moody-Byrd Director, Business And Healthcare Marketing Palm</p> <p>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.</p> <p>Andrew Barbash, MD Chief of Neurology Holycross Hospital (Silver Spring, MD)</p> <p>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.</p> <p>Chris Barry, Group Product Manager Windows Client PMG, Tablet PC Division Microsoft</p>
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Trends in Remote Patient Monitoring 2009

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Spyglass Consulting Group
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- IN THIS STUDY 5**
- METHODOLOGY 5**
- TARGET AUDIENCE 5**
- DEMOGRAPHICS..... 6**
- INTRODUCTION..... 11**
- EXECUTIVE SUMMARY 13**
- MARKET SURVEY RESULTS 18**
- WHAT IS REMOTE PATIENT MONITORING (RPM)? 18**
- RPM INVESTMENTS 23**
 - Are organizations making investments in RPM?..... 23
 - Why are organizations making investments in RPM?..... 24
 - How are organizations funding RPM initiatives?..... 27
 - Which types of organizations are making investments in RPM? 29
 - What is the scope of RPM deployments (percentage of daily census)?..... 33
 - Are organizations planning to increase RPM deployments in the future? 34
- RPM SOLUTIONS 35**
 - What are the technical limitations of RPM solutions? 35
 - Chronic Conditions 49
 - Which chronic diseases are organizations using RPM to support?..... 49
 - Vital Sign Peripherals 55
 - Which vital signs are organizations using RPM to monitor?..... 55
 - Vendor Solutions 57
 - Which RPM vendor solutions have organizations deployed?..... 57
 - Video Conferencing..... 60
 - Does video conferencing provide value to support home telehealth? 60
 - What are the limitations for using video conferencing? 63
 - Are physicians ready to use video conferencing to support patient consults? 66
 - Broadband Adoption..... 68
 - Are elderly patients adopting broadband services?..... 68
- RPM BARRIERS TO ADOPTION 69**
 - Patient Data Management..... 69
 - Are organizations using electronic medical records to support RPM? 69
 - Are organizations able to access patient information across continuum of care?..... 70
 - Are elderly patients managing their own healthcare records?..... 71
 - Clinical Workflow Adoption..... 74



What are the implications of RPM on clinical workflow?..... 74

Payer Reimbursement..... 79

 Are healthcare payers providing reimbursement for RPM?..... 79

Return on Investment 84

 Do RPM solutions provide a compelling return on investment? 84

Private Pay Service 87

 Do patients want to be monitored after their episode of care? 87

 Are organizations providing a private pay service for RPM? 88

Healthcare Licensure..... 90

 Should federal government revise licensure laws to support telehealth?..... 90

RPM FUTURE OUTLOOK 94

 Healthcare Reform 94

 Consumerism 96

 Healthcare 2.0 98

CONCLUSIONS 99

ABOUT SPYGLASS CONSULTING GROUP 100

LIST OF FIGURES 101

GLOSSARY 103

ENDNOTES 104

