

<b>Healthcare without Bounds: Trends in Remote Patient Monitoring 2015</b>	
<b>TITLE:</b>	Healthcare without Bounds: Trends in Remote Patient Monitoring 2015
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<b>LENGTH:</b>	81 Pages 39 Figures
<b>TYPE:</b>	Study - Customer Needs and Strategies
<b>PUBLISHED:</b>	November 2015
<b>PRICE</b>	\$2,495.00 (US) <i>Enterprise pricing available upon request</i>
<b>STUDY OVERVIEW:</b>	<p><b>Remote Patient Monitoring (RPM)</b> solutions enable healthcare organizations to remotely monitor and manage chronically ill patients with congestive heart failure, chronic obstructive pulmonary disease, diabetes, hypertension and asthma. These solutions have been demonstrated to improve patient outcomes, reduce healthcare delivery costs, and increase access to care for patients living in rural/remote areas.</p> <p>Early adopters of RPM solutions are capitated managed care organizations that have fiscal responsibility for their patients across the spectrum of care, which include health maintenance organizations, integrated delivery systems, home health agencies, hospices, disease management companies and government agencies like the Veterans Administration.</p> <p>Exploding U.S. healthcare costs are being driven by an aging baby boomer population and the prevalence of chronic disease. More than 133 million Americans representing 45 percent of the U.S. population have at least one chronic disease. Chronic diseases are responsible for seven out of every 10 deaths in the United States, killing more than 1.7 million Americans every year. Chronic diseases can be disabling and reduce a person's quality of life, especially if left undiagnosed or untreated. Patients with chronic conditions account for approximately 83 percent of the total U.S. health spend.<sup>1 2 3 4</sup></p> <p>Healthcare providers, with the passage of the Affordable Care Act, are rapidly consolidating into larger integrated delivery networks and transitioning toward various at-risk payment and care delivery models. Many are formulating strategies and deploying foundational processes, infrastructure, and tools required to support population health management programs.</p> <p>Healthcare industry consolidation, migration toward at-risk payment and care delivery models, and the rise of consumer driven health has created an <u>imperative</u> for healthcare providers to consider large scale RPM (remote patient monitoring) investments. These help monitor and manage value-based risk associated with supporting large patient populations with complex chronic conditions to help achieve the Triple AIM of improving care quality and outcomes, controlling healthcare costs, and increasing patient satisfaction.</p>

	<p><b>ACOs evaluating RPM to support population health.</b> Eighty percent of providers surveyed were Accountable Care Organizations (ACOs) or in the process of evaluating different at-risk payment and care delivery models. Seventy-seven percent were evaluating RPM to help manage value-based care risk associated with supporting large chronically ill patient populations.</p> <p><b>ACOs making significant investments in mobile RPM solutions.</b> Eighty-four percent of providers surveyed who had deployed RPM were using mobile devices, primarily tablets to support chronically ill patients recently discharged from the hospital.</p> <p><b>ACOs expressing strong interest in patient BYOD and wearables.</b> About 50 percent of providers surveyed plan to evaluate patient BYOD (Bring Your Own Device) options and wearable technologies including Smart Watches and activity trackers that can be used to support chronically ill patients.</p> <p><b>ACOs embracing analytics and Big Data to support population health.</b> Seventy-nine percent of providers surveyed are embracing analytics and decision support tools to turn raw patient data into actionable knowledge and insights to help manage and monitor value-based risk associated with population health.</p> <p><b>ACOs struggling to integrate RPM with clinical infrastructure.</b> Seventy percent of providers surveyed expressed concerns that RPM solutions were not well integrated with existing clinical care processes, infrastructure and tools.</p>
<p><b>STUDY METHODOLOGY</b></p>	<p><b>Trends in Remote Patient Monitoring 2015 (RPM)</b> presents the findings of an end-user market study focused on the current state of remote patient monitoring adoption by <b>healthcare provider organizations</b> across the United States. The report uncovers strong opinions regarding the market opportunities and challenges for deploying RPM solutions to help risk-bearing organizations achieve the Triple AIM of improving care quality and outcomes, controlling healthcare delivery costs, and increasing patient satisfaction.</p> <p><b>Trends in Remote Patient Monitoring 2015</b> is an outgrowth of a similar study published by Spyglass in June 2013 entitled <b>Trends in Remote Patient Monitoring 2013</b>. Throughout this report, Spyglass traces remote patient monitoring over the past few years identifying important trends in the field.</p> <p>The content for <b>Trends in Remote Patient Monitoring 2015</b> was derived from more than 100 in-depth interviews with healthcare organizations involved in telehealth/telemedicine including <b>multi-hospital delivery systems, standalone community hospitals, ambulatory environments, home health agencies, and government organizations.</b></p> <p>Telephone interviews were conducted over a two-month period starting in May 2015. Interviews identified the needs and requirements for remote patient monitoring. Topics include:</p> <ul style="list-style-type: none"> <li>• potential impact and benefits for deploying RPM for supporting population health,</li> <li>• existing workflow inefficiencies in managing chronically ill patients, and</li> <li>• challenges for integrating RPM with existing clinical processes, infrastructure and tools.</li> </ul>
<p><b>TARGET AUDIENCE</b></p>	<ul style="list-style-type: none"> <li>• <b>Software and hardware vendors, systems integrators and management consulting groups</b> who are selling hardware, applications and services into the healthcare industry</li> <li>• <b>Healthcare administrators and IT executives</b> who are making strategic decisions to fund clinical information technology solutions</li> <li>• <b>Clinicians</b> who are involved in informatics and clinical system evaluation and selection</li> <li>• <b>Investment banking and private equity investors</b></li> </ul>

**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 140 leading high technology vendors, management consulting organizations and healthcare providers including **Cisco, IBM, Microsoft, Intel, Hewlett Packard, 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 of 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](mailto:gmalkary@spyglass-consulting.com).

<sup>1</sup> Centers for Disease Control, Chronic Disease Prevention and Overview, 2015, <http://www.cdc.gov/chronicdisease/overview/#ref1>

<sup>2</sup> US Dept. of Health and Human Services, Multiple Chronic Conditions—A Strategic Framework: Optimum Health and Quality of Life for Individuals with Multiple Chronic Conditions, 2010, [www.hhs.gov/ash/initiatives/mcc/mcc\\_framework.pdf](http://www.hhs.gov/ash/initiatives/mcc/mcc_framework.pdf)

<sup>3</sup> AHRQ Publication, Multiple Chronic Conditions Chart book, 2014, <http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/prevention-chronic-care/decision/mcc/mccchartbook.pdf>

<sup>4</sup> Centers for Medicare & Medicaid Services, Chronic Conditions among Medicare Beneficiaries, Chart Book, 2012,

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Downloads/2012Chartbook.pdf>

# Trends in Remote Patient Monitoring 2015

## November 2015

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