

WHITE PAPER:

Physician Attitudes Toward Connected Health Strategies

IDC Health Insights: Connected Health IT Strategies

Lynne A. Dunbrack



IN THIS PERSPECTIVE

This IDC Health Insights perspective examines the use of connected health technology, specifically smartphones and tablets, by physicians to care for their patients. Provider organizations are looking to mobile technologies to improve access to electronic health information, and thereby increase clinician productivity and efficiency while improving patient care. Physicians can use the findings of the IDC Health Insights' 2013 *Connected Health Physician Survey* to benchmark their use of connected health technologies against their peers.

METHODOLOGY

IDC Health insights conducted a Web-based survey to gauge physicians' adoption, trends and needs, and guide future research on clinical mobility. Approximately 230 ambulatory- and hospital-based physicians responded to the survey, which was fielded from May 17 to 23, 2013 by MedData Group.

This report presents key findings from the IDC Health Insights' 2013 *Connected Health Physician Survey*. Findings regarding respondent demographics are presented in the Learn More section of this perspective.

SITUATION OVERVIEW

Connected health technologies, such as mobile, remote health monitoring, and video or online care, can facilitate the delivery of health care and promote care team collaboration. Of particular interest among physicians is using mobile technology at the point of care because:

- Clinicians are highly mobile and need ready access to critical health information whether they are on rounds, in their offices, or on call
- More health information is available electronically as a result of the deployment of electronic health records (EHRs) to meet Meaningful Use requirements
- The consumerization of the technology and widespread use of mobile technology for personal use increases clinicians' familiarity with and comfort level in using mobile technology
- The portable form factors of smartphones and tablets are attractive to clinicians, especially when compared to more cumbersome computers on wheels (COWs) or heavier laptops.



Connected Health Technologies are used to Improve Services, But Financial Issues Persist

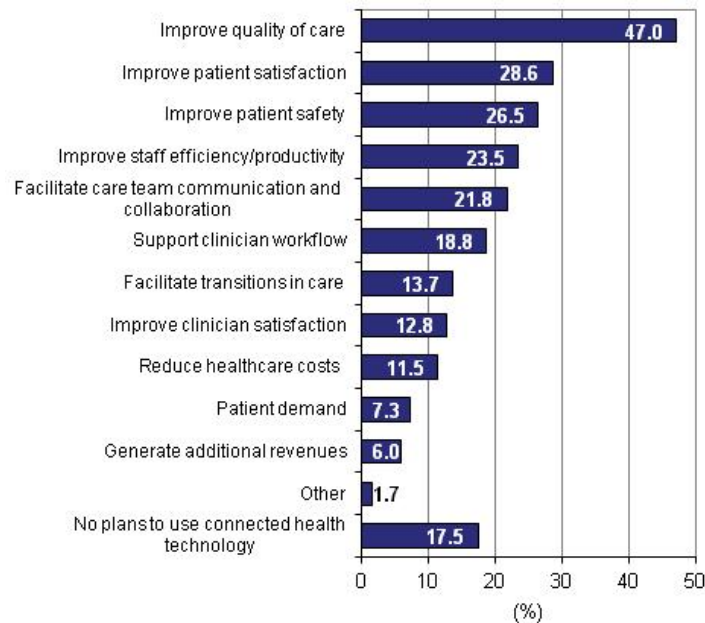
When asked about the top objectives for using connected health technologies, physician respondents reported improving quality of care (47%), patient satisfaction (28.6%), and patient safety (26.5). Interestingly, reducing healthcare costs (11.5%) and generating additional revenues (6%) were among the least commonly mentioned objectives. (See Figure 1) This suggests that there is still some ambivalence about whether connected health technology can generate a positive financial impact.

Financial issues topped the list of concerns identified by the physicians responding to IDC Health Insights survey. Total cost of ownership (40.6%) and lack of payer reimbursement (33.8%) were mentioned most frequently.

FIGURE 1

Connected Health Technologies: Drivers

Q. What are your top objectives for using connected health technologies (e.g., mobile, video chat, remote health monitoring) in your organization?



N = 234

Source: IDC Health Insights Physician Attitudes Toward Connected Health Technologies

New, emerging technologies are not without their challenges. Financial issues topped the list of concerns identified by the



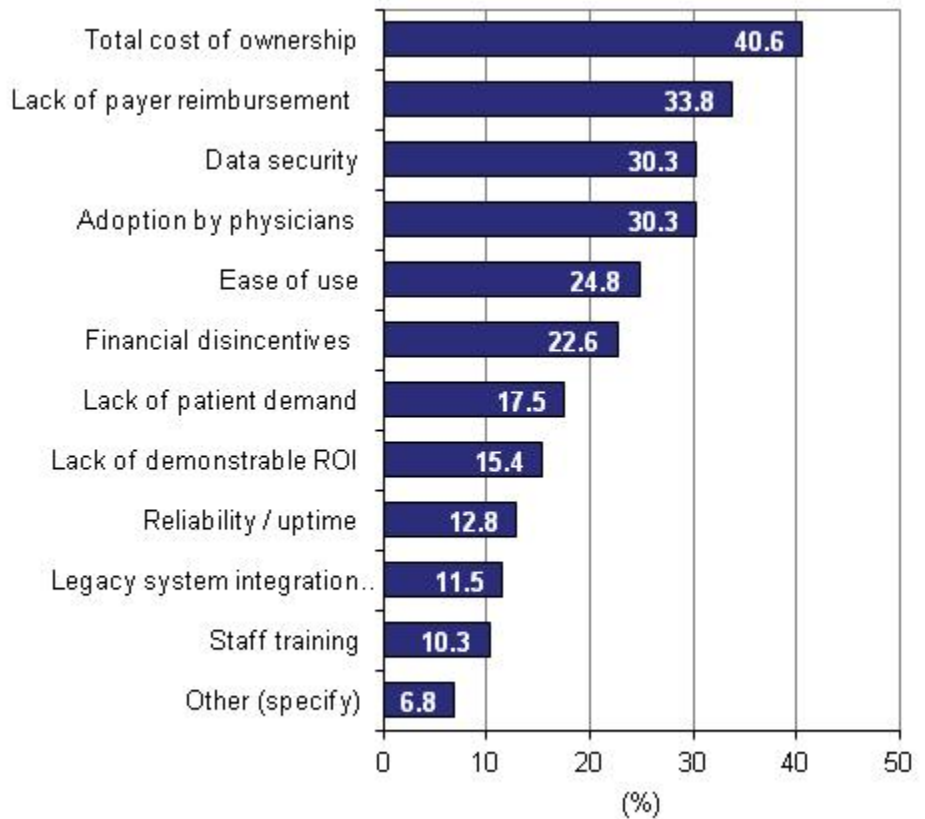
physicians responding to IDC Health Insights survey. Total cost of ownership (40.6%) and lack of payer reimbursement (33.8%) were mentioned most frequently. Financial disincentives, i.e., using the technologies lowered practice revenue, (22.6%) made the top 5 and 15.4% of physicians respondents mentioned lack of demonstrable ROI. (See Figure 2)

FIGURE 2

Connected Health Technologies: Challenges

Q. What are your top challenges of deploying connected health technologies (e.g., mobile, video chat, remote health monitoring) at your organization?

Nearly half (43.6%) of the surveyed physicians used their own smartphone and 23.5% of physicians use their own tablets.



N = 234

Source: IDC Health Insights Physician Attitudes Toward Connected Health Technologies



Apple Dominates Mobile Device Choice

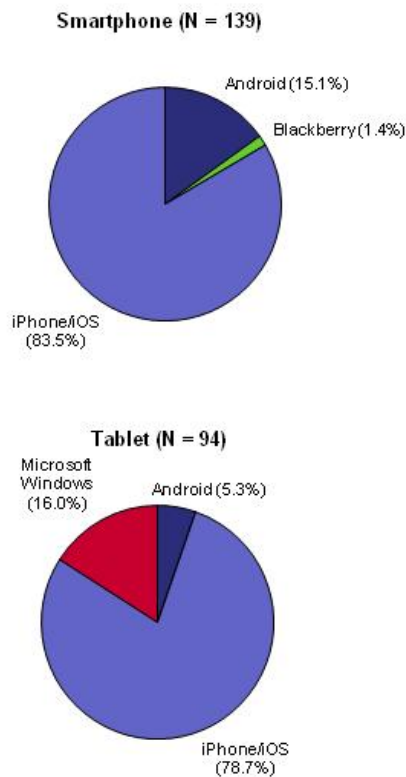
The vast majority of smartphones and tablets used by clinicians responding to this survey are iPhones and iPads. (See Figure 3) This is reflective of the popularity of the iOS platform and application ecosystem in the consumer market and providers embracing "bring your own device" policies. Nearly half (43.6%) of the surveyed physicians used their own smartphone and 23.5% of physicians use their own tablets.

FIGURE 3

Mobile Devices: Smartphones and Tablets

Q. What kind of smartphone do you use?

Q. What kind of tablet do you use?



14.4% of physician reported using an Android smartphone. However, Android tablets came in third (5.3%) behind Microsoft Windows tablets (16%)

Source: IDC Health Insights Physician Attitudes Toward Connected Health Technologies



Most physicians use their mobile devices to consume information, and are increasingly using them to create and circulate information.

Android smartphones are gaining some traction; 14.4% of physician respondents reported using an Android smartphone. However, Android tablets came in third (5.3%) behind Microsoft Windows tablets (16%). It should be noted that the Microsoft Windows tablets were all corporate-liable devices. IT departments find Microsoft Windows tablets easier to manage because they can be treated like any other Microsoft Windows-based endpoint device when it comes to provisioning, securing and monitoring the network of devices.

Early Mobile Use Cases Focus on “Consuming” Information

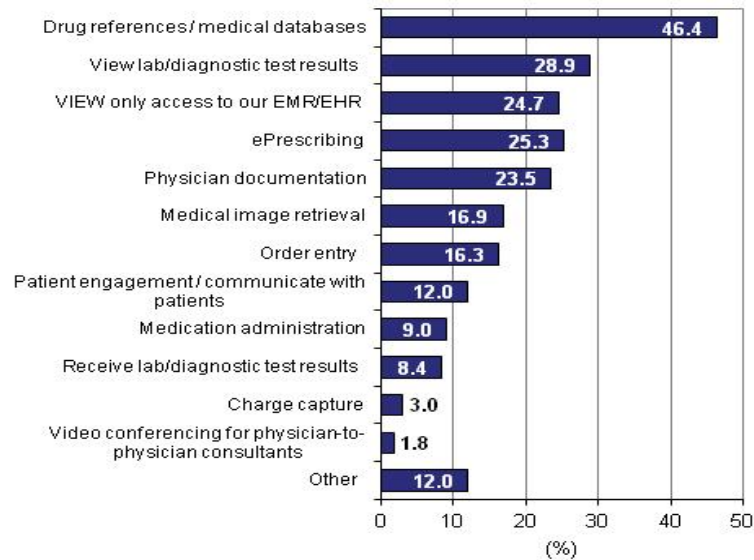
Clinical mobility functionality can be categorized along the following capabilities: consume, create, circulate, and collaborate. Most physicians use their mobile devices to consume information, and are increasingly using them to create and circulate information. (see Figure 4) Common functions include the ability to *consume* or access information in EHRs and other clinical information systems, medical reference databases, and online clinical resources. The use of input devices such as a QWERTY keypad and stylus, make it possible to *create* information through care documentation, charge capture, and physician or nursing notes, as well as *circulate* information by initiating transactions, such as electronic prescriptions or orders, and sending and receiving messages and alerts. Built-in cameras provide additional input capabilities. Using the rear-facing camera, clinicians can take photos of wounds or other interesting pathologies to share with specialists or scan them to the patient's EHR. Ultimately, physicians will want to be able to *collaborate* with the care team, and even with patients, and their families, using mobile technology to request and share information and initiate video conferences.



FIGURE 4

Mobile Use Cases

Q. What are your top healthcare applications you use on your mobile device?



N = 166

Source: IDC Health Insights Physician Attitudes Toward Connected Health Technologies

Physicians Use Insecure Channels to Communicate with Colleagues and Patients

Mobile messaging has grown exponentially among consumers and businesses alike because of the convenience, ease, and speed of communication that text messaging provides to mobile device users. After unified communications (e.g., email, instant messaging), native text messaging was the most frequently cited channel for communicating with another colleague. Under the Health Insurance Portability and Accountability Act (HIPAA), protected health information must be encrypted when it is in transit or at rest. When sending a text message using the mobile device's native texting application, messages are sent and stored as clear text. That is, visible to anyone who picks up a phone that is not password protected and scrolls through the text messages or has access to the carriers' text messages database. Despite that most healthcare organizations have policies against unsecure texting of protected health information healthcare professionals send text messages because it is an efficient way to communicate. Younger physicians (35 and younger) were

Younger physicians (35 and younger) were more likely to text with colleagues than their older colleagues, which is in keeping with how digital natives like to communicate.



more likely to text with colleagues than their older colleagues, which is in keeping with how digital natives like to communicate.

4 out of 5 Physicians Would Use Remote Health Monitoring

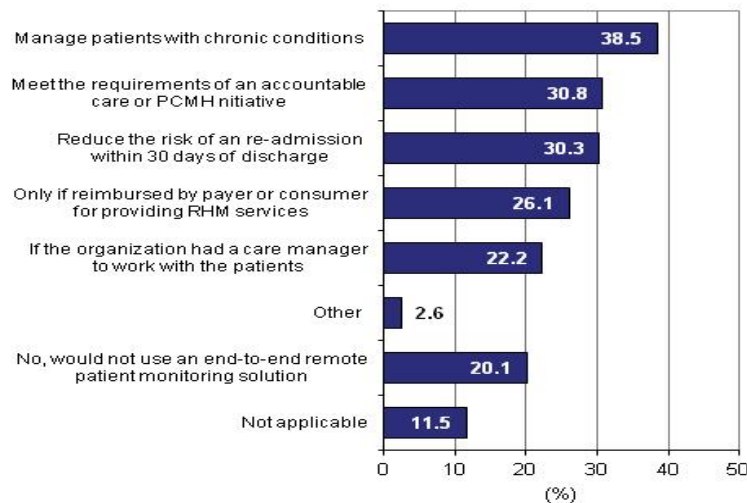
The prevalence of chronic conditions is on the rise and is compounded by an aging population with multiple comorbidities. Managing patients with chronic conditions was the number one reason (38.5%) physician respondents gave when asked "under what circumstance would you consider using end-to-end remote health monitoring solution that included a connected device used by the patient that would transmit biometric data to be aggregated and analyzed and made available to you via a physician dashboard or portal application?" Meeting the requirements of accountable care organizations or patient-centered medical homes (30.8%) and reducing the risk of 30-day readmissions (30.3%) were the next frequently mentioned. (See Figure 5)

Only 20.1% of physicians reported that they would not use an end-to-end remote health. Reasons cited for not using remote health monitoring included lack of payer reimbursement (31.9%), not having the resources to manage the volume of data generated by remote health monitoring (29.8%), and concerns about medical liability (29.8%).

FIGURE 5

Remote Health Monitoring: Drivers

Q. Under what circumstances would you consider using an end-to-end remote health monitoring solution that included a connected device used by the patient that would transmit biometric data to be aggregated and analyzed and made available to you via a physician dashboard or portal application?



N = 234

Source: IDC Health Insights Physician Attitudes Toward Connected Health Technologies



Connected health technology, when used effectively, can improve the quality of care and patient experience along with increasing clinician productivity and efficiency.

Only 20.1% of respondents reported that they would not use an end-to-end remote health. Reasons cited for not using remote health monitoring included lack of payer reimbursement (31.9%), do not have the resources to manage the volume of data generated by remote health monitoring (29.8%), and concerns about medical liability (29.8%).

Essential Guidance

Connected health technology, when used effectively, can improve the quality of care and patient experience along with increasing clinician productivity and efficiency. Before deploying connected health technologies, such as clinical mobility, remote health monitoring, video conferencing and other forms of collaboration technologies, physician executives should consider the following recommendations:

- **Identify the problem to be solved.** All too often, healthcare organizations are attracted by the "shiny" gadget, giving little thought to how it will be deployed beyond a pilot project. Careful consideration should be given to defining the problem(s) to be solved, the strategic objectives to be met, and determining whether there are the appropriate people and processes in place to take full advantage of the new technology.
- **Understand the workflow implications of deploying new technology.** Many promising proof of concept projects – whether the project is piloting EHRs, computerized physician order entry, or clinical mobility – fail because the new technology disrupts the conventional workflow. The technology should either fit within the workflow or the workflow should be reengineered to leverage the new capabilities provided by the connected health solution.
- **Do not underestimate security.** HIPAA rules are very clear that identifiable protected health information should be encrypted when in motion and at rest. The fines for security and privacy breaches have increased under the HITECH Act within the American Recovery and Reinvestment Act of 2010. Under ARRA, privacy breach notification, minimum use, and disclosure reporting requirements become more stringent. The annual penalties for violations can total up to \$1.5 million per year, up from \$25,000.
- **Look to early adopters for best practices and lessons learned.** While most provider organizations are in the early stages of using connected health solutions, there are exemplary deployments to be found in large integrated delivery networks, academic medical



centers, and the U.S. Department of Defense. Lessons learned from deployments that met and addressed challenges also provide valuable insights.

LEARN MORE

Nearly 6 out of 10 physician respondents reported being either a specialist (55.9%) or hospitalist (5.5%).

Related Research

- *Technology Selection: A Technology Framework for End-to-End Remote Health Monitoring* (IDC Health Insights #HI240416, April 2013)
- *Business Strategy: A Framework for Mobile Transformation in Healthcare* (IDC Health Insights #HI240300, March 2013)
- *U.S. Connected Health IT 2013 Top 10 Predictions: The Consumer Takes Center Stage* (IDC Health Insights #HI238619 December 2012)
- *Business Strategy: Investing in Connected Health Technologies to Improve Consumer Engagement* (IDC Health Insights #237177, October 2012)
- *Perspective: Consumer Attitudes Toward Aging in Place Technologies* (IDC Health Insights #HI232427, December 2011)
- *mHealth Applications: What will Consumers Be Willing to Use and Pay For?* (IDC Health Insights #HI229964, August 2011)
- *Consumer Attitudes Toward Personal Health and Fitness Monitoring* (IDC Health Insights #HI227530, March 2011)

Appendix: Respondent Findings

Respondents were asked a series of questions regarding their specialty, type and size of their organization, and their age.

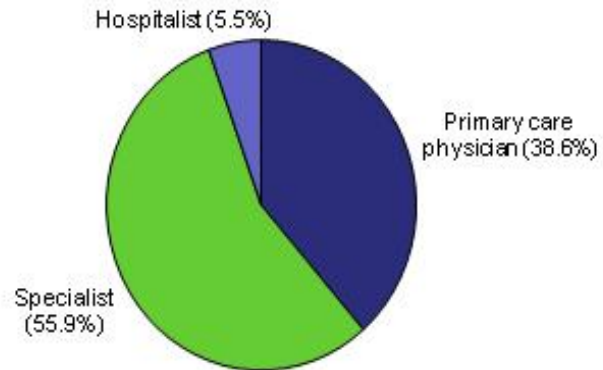
Nearly 6 out of 10 physician respondents reported being either a specialist (55.9%) or hospitalist (5.5%). This is fairly consistent with medical specialty distribution of active U.S. physician. According to the AMA 32.2% of physicians are primary care physicians and 67.8% specialists. (See Figure 6)



FIGURE 6

Demographics: Specialty

Q. Which of the following best describes you?



According to the AMA
32.2% of physicians are
primary care physicians
and 67.8% specialists.

N = 236

Source: IDC Health Insights Physician Connected Health Survey

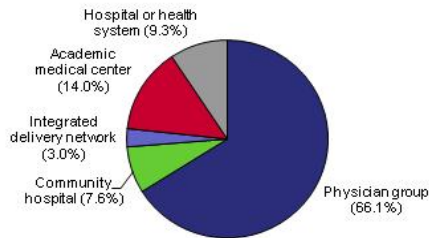
The majority of physicians responding to this survey (66.1%) reported that a physician group best describes their organization, and of these physicians, 68.6% practice in a group with 10 or few fulltime-equivalent physicians. (See Figures 7 and 8) A little over half (50.3%) of the primary care physicians and nearly half of the specialists (47.1%) reported practicing with a physician group.



FIGURE 7

Demographics: Organization

Q. Which of the following best describes your organization?



N = 236

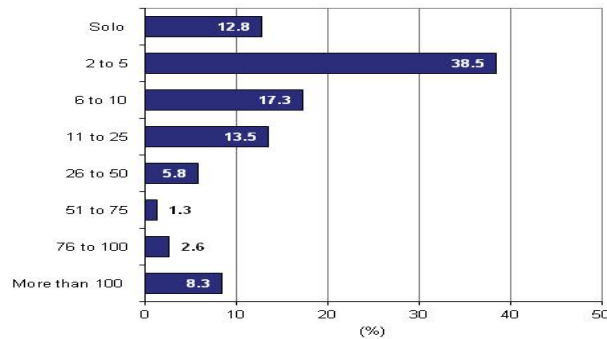
Source: IDC Health Insights Physician Connected Health Survey

The majority of physicians (66.1%) reported that a physician group best describes their organization, and of these physicians, 68.6% practice in a group with 10 or few fulltime equivalent physicians.

FIGURE 8

Demographics: Practice Size

Q. How many physicians (full-time equivalents) practice in your physician group?



N = 156

Source: IDC Health Insights Physician Connected Health Survey



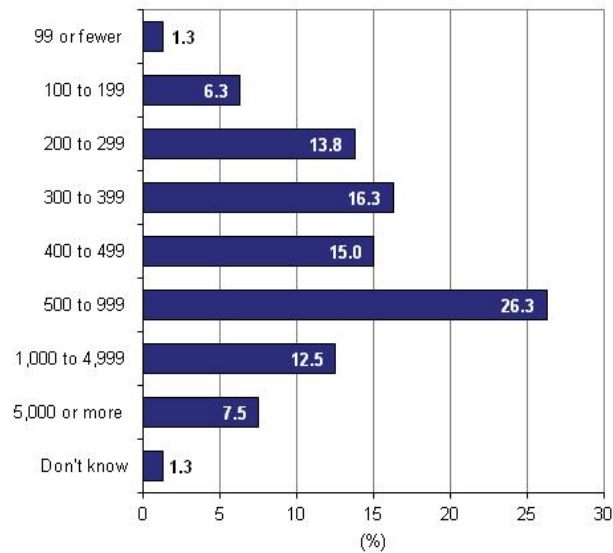
52.5% physicians reported that their hospital (or total across a multiple hospital system) had fewer than 500 beds, while 46.3% worked in hospitals with 500 beds or more.

Of the one-third of physician respondents who practice in a hospital, 52.5% reported that their hospital (or total across a multiple hospital system) had fewer than 500 beds, while 46.3% worked in hospitals with 500 beds or more. (See Figure 9) Utilization of connected health technology to communicate with colleagues and patients varied by whether the provider was hospital- or physician group-based. Hospital-based physicians reported that there were more likely to use native text capabilities (31.7%) compared with practice-based physicians (24.1%). These findings underscore the complex clinician workflows in a hospital, but also highlight the potential risk for a HIPAA violation if patient identifiable protected health information is included in the text.

FIGURE 9

Demographics: Hospital Size

Q. How many beds are there in your hospital or total across your organization if a multi-hospital organization?



N = 80

Source: IDC Health Insights Physician Connected Health Survey

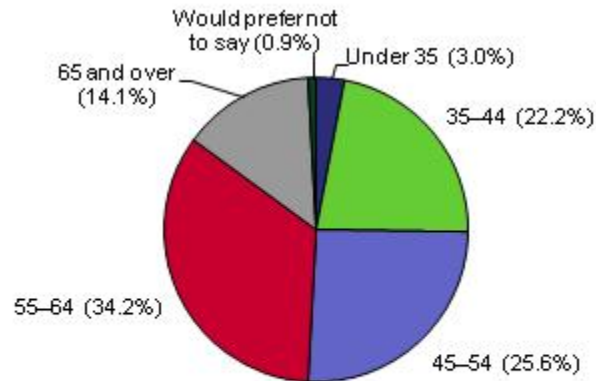


The distribution of physician by age category is slightly skewed toward older middle-aged physicians. Only 3% of physician respondents were under 35, an age cohort often referred to as digital natives. Physicians 55 and older were less likely to use a smartphone professional or personal use. Of the respondents who do not own a smartphone, 73.7% are age 55 years or older respectively.

FIGURE 10

Demographics: Age

Q. What is your current age?



N = 234

Source: IDC Health Insights Physician Connected Health Survey

Physicians 55 and older were less likely to use a smartphone professional or personal use. Of the respondents who do not own a smartphone, 73.7% are age 55 years or older respectively.

Copyright Notice

Copyright 2013 IDC Health Insights. Reproduction without written permission is completely forbidden. External Publication of IDC Health Insights Information and Data: Any IDC Health Insights information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate IDC Health Insights Vice President. A draft of the proposed document should accompany any such request. IDC Health Insights reserves the right to deny approval of external usage for any reason.



About IDC Health Insights

As a healthcare payer, provider or life sciences organization, or supplier serving these markets, you are keenly aware of the accelerating need for technology-driven transformation within the industry to improve quality and value, while reducing costs. IDC Health Insights is dedicated to helping you improve healthcare quality, access, business and clinical processes, and stakeholder satisfaction by maximizing the value of your technology investments. Our unparalleled integrated coverage approach, combined with in-depth research and advisory services focused on the payer, provider and life sciences segments, is designed to provide you with a unique look at issues impacting the entire industry.

<http://www.idc-hi.com>

About MedData Group

MedData Group provides demand generation and data services for providers of healthcare technology, medical devices, medical education and others looking to engage with hard-to-reach physicians and other healthcare professionals using a fundamentally unique approach.

MedData Group publishes Medical Product Guide, the industry's go-to resource that provides clinicians and healthcare professionals with meaningful vendor, product and industry information. By distributing meaningful content to healthcare professionals, we are able to collect more data, glean deeper insights, and reach larger audiences than any other demand generation service. Using behavioral analytics and big-data techniques, our proprietary content and lead management system produces unrivaled insights that we apply to best-in-class marketing practices to achieve unmatched results towards helping our clients reach their business goals.

www.meddatagroup.com; sales@meddatagroup.com