Putting patients into "meaningful use"

At a glance

To realize their health IT investment, and be regarded as providers of choice as they enter Stage 2, health systems need to have both patients and physicians using PHRs when making care decisions.

First, health systems will need to "sell" the benefits of PHRs to consumers. Then they will need to build new, technology-enabled healthcare delivery processes around patients' preferences and convenience—which will mean changing how clinicians do their work.

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Introduction

> *The US is embarking on its largest investment in health IT ever, but most health systems have left out the voice of the patient.*

Last summer, a woman ended up in an Eau Claire, Wisconsin, emergency room—and then a coma—after months of experiencing symptoms that had perplexed several doctors regarding a diagnosis. Fortunately, a family member released to the woman's doctor the Facebook account where the woman had been tracking her symptoms, conditions, medications, and hospitalizations. The woman had recorded details about how she felt and when she felt that way. After reading her account, physicians became able to piece information together and diagnose and treat her; she has since recovered.[1]

While this woman was fortunate to have been tracking her health somewhere, it's unfortunate that she did not have a personal health record (PHR) she could share among her caregivers. With a PHR, she might have uncovered trends in her health data that would have prompted her to ask certain questions of her physicians: 40% of today's PHR users said their PHRs led them to ask their physicians questions they might not have asked before.[2] With a PHR, this woman might have avoided the emergency room—and the coma.

Stage 2 of "meaningful use" may require health systems and providers to offer and populate patients' PHRs. In January 2011, the US Department of Health and Human Services issued the draft set of criteria for Stage 2. The industry has expressed concerns that the proposed requirements and timelines for Stage 2 may be too aggressive. Among a number of other requirements, Stage 2 sets higher standards for communicating health information to patients. This represents a big leap from what hospitals and providers have been preparing for over the past year. In Stage 1, eligible hospitals and providers need only provide patients with an electronic copy of their health information—including diagnostic test results, problem lists, medication lists, and medication allergies—upon request, and just 50% of the time.

However, Stage 2, which begins October 2012, may require eligible hospitals to offer 80% of patients the ability to view and download relevant information via a web-based portal within 36 hours of discharge and eligible providers to have at least 20% of their patient populations accessing information that way. Some health systems may be poised to meet the adoption requirement and assist physicians to do the same, but will providing patients with access to health information alone accomplish the job? Not if health systems want to succeed in an increasingly competitive industry where a redesign of health-care delivery hinges on how health information is communicated and used.

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1 Source: Newt Gingrich and Kamal Thapar. "Facebook is—Literally—a Lifesaver." *AOL News*, December 6, 2010, accessed February 8, 2011, http://www.aolnews.com/2010/12/06/facebook-is-literally-a-lifesaver

2 Source: Tresa Undem. *Consumers and Health Information Technology: A National Survey, 2010*. California Healthcare Foundation, April 2010, accessed February 8, 2011, http://www.chcf.org/~/media/Files/PDF/C/PDF%20ConsumersHealthInfoTechnologyNationalSurvey.pdf.

"Meaningful use" Stages 1 and 2 are leading to interoperability. The hope is that interoperability will enable providers to exchange information, with a view to better coordinate patients' care, improve treatment outcomes, and move into emerging delivery models like the patient-centered medical home, health information exchanges, and accountable care organizations (ACOs). (For more information on health information exchanges and ACOs, see _Designing the health IT backbone for ACOs_.)

Patients and consumers might be aware that the government's incentive program has something to do with providers' adopting electronic medical records (EMRs)—or they might not. "I don't believe patients know what 'meaningful use' requirements are, and I don't know
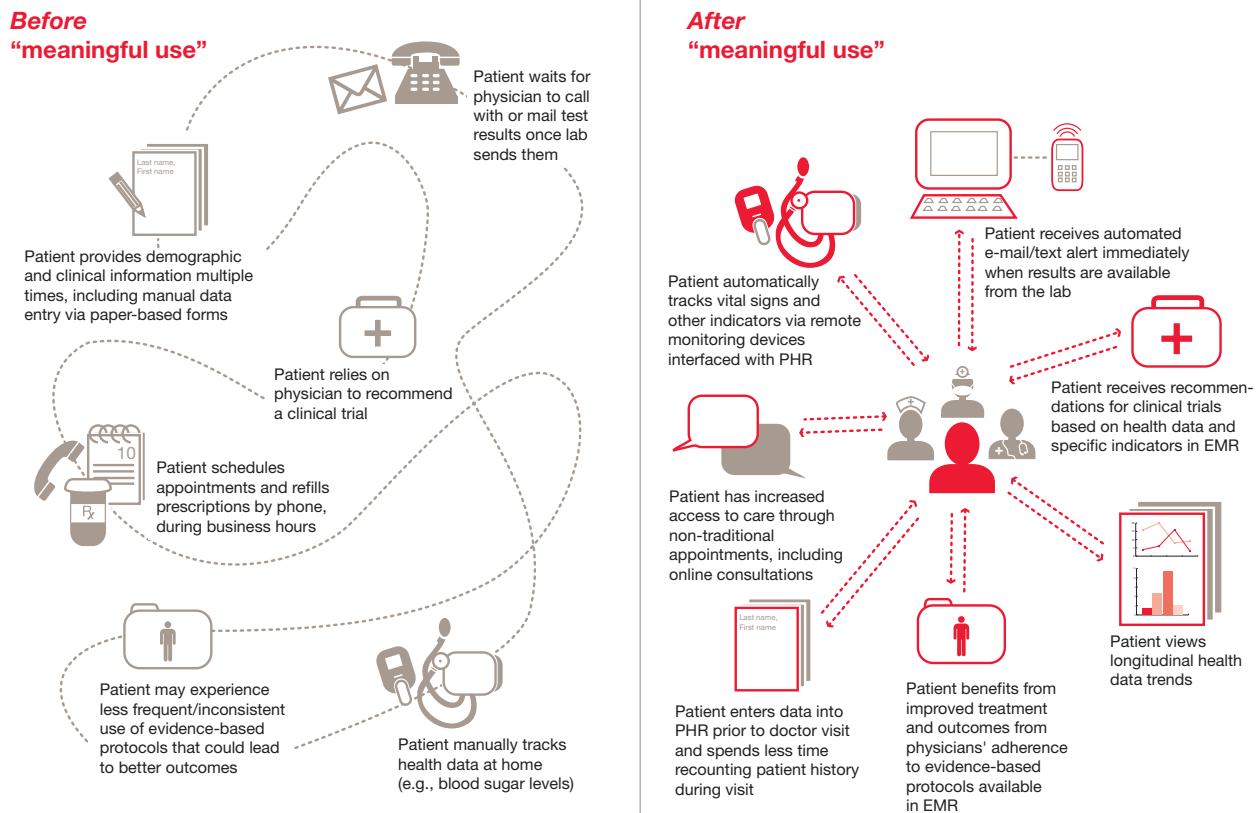
that they necessarily should," said Glenn Mitchell, MD, chief medical officer at Mercy Health, a faith-based health system with 28 hospitals in Arkansas, Kansas, Missouri, and Oklahoma. "But what they should be able to identify, is that they are experiencing healthcare that is moving in a better direction than it was in the past." (See Figure 1)

The United States is embarking on the largest investment in health information technology (IT) ever, and success will ultimately be measured in better patient outcomes, higher quality, and reduced cost. To realize their health IT investment, and be regarded as providers of choice as they enter Stage 2, health systems need to have both patients and physicians using PHRs when making care decisions. First, health systems will need to "sell"

the benefits of PHRs to consumers. Then they will need to build new, technology-enabled healthcare delivery processes around patients' preferences and convenience—which will mean changing how clinicians do their work.

Recently, in _Ready or not: On the road to the "meaningful use" of EHRs and health IT_, PwC's Health Research Institute (HRI) reported on the ways health systems were preparing to meet "meaningful use" requirements. In this follow-up report, HRI is zeroing in on the ways health systems are involving patients in preparing for achievement of "meaningful use". The research includes surveys of more than 300 provider executives and administrators and 1,000 consumers regarding their perspectives on health IT.

Figure 1: How "meaningful use" changes the healthcare experience for patients and families

Before "meaningful use"

Patient waits for physician to call with or mail test results once lab sends them

Patient provides demographic and clinical information multiple times, including manual data entry via paper-based forms

Patient relies on physician to recommend a clinical trial

Patient schedules appointments and refills prescriptions by phone, during business hours

Patient may experience less frequent/inconsistent use of evidence-based protocols that could lead to better outcomes

Patient manually tracks health data at home (e.g., blood sugar levels)

After "meaningful use"

Patient automatically tracks vital signs and other indicators via remote monitoring devices interfaced with PHR

Patient receives automated e-mail/text alert immediately when results are available from the lab

Patient receives recommendations for clinical trials based on health data and specific indicators in EMR

Patient has increased access to care through non-traditional appointments, including online consultations

Patient views longitudinal health data trends

Patient enters data into PHR prior to doctor visit and spends less time recounting patient history during visit

Patient benefits from improved treatment and outcomes from physicians' adherence to evidence-based protocols available in EMR

Source: PwC Health Research Instiute.

Key findings from PwC research

1. Engaging external constituents may postpone achievement of "meaningful use".

Even though more and more health systems have begun to involve physicians, health insurers, and patients in their "meaningful use" initiatives, they appear less confident about achieving "meaningful use" within the government-specified time frame. By 2015, health systems that have not achieved Stages 1, 2, and 3 will see a decrease in their Medicare reimbursements. But according to the HRI survey, only 82% of respondents said they will achieve "meaningful use" before the penalties kick in—compared with 90% last spring. (See Figure 2.) As health systems finalize work flows to meet the data requirements for "meaningful use," they appear to be more aware of the complexity and time involved in implementation. They might be surprised to find that if they're going to align "meaningful use" with plans for delivering more-patient-centered care—the long-term goal—they might not be first in line to collect on incentives.

2. Patient awareness of and access to available health IT tools is low; social, expectation, and education hurdles also exist.

Only 14% of patients access their medical records electronically through their doctor's office or a hospital, according to an HRI survey. Prescriptions are the most common piece of health information accessed electronically, but over 55% of consumers can't access such information as lab results or physician visit notes. And of the few who do access their health data electronically, only one-third share their EMRs with primary care physicians and specialists. (See Figure 3) This may be attributed to consumers' lack of awareness of the technology and its uses and/or their providers' inability to provide electronic health data. To add to the confusion, the lines between the EHR, the EMR, the PHR, and the patient portal are blurring. (See the sidebar on page 14: EHRs, EMRs, and PHRs—what's the difference?)

The Center for Advancing Health conducts research, communicates findings, and advocates for policies that support Americans' ability to benefit from advances in health science. Jessie Gruman, the center's president, said, "Our research indicates consumers think their health data is already being shared among their providers. They can't imagine there isn't something already in place for this to happen. And because of this, there's very little consumer demand for PHRs right now." In reality, a recent study found that, while 69% of primary care physicians said they send patient information to specialists upon referral, only 35% of specialists said they actually receive that information.[3]

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3 Source: Carolyne Krupa. "Referral silence irks specialists, primary care doctors alike." *American Medical News*, January 31, 2011, accessed February 8, 2011, http://www.ama-assn.org/amednews/2011/01/31/prl20131.htm.

Figure 2a: Health systems' confidence about achieving "meaningful use" is sliding

When will your organization apply for "meaninful use" incentives? (cumulative %)
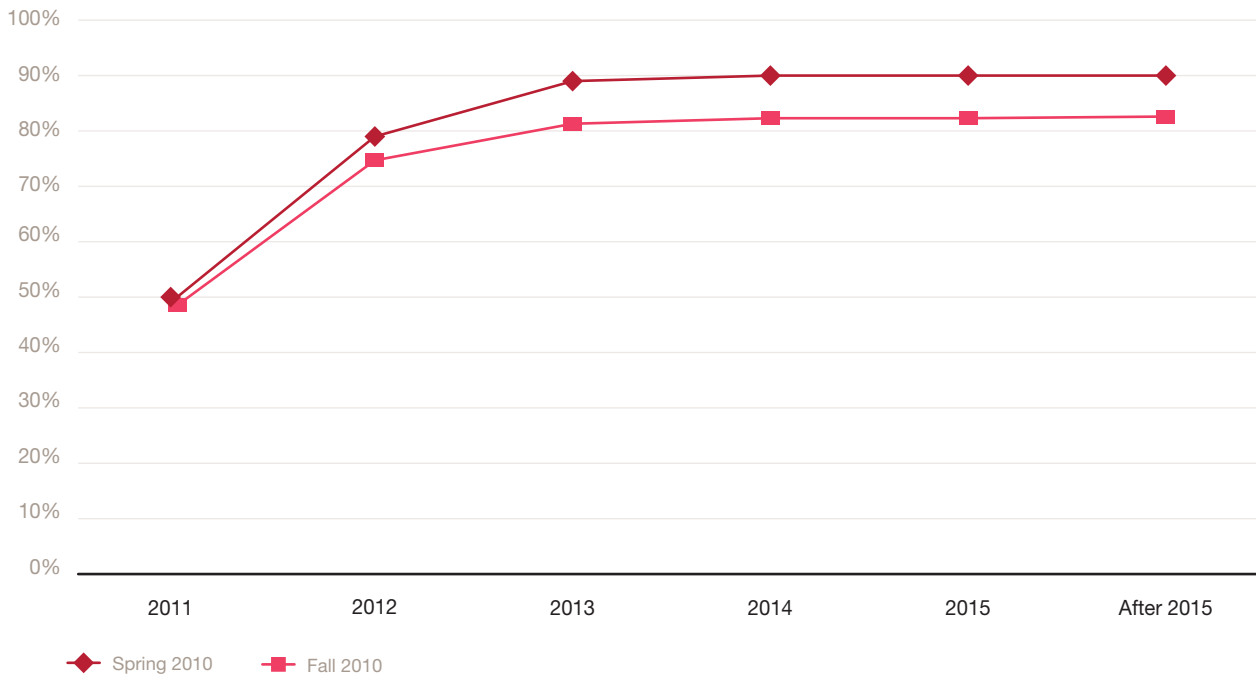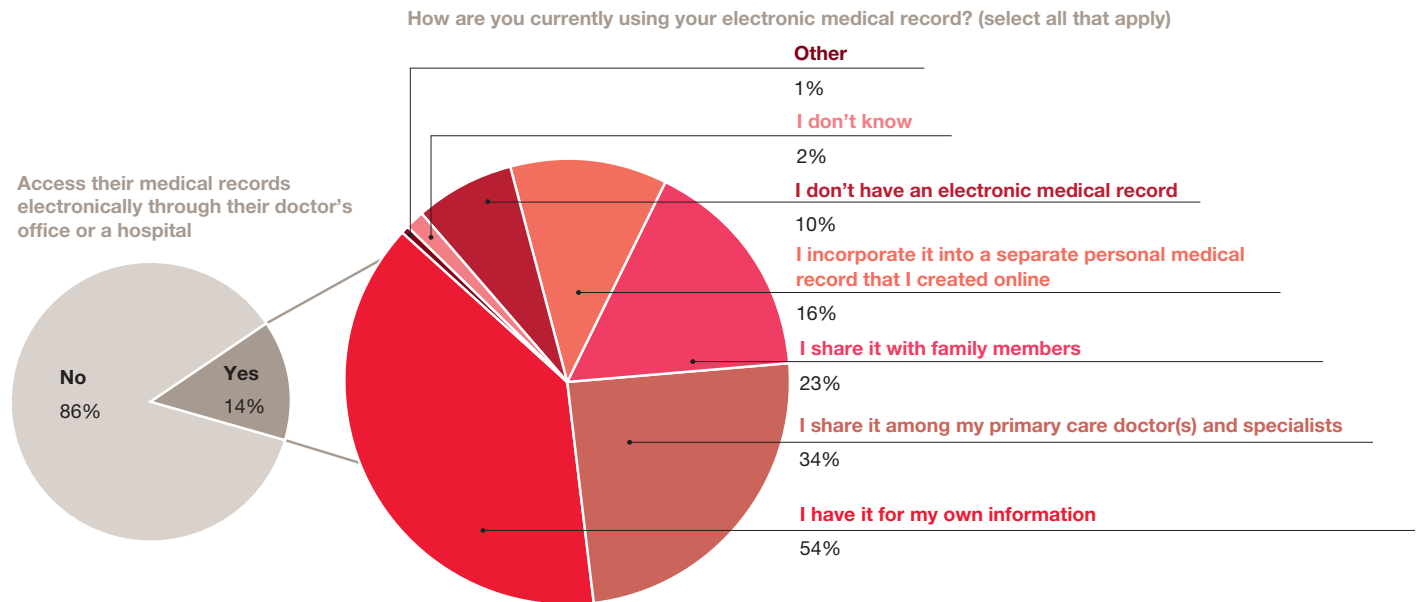

Spring 2010 ◆   Fall 2010 ■

Figure 2b: More health systems are engaging key external stakeholders in "meaningful use" initiatives

Are you working with external constituents around "meaningful use" now?
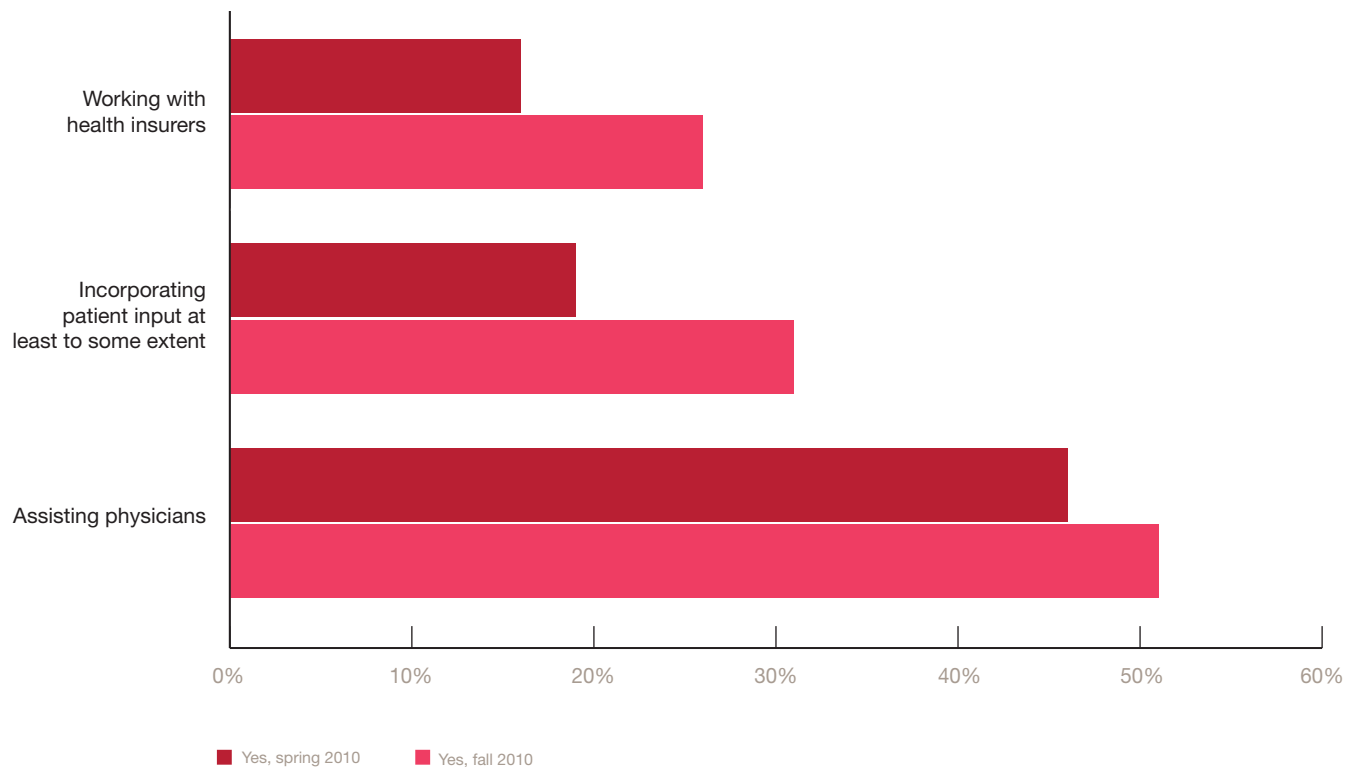
■ Yes, spring 2010   ■ Yes, fall 2010

Figure 3: Of the 14% of consumers who access their medical records electronically, only one-third share their EMR among their primary care physicians and specialists.

How are you currently using your electronic medical record? (select all that apply)

Access their medical records electronically through their doctor's office or a hospital

No 86%

Yes 14%

Other
1%

I don't know
2%

I don't have an electronic medical record
10%

I incorporate it into a separate personal medical record that I created online
16%

I share it with family members
23%

I share it among my primary care doctor(s) and specialists
34%

I have it for my own information
54%

Source: *PwC Health Research Institute Consumer Survey*, 2010

The impact of PHRs is elusive to patients and consumers. "There has been a marketing gap," said Andrea Routh, executive director of the Missouri Health Advocacy Alliance, a collaborative of more than 40 consumer organizations involved in the development of the state's health information exchange. "We haven't seen the benefits of PHRs marketed to patients yet, but I think the state health information exchanges themselves will raise awareness. People are going to say, 'Wait: I'm a piece of that picture. I want to make sure my physicians also know about the things I know about my own health.'" That could include information like herbal remedies patients are taking, exercise regimens, or even records patients keep about how they feel from day to day.

Encouraging consumers to use PHRs may be difficult given existing access, social, and educational barriers to health IT tools. (See Figure 4) For starters, 44% percent of consumers PwC surveyed don't even know what EHR stands for.

There are also expectations to bridge. "When we developed our patient portal, MyBJC, we relied on an advisory group of patients and physicians," said David Weiss, senior vice president and chief information officer at BJC HealthCare, a 13-hospital delivery system serving the Greater St. Louis, southern Illinois, and mid-Missouri regions. "At our first meeting, we discussed what would be a reasonable turnaround time for making test results available for view in the portal. The physicians first said 45 days, which was completely unreasonable.

Then they said two weeks to 30 days. When we asked the patients, they said, 'How about 30 minutes?'" Forty-five days or 30 minutes—this time gap mirrors the expectation gap between health organizations and consumers.

3. Patient engagement in "meaningful use" initiatives is still low, despite consumer interest.

As many health systems continue to pace their approaches to "meaningful use," some have delayed patient portal and PHR initiatives so they can focus on tying loose ends for achieving Stage 1. "Some of our efforts to electronically connect patients with our organization have been put on the back burner because of the timeline for meeting 'meaningful use' requirements," said Pamela McNutt, senior vice president and chief information officer at Methodist Health System in Dallas.

"At our first meeting, we discussed what would be a reasonable turnaround time for making test results available for view in the portal. The physicians first said 45 days, which was completely unreasonable. Then they said two weeks to 30 days. When we asked the patients, they said, 'How about 30 minutes?'"

David Weiss
senior vice president and chief information officer
BJC HealthCare

Nearly one-third of health systems said they are incorporating patient input into their "meaningful use" initiatives, up from 19% last spring. (See Figure 5) But according to a PwC consumer survey, only 13% of respondents said a provider or hospital has asked them what they think about EMRs. Consumers seem interested in offering feedback: 56% said they'd be willing to talk to hospitals and providers about their preferences for what they'd like available in an EMR or how they'd like to use it.

To achieve the ultimate goal of patient-centered care, health systems and providers will need patients to buy into the concept and utilize the health IT tools supporting it. The implication of not involving patients early in the process might be lower and slower adoption and utilization of these tools.
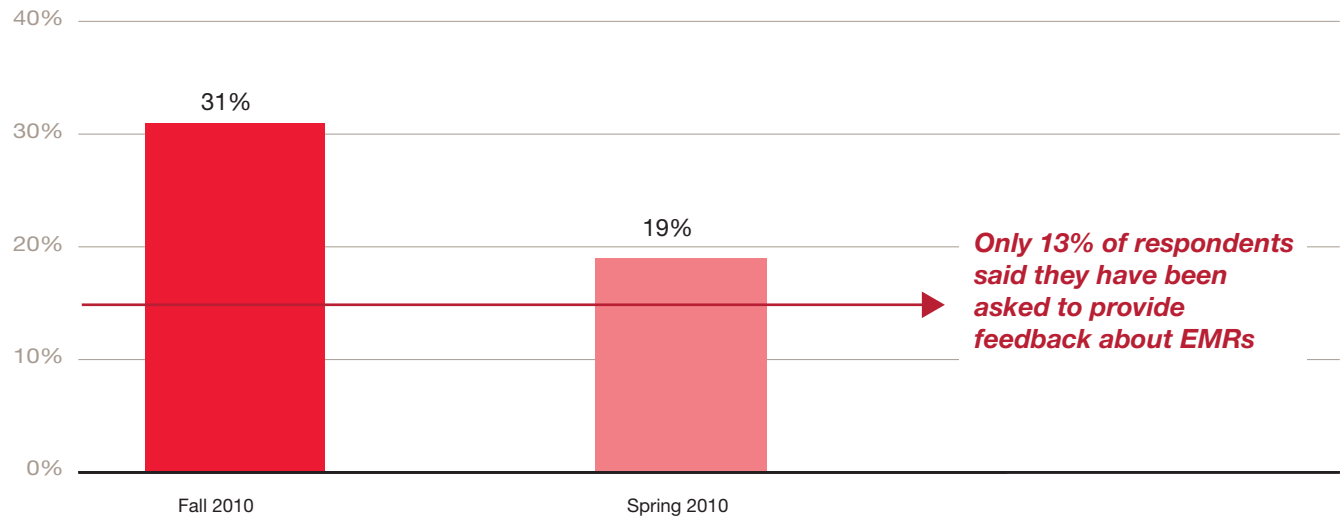
Figure 4: Encouraging consumers to use PHRs may be difficult given existing access, social, and educational barriers.

- 25% of the US population still cannot access the Internet from home [4]
- Ease of use of EHRs/PHRs has yet to be perfected
- PHRs not widely offered because providers struggle with making data real-time

Access gaps

- 44% of consumers PwC surveyed don't know what *EHR* stands for
- Varying viewpoints on what constitutes patients' active participation in their care
- Patients' lack of understanding of what is expected of them
- Lack of understanding of how to manage health data in a practical manner

Education gaps

Social gaps

- Varying comfort levels regarding sharing health information outside of traditional face-to-face interactions
- Differing attitudes on challenging professional opinion
- Intimidated by or lack of trust in technology
- Varying levels of technology use/familiarity

Expectation gaps

- Differences between what patients want and what physicians patient want
- Conflicting views about timely turnaround of data
- Health data may not be linked to actionable health improvement steps for patients

Source: PwC Health Research Instiute.

4 Source: *An Overview of Home Internet Access in the U.S.,* Nielsen Company, December 2008, accessed February 8, 2011, http://blog.nielsen.com/nielsenwire/wp-content/uploads/2009/03/overview-of-home-internet-access-in-the-us-jan-6.pdf.

Figure 5: Are you incorporating patient input into initiatives related to meaningful use at least to some extent?

- 31% — Fall 2010
- 19% — Spring 2010

Only 13% of respondents said they have been asked to provide feedback about EMRs

Source: *PwC Health Research Institute Survey of CHIME CIO Members*, 2010; *PwC Health Research Institute IT Implications of Health Reform Survey*, 2010.

4. "Meaningful use" has yet to explicitly call for measuring the level of patient engagement.

As it stands now, the "meaningful use" program has no written standards for measuring providers' progress on engaging patients in their care through the use of health IT tools. By contrast, the draft ACO standards of the National Committee for Quality Assurance include measuring the patient experience through the Consumer Assessment of Healthcare Providers and Systems program.[5] What constitutes "using PHRs" is open for interpretation at this point. The Office of the National Coordinator (ONC) has indicated that it intends to incorporate into Stage 2 some standards for making data available to patients through patient portals. But the proposed rules, and the proposed framework for health IT set forth by the President's Council of Advisors on Science and Technology, do not fully address how patients and physicians should use these tools to make patients partners in their own health care.

"I don't believe patients know what 'meaningful use' requirements are, and I don't know that they necessarily should. But what they should be able to identify, is that they are experiencing healthcare that is moving in a better direction than it was in the past."

Glenn Mitchell, MD
chief medical officer
Mercy Health

5 Source: The Consumer Assessment of Healthcare Providers and Systems is an Agency for Healthcare Research and Quality program, a public-private initiative to develop standardized surveys of patients' experiences with ambulatory and facility-level care. Healthcare organizations, public and private purchasers, consumers, and researchers use the program's results to (1) assess the patient-centeredness of care, (2) compare and report on performance, (3) improve quality of care. The National Committee for Quality Assurance accredits health plans and has proposed standards for accrediting ACOs.

6 Source: Society for Participatory Medicine. Accessed February 8, 2011, www.participatorymedicine.org.

Future modifications and stages of the program might address that disconnect, but in the meantime, consumer-focused organizations like the Society for Participatory Medicine are asking for more from "meaningful use". The organization is a 501(c)(3) public charity devoted to promoting the concept of more patient participation in medicine and healthcare[6], and provider encouragement and partnering with patients in this role. In response to calls for comment, the society is asking ONC to strengthen the "meaningful use" standards and to add to them certain measures that would assist providers in gauging how well they are involving patients in such activities as work flow redesign and quality improvement initiatives, according to David Harlow, principal at The Harlow Group, LLC, and the society's public policy committee chairman.

5. Health systems will need to compete for consumers in the PHR market.

With competing health systems, health insurers, and employers, as well as the likes of Microsoft and Google offering PHRs, there may be stiff competition for consumers' attention. Right now, only one-quarter of PHR users have a provider-sponsored one; the rest have PHRs offered by other sources.[7] Commercial online offerings have not taken off as intended; they account for only 6% of PHR users.[7] To address the low adoption rate, some of these vendors have partnered with hospitals and health information exchanges to promote their offerings.

Still, health systems shouldn't ignore the potential for growth in direct commercial PHR adoption among consumers. For example, some commercial PHR vendors have plans for developing personal health systems (PHSs) that would use their resources to pull in EHR data from multiple disparate sources on behalf of consumers and make it available in their PHRs.[8] "I believe the two options are going to be to obtain a PHR from your provider or to do it on your own," said Steve O'Neill, vice president of information services at Hartford HealthCare, an 867-bed teaching hospital in Connecticut. "I don't think patients trust their health plans to have access to their clinical information."

Unless they are interfaced with a provider's EHR system, commercial PHRs require patients to populate their own data—a cumbersome task. "It's not easy for consumers and patients to build PHRs on their own, so providers will need to figure out how to fill this gap," he said. "This is going to be a massive effort, though, starting with making data available that is both timely and meaningful for patients."

While **56%** of consumers are willing to provide feedback about what they want from an EMR or how to use it...

Source: *PwC Health Research Institute Consumer Survey*, 2010.

only **13%** of consumers have been asked by providers to give that feedback.

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7 Source: Tresa Undem. *Consumers and Health Information Technology: A National Survey, 2010*. California Healthcare Foundation, April 2010, accessed February 8, 2011, http://www.chcf.org/~/media/Files/PDF/C/PDF%20ConsumersHealthInfoTechnologyNationalSurvey.pdf. ConsumersHealthInfoTechnologyNationalSurvey.pdf.

8 *iPHR Market Report: Analysis and Trends of Internet-based Personal Health Records' Market*. Chilmark Research, May 2008, accessed February 11, 2011, http://www.chilmarkresearchstore.com/iphr2008execsummary.html

How effectively health systems expand the care team to include patients and consumers will determine the PHR return on investment

Healthcare providers can follow four steps to promote adoption and utilization of PHRs.

Step 1: Make the physician/advanced-practice nurse the face of the PHR.
How health systems engage physicians and other caregivers in promoting health IT tools will determine such tools' adoption rates and ability to achieve the ultimate goal of better treatment outcomes at lower costs. No matter how much media advertising a health system does to raise awareness, physicians and advanced-practice nurses will be the faces of the PHR because in patients' eyes, they are the trusted sources of information. And health systems need to be prepared to support them. This begins with rethinking the dynamic of the patient encounter and understanding consumer expectations.

Right now, less than half of physicians are willing to use PHRs as part of their clinical work.[9] One reason may be the mistrust of patient-provided data among providers.

Providers will need to become comfortable with what data to rightly trust versus what data to view as potentially relevant but not sufficient for making hard and fast clinical decisions (e.g., the Facebook example). To start, they need to mark all patient-provided data as such and decide which elements they can capture as discrete, structured data to be included for analysis and trending.

Health systems need to find ways to help their physicians buy in to PHRs and build processes to design, use, and support them. (See Figure 6) (For information on physician-hospital alignment, see *Courtship to marriage: Why health reform is driving physicians and hospitals closer together*.)

Step 2: Define expectations for *active participation* in healthcare.
Providers and patients need to agree on what constitutes active participation and responsibility as those terms apply to patients' own care and, particularly, how the terms apply to providers' and patients' use of health IT tools. As the Center for Advancing Health's Gruman pointed out: "The rhetoric of health plans and employers challenges us to become active participants in our care and to use PHRs and other health IT tools, but physicians generally have a different idea of what active participation is. And most consumers don't understand what's required of them to participate in their own care." The center has developed an Engagement Behavior Framework that lists actions Americans need to take to benefit from their care.[10] "Yes, consumers

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9 Source: Markle Foundation. Accessed February 8, 2011, http://www.markle.org/

10 Source: Center for Advancing Health. *A New Definition of Patient Engagement: What is Engagement and Why is it Important?* Accessed February 8, 2011, http://www.cfah.org/pdfs/CFAH_Engagement_Behavior_Framework_current.pdf

need to change behaviors," she said, "but health systems need to make sure they meet consumers halfway."

Finding that midpoint could start with helping patients connect with the right primary care physicians. For example, Mercy Health has future plans to develop a *Match.com*-like module that would connect patients with physicians based on how patients respond to questions about personality, dialogue preferences (e.g., face-to-face, e-mail, phone), propensity to challenge professional opinions, and attitudes about social media. (See sidebar: MyMercy— Patients take their health with them.)

Step 3: Get family members on board.

Family members and domestic caregivers will play large roles in PHR adoption. BJC HealthCare's experience supports this notion. More than five years ago, the health system started offering to employees for free a PHR called myHealthFolders. This same software has been offered to community employers to be used as an extension of their employee-based medical benefit services. Employees are able to enter their own medical and dental information, living wills, and insurance and other administrative data, as well as the same information on their dependents and family members who've involved them in their care. Only one-fifth

of the health system's 27,000 employees are using it. However, the main users aren't using it for themselves; they're using it for family members. According to Weiss, there are two main user groups of PHRs: (1) parents who are keeping track of their children's health data, including immunizations, and (2) adult children who are keeping track of their elderly parents' health data.

Especially when patients get sick, family caregivers are likely to be receptive to using PHRs to help manage their loved ones' care when those loved ones are incapable of caring for themselves. Health systems should consider family caregivers as a critical element in driving patient adoption.

Figure 6: Health systems need to help physicians build processes to design, use, and support PHRs

1

Designing the PHR

- What information will be viewable?
- What will it look like?
- What levels of information will be made available?
- Will data be put into context for patients?
- Will there be a single sign-on regardless of caregiver?
- What are reasonable turnaround times for making data available?
- Will information be structured the same for physicians and patients?
- Can patient-provided data become discrete data?

2

Conducting the patient encounter

- How will using PHRs benefit patients?
- How will information be used during the patient encounter?
- How will providers answer questions about privacy and security?
- How will physician and staff work flows need to change to support a different patient experience?
- How does the PHR change the way follow-up visits are conducted?

3

Supporting PHR use

- How will patients get signed up?
- How will patients become educated?
- How will patients obtain navigational assistance?
- How will incomplete or inaccurate information or lags in data availability be addressed?
- Who will answer patients' technical questions?
- How will remote monitoring devices be connected to the PHR?
- How will non-digital information be incorporated?

Step 4: Design PHRs alongside patients to keep them coming back.

With competition among health systems, health insurers, employers, and commercial PHR vendors, there's an opportunity for healthcare providers to team with patients and consumers in order to build or enhance brand loyalty.

Studies have shown that consumers are more interested in adopting a PHR offered by their healthcare provider than by any other source.[11] But commercial PHRs are portable, and that's a key differentiator because portability is an issue for provider-sponsored PHRs. Consumers are likely to have more than one PHR, since every provider will be required to have one, but making PHRs interoperable and shareable outside the health system is far off. So, health systems need to design their PHRs with their patients in order to increase the likelihood that patients will stay in the system for all of their care.

Health systems should understand the varying levels of information their patients will want to see. For example, some patients will welcome detailed physician notes; others will expect medical terminology to be summarized and put into context for them. "One of the drivers to give the patient full access is to engage them in their overall health and medical care, have them challenge anything that appears inaccurate, but there is a fine line in giving them all of the information," said BJC HealthCare's Weiss. "There will be false-positives to deal with and some anxious patients moments." For example, if a radiologist is looking for a mass in the upper right quadrant of the lung but instead and finds an irregularity in another quadrant, he may document it in his notes even if he is not concerned. The physician might never discuss the irregularity with the patient, but the patient with full access will discover it in the notes and may become concerned.

OpenNotes is a demonstration project that is evaluating the impact of making physician notes available to patients.[12] The study, supported primarily by a grant from the Robert Wood Johnson Foundation Pioneer Portfolio, has three participants: Beth Israel Deaconess Medical Center in Boston; Geisinger Health System in Danville, PA; and Harborview Medical Center in Seattle. More than 100 physicians and 25,000 patients are participating across the three sites. Preliminary results are currently under analysis, according to Elisabeth Vodicka, program administrator for *OpenNotes* at Beth Israel Deaconess Medical Center.

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Steve O' Neill
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11 Source: Tresa Undem. *Consumers and Health Information Technology: A National Survey, 2010.* California Healthcare Foundation, April 2010, accessed February 8, 2011, http://www.chcf.org/~/media/Files/PDF/C/PDF%20ConsumersHealthInfoTechnologyNationalSurvey.pdf.

12 Source: *OpenNotes* Project. Accessed February 8, 2011. http://www.myopennotes.org/.

MyMercy—Patients take their health with them

Background

Prior to launching a personal health record (PHR) in July 2010, clinical leadership at Mercy Health (Mercy) wanted a strategy to engage patients on a personal level. The PHR, called MyMercy, would have numerous benefits, allowing patients to connect through their computers or smart phones. The free service would allow patients to schedule appointments, view lab test results, and send secure messages to their doctor's office.

However, even with all of those features, patient adoption of PHRs has been traditionally low across the country. Mercy used traditional marketing promotions, but supplemented it with focused communications from the physicians and nurses treating patients at the faith-based system of 1,500 physicians and 28 hospitals in Arkansas, Kansas, Missouri, and Oklahoma.

The hard work paid off: in less than six months, MyMercy has more than 85,000 users. Nearly one-third of that group is over the age of 60. In addition, one-fifth of the patients Mercy's primary care physicians serve are using the PHR. The next challenge will be expanding MyMercy to specialty physicians and advanced nurse practitioners.

The strategy

First, Mercy had to establish the foundation for successful adoption – physician readiness and advocacy. Then, they could work with physicians to encourage MyMercy registrations at the point of care. While the benefits of PHRs are many for physicians, many are worried about losing income. Some research has shown that EMRs and PHRs reduce utilization, which reduces income for physicians.

However, early adopters soon found that PHRs opened up primary care access for sicker patients, which are billed at more expensive codes. "The way we conduct some of our follow-up visits has changed," said Raymond Weick, MD, a family physician whose practice was part of the MyMercy pilot project that launched in March 2009. "For example, I can correspond with many patients via e-mail, which saves them a visit to the office and frees up appointment slots on my schedule so that I can see and spend more time with my sicker patients." While he may lose out on reimbursement from follow-up visits, he gets paid more for delivering a higher level of care to sicker patients, he said.

The roll-out

The health system developed a modest financial incentive program targeting MyMercy adoption by region, which generated healthy internal competition among the physician practices within each region. The program sets a minimum MyMercy adoption target of 100 patients per physician. Physician champions from each region share experiences about how to best promote and use the tool.

MyMercy at a glance

- **85,000+** patient users
  - 60% female / 40% male
  - >50% over the age of 45
  - >30% over the age of 60

- **7,000+** patient visits per day

- **80,000+** page views per day

- **600+** registrations per day

- **Lab results and inbox** are most frequently viewed

- **Adoption rate of 21%** across Mercy Clinic primary care practices

As part of MyMercy's four-week roll out, healthcare professionals from each practice participate in readiness planning prior to product launch where they learn about product functionality, data and e-mail turnaround standards, and promotion techniques, and become familiar with point-of-care marketing materials. The MyMercy promotion is reinforced throughout the office—from the receptionist to the medical assistant to the nurse—so that patients encounter a stream of touch points to learn about MyMercy before they even see the physician. (See Figure A).

After establishing physician readiness and developing point-of-care materials, marketing supports MyMercy promotion through direct mail campaigns and expanded marketing activities including television, radio, print, and the Internet - including social media venues like Facebook and YouTube. "We view social media as one of the most cost-effective ways to spread the word about the benefits of MyMercy," said Brad Herrick, director of digital marketing. "We are also looking at ways to incorporate social media sharing functions within MyMercy and are working to expand social media within the context of our online physician directory, which highlights our MyMercy physicians."

Meeting patients' expectations

Patient feedback has been positive, with lab results getting top marks. One patient commented, "Getting lab results and not having to worry about missing a phone call or waiting over the weekend is the aspect I like best. I received two test results over the weekend. It was nice to not have to wait until Monday." Another said, "It's great to e-mail the doctor directly. There are too many lost or forgotten messages when going through the receptionist to the nurse to the doctor."

Lessons learned

- Demonstrating the benefits of PHRs to physicians is critical to garnering patient adoption and utilization.

- Using a variety of indirect and direct promotion techniques that build upon one another can be effective at building awareness and educating patients on health IT tools.

- Staying in touch with patients and making it easy for them to give feedback is an effective way to refine the patient experience through PHRs.

Figure A: Patients encounter several MyMercy touch points even before seeing the physician

MyMercy touch points during a visit
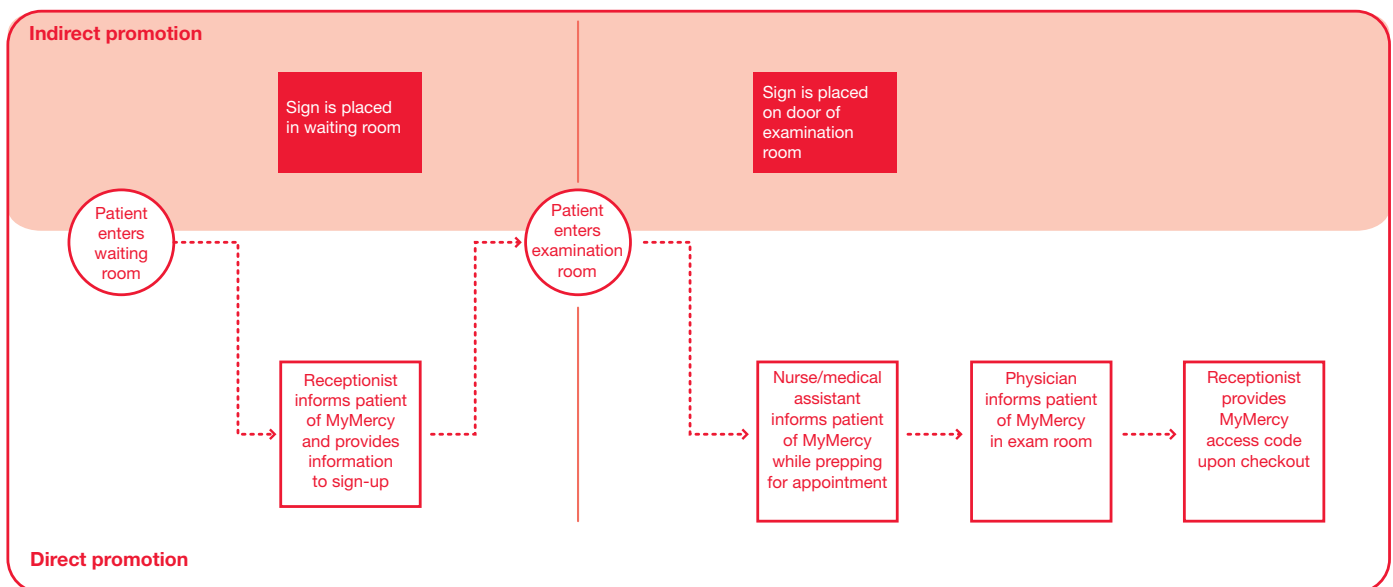
EHRs, EMRs, and PHRs—what's the difference?

For many, the terms electronic health records (EHRs), electronic medical records (EMRs), and personal health records (PHRs) seem to blend into one, making it easy to become confused about which software is used when and for what purpose. The Office of the National Coordinator, the National Alliance for Health Information Technology, and the Health Information Management and Systems Society bring clarity to the terms, which are, indeed, defined differently. (See Figure B).

Figure B: EHRs, EMRs, and PHRs defined

Software	Description
Electronic medical record (EMR)	• Digital version of the paper charts in the clinician's office • Tracks data over time • Easily identifies which patients are due for preventive screenings or checkups • Checks how patients are faring on certain health indicators • Monitors and improves overall quality of care within the clinician's practice • Only contains the medical and treatment history of the patients in one practice • Limited portability • No patient access
Electronic health record (EHR)	• Like the EMR, but provides a broader view of the patient • Designed to go outside the health organization that originally collects and compiles the information • Contains information from all the clinicians involved in patient's care • Information moves with and can be accessed by patients • Shares information with other health care providers
Personal health record (PHR)	• Electronic application that allows patients to maintain and manage their health information (and that of others for whom they are authorized) • Information is under the patient's control and allows patient to provide self-generated information • Enables others the patient has authorized to act in the patient's interest to have control over access • Sources of health information may include healthcare providers, clinicians, medical devices, wellness promoters, individuals, health insurers, research institutions, public health agencies • Portability is dependent on whether the PHR exists independently or is sponsored by a health insurer or healthcare provider

Source: The Office of the National Coordinator for Health Information Technology, http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&cached=true&objID=1221&PageID=15593); and http://healthit.hhs.gov/blog/onc/index.php/2011/01/04/electronic-medical-record-vs-electronic-health-record-clarifying-the-ehremr-difference/

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Acknowledgments

About the research

This report is the third in a series of reports on the IT implications of health reform and other regulatory requirements. Subsequent reports will discuss the IT infrastructure, informatics and reporting, and privacy and security requirements for such regulatory initiatives as value-based purchasing, accountable care organizations, and comparative effectiveness as well as such market drivers as the emerging economy of data through secondary use. The research for this report included 16 in-depth interviews with thought leaders and executives in the healthcare arena, including hospital providers and consumer advocacy groups. HRI also commissioned in fall 2010 an online survey of more than 300 healthcare executives as well as an online survey of 1,000 US adults representing a cross-section of the population in terms of insurance status, age, gender, income, and geography. The consumer survey collected data on consumers' perspectives on health reform topics and preferences related to their healthcare usage and payments.

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