

INSIDE EDGE

Microsoft, Google and the New World of PHRs

EXECUTIVE SUMMARY

We thought our 2007 overview of the personal health record (PHR), which provided a framework for discussion and a roundup of PHR efforts, would put the issue to rest for awhile. That view seemed safe given the clear lack of consumer uptake. Well, consumers still haven't taken to the PHR, the uptake needle has not moved much if at all, there's no groundswell. However, other top-down factors have emerged and invigorated the PHR as an element in consumer empowerment and health-care reform.

Enter Microsoft and Google. Both software giants have cast their hats into the PHR space in the past few months and rattled the status quo with web platforms for personal health information, Microsoft with HealthVault and Google with Google Health. Despite low consumer adoption, with game-changers like these in the field we knew it was time for a PHR update. If anyone understands the interplay of consumers and technology, it would be Microsoft and Google.

Things already seem to be moving. Last month, Microsoft, Google and a slew of healthcare organizations joined in a broad coalition to approve the first privacy framework for PHRs. The guidelines were created by the Markle Foundation and 46 other electronic service providers, consumer advocates and medical associations over the past year and a half. The Markle Foundation also

released a survey in June on consumer attitudes toward PHRs which found that only about 2.7 percent of respondents have a PHR; 57 percent of those without PHRs said privacy concerns were the reason; eight in ten said PHRs could improve their health.

A year of change

"The last year has been interesting for PHRs," says Archelle Georgiou, MD, an independent consultant and senior fellow at the Center for Health Transformation, based in Washington, DC. "The entry of Microsoft and Google has brought a lot more visibility to the PHR sphere and it's reasonable to assume that these two behemoths will be leaders in this space." There's also a bandwagon effect: a sense that other healthcare IT companies not able to integrate with Google and Microsoft's technology platforms will risk being quickly left behind.

But Georgiou then adds, "My prediction is that Microsoft and Google will provide great frameworks, but the PHR space will get harder before it gets easier." In essence, Microsoft's HealthVault is a very basic PHR with an open platform or shell for many different kinds of applications; the company's strategy is to partner with vendors of those applications. "That makes the PHR platform a potentially complex environment for the consumer to navigate. What I fear is that adoption will stagnate or decline because this framework will create more confusion," she says. At the very least, Google

July 2008
Volume 14, Number 6

Chairman

Stanley R. Nelson

Vice Chairman

Donald C. Wegmiller

Executive Director

Shelli Williamson

Editor

Chuck Appleby

Managing Editor

Jean Appleby



Scottsdale Institute Conferences 2008-2010

Fall Conference 2008

Hosted by Northwestern Memorial Hospital
Sept. 25-26, 2008
Chicago

Spring Conference 2009

April 29-May 1, 2009
Camelback Inn,
Scottsdale, Ariz.

Fall Conference 2009

Hosted by Texas Health Resources
Sept. 24-25, 2009
Fort Worth, Texas

Spring Conference 2010

April 14-16
Camelback Inn,
Scottsdale, Ariz.

Fall Conference 2010

Hosted by Intermountain Healthcare, Salt Lake City, Utah

SCOTTSDALE
INSTITUTE

Membership

Services Office:

1660 Highway 100 South
Suite 306

Minneapolis, MN 55416

T. 952.545.5880

F. 952.545.6116

E. scottsdale@scottsdaleinstitute.org

W. www.scottsdaleinstitute.org

and Microsoft will heighten consumer awareness of PHRs. “However, the reality is that we’re right at where we were last year in terms of consumer adoption.”



Archelle Georgiou, MD, senior fellow, Center for Health Transformation, Washington, DC

Georgiou says patients are more likely to adopt PHRs when their doctors support and encourage their use. Standardized electronic clinical data and ubiquitous EHR adoption are still a decade away, but when that does occur,

physicians are going to be the vital link in PHR use. “I’m struck by how much patients express feeling safe with their physicians. They really see physicians as partners,” she says.

Also, the developments of the past six months haven’t changed the fundamental challenges surrounding security and privacy. Georgiou, who previously worked at United Healthcare, firmly believes that payers—ideally in partnership with employers—have a key role in leveraging administrative claims data to pre-populate the PHR with clinically relevant and easy-to-understand data about previous conditions, tests and treatments. Payers are de facto the best source for that kind of information because only 10 percent to 20 percent of doctors and hospitals use EHRs.

A key issue is that the record is relatively complete and continuously and automatically updated. “People won’t manually refresh their own clinical data,” she asserts. “And even if they do, there’s a high risk of inaccurate data entry. PHRs with incomplete and outdated records will not be used by patients or their doctors.”

Georgiou predicts that the long-term, sustainable model for PHRs will be an integrated but “untethered” model—one that can incorporate data from multiple sources but is not proprietary to an EHR vendor, doctor or payer. “What will fail is any PHR that doesn’t integrate since it won’t reflect a consumer’s healthcare history. It doesn’t have to be delivered by a health plan.”

Despite the obstacles, bringing comprehensive patient information into a single document like the PHR is worth the investment, especially for the chronically ill. “The benefits are enormous. Online PHRs decrease the risk of duplicate medications and procedures, promote communication between doctors and patients, and make access to healthcare more convenient. The PHR can highlight for a person all the medications they’re taking, while allowing specialists to see what the patient is taking and bring visibility to all aspects of that person’s care,” she says.

Google

Launched in May with eight major partners including Longs Drugs, CVS and Minute Clinic, Google Health is a PHR with a platform application that allows a consumer to manually store information by typing it in or by authorizing a health system like the Cleveland Clinic to download patient information from an EHR, according to Missy Krasner, product marketing manager for Google Health. “Once your data is stored, you can then select from a directory of customized, personalized services like My Daily Apple, which can read your health profile—as an MS patient, for example—and then scan the web for the most recent news about treatment for your condition,” she says.

For information on any of these teleconferences, please register on our Website www.scottsdaleinstitute.org

August 13

Clinical System Benefit Measurement Metrics: How to Select, Collect and Report
• Doug Thompson, director, Navigant Consulting, Chicago

August 14

Realizing Budgetable Benefits: RAD Voice Recognition
• Robert C. Weeks, director, Information Services Division, Memorial Hermann Healthcare System, Houston

August 26

Revenue Cycle Reformation: Will Software Solutions Keep Up?
• Kent Gale, president, KLAS Enterprises, Orem, Utah

September 9

A Balanced Scorecard Approach to Developing an Integrated Enterprise Data Warehouse
• Narayanan Kulasekar, manager, EDW/Business Intelligence, Advocate Health Care, Oakbrook, Ill.
• Tina Esposito, MBA, RHIA, director, Center for Health Information Services, Advocate Health Care, Oakbrook, Ill.

more events on next page

Google Health, available to partners and consumers free of charge with only a sign-in at www.google.com/health has published APIs for partners based on CCR (Continuity of Care Record) standards and will soon support the more robust CCD (Continuity of Care Document) and HL7 standards. Krasner says Google started with the CCR as opposed to the CCD because more organizations were using the former. Google, which just signed a deal with Blue Cross Blue Shield of Massachusetts, is open to partnering with all comers, including EHR vendors, large medical groups, national labs and health plans. Lab results from Quest Diagnostics Inc. are available on Google Health, but with a slight twist: unlike other data, it must be released by the patient's physician first, because Quest business relationships are directly with doctors and health plans.



Missy Krasner, product marketing manager, Google Health, Mountain View, Calif.

Krasner says Google Health is in line with the company's traditional strategy. "Google often puts products out free on the web. Our mission is to make information more accessible and useful," she says, citing examples like Google Book Search and Picasa, its photo-management software, both of which require only a user name and password to activate. However, the healthcare audience, like the audiences for its other products, is likely to generate more use of the Google search engine. "The more you sign in, the more searches. The more searches, the more brand loyalty," says Krasner.

Still, that doesn't mean Google will put any ads on Google Health. "Google Health

has no direct monetization strategy currently. There is a Google search bar in all of our products, and this takes you out of Google Health and allows you to do searches," she says. The Google.com search results page does provide ads on the right-hand side of the page and that's where Google makes money.

Google does not publish numbers of users on any of its offerings but Krasner says the company is pleased with the response to date to Google Health. "We're very much in beta. You can do sharing with third parties, for example, but not user to user yet. That's a feature we'll be adding. We generally launch our products early and then undergo an iterative process as it evolves. It's about getting the product out and then getting user feedback to shape it," she says.

Kaiser as PHR pioneer

A few leading healthcare providers believe they've already established proof of concept with the PHR in a large population. "We think we have the largest number of consumers linked to the PHR—nearly two million," says John Mattison, MD, chief medical information officer and assistant medical director, Southern California Kaiser Permanente. This PHR is a direct and instantaneous export of all updates from the EHR used by every KP provider on every encounter with all 8.7 million members. A web-based consumer view of Kaiser's Epic EHR, it is available to all Kaiser members. "If they travel anywhere in the world, they can share that same view into that record with any provider who has web access. That's the simple case example of a PHR," he says.

It's more difficult to provide a comprehensive, portable record for people who are highly mobile or frequently move or change jobs, health plans and providers. Firms like Revolution Health, Google,

Upcoming Events continued

September 16
Hospitals Subsidizing Community Physician EHRs, Tax Implications for Both Parties

- Linda Sauser Moroney, partner, Drinker Biddle Gardner Carton, Chicago
- Jennifer R. Breuer, partner, Drinker Biddle Gardner Carton, Chicago

September 17
Oncology Solutions: A Complex Area – Who is Hitting the Mark?

- Jeremy Bikman, VP, Research, KLAS Enterprises, Orem, Utah

September 22
Ultrasound Technology: Benefits and Impact at the Seton Family of Hospitals

- Gerry Lewis, CIO, Seton Family of Hospitals, Austin, Texas
- Jeff Falwell, Dell Project Manager, Seton Family of Hospitals, Austin, Texas

September 23
Cincinnati Children's Clinical Research Data Warehouse (I2B2)

- Keith Marsolo, director, Research Data Warehouse and instructor, Pediatrics, Cincinnati Children's Hospital Medical Center

October 1
Clinical Browser Delivers Value at Daughters of Charity Health System

- Dick Hutsell, VP and CIO, Daughters of Charity Health System, Los Altos, Calif.

For information on any of these teleconferences, please register on our Website www.scottsdaleinstitute.org

Today's basic PHRs will in the future add features like decision support, health maintenance records, wellness programs and protocols. In addition, user-friendly integration with smartphone applications will be a key differentiator.

Microsoft and WebMD have arisen to serve their needs. Those types of products, says Mattison, “allow people to have control over their PHR. They may want to leave things out, choose to edit it in such a way that they can show other folks what they want them to see. That’s really a personal health record. They can elect to leave out what they want—and that makes them the first trusted source. The flip side of that coin is that there is a liability in that when a patient shows up 10 years from now you can have a good idea of that person’s record, but not know if it’s complete.” That issue will drive two trends in the industry: 1) The PHR will become more and more complete and the gap with the EHR will narrow, and 2) from a provider perspective, the PHR can never be regarded as a complete source of information as long as the consumer retains discretion over what is or is not entered into that record, he says.

KAISER PERMANENTE® thrive



**John Mattison, MD,
CMIO, SOCAL Kaiser
Permanente,
Pasadena, Calif.**

With the potential of multiple PHR vendors, product differentiation becomes paramount. Mattison expects today’s basic PHRs will in the future add features like decision support, health maintenance records, wellness programs and protocols. In addition, user-friendly integration with smartphone applications will be a key differentiator. While Kaiser provides members its own consumer record, the organization wanted it to be interoperable with as many outside products as possible. “Kaiser’s strategy is not

to focus on a single vendor, but to be open to any PHR products that dovetail with Kaiser’s record to encourage coordination of care,” he says.

Last month Kaiser announced a pilot with Microsoft that would allow Kaiser’s 156,000 employees to link their Kaiser PHR with Microsoft HealthVault. If it works, Kaiser will offer the same service to its nearly nine million members. Mattison is quick to note that Kaiser’s agreement with Microsoft does not constitute a long-term, exclusive contract. Both Microsoft and Google have committed to the CCD, according to Mattison, but Kaiser has endorsed Microsoft’s HealthVault because Microsoft was ready today to embrace CCD, which is built upon a data model that can expand greatly in scope of content without sacrificing data integrity.

Microsoft had also developed more mature privacy and security measures. “Microsoft has learned some hard lessons in the past. They’ve gone out of their way to design secure systems and at Kaiser we do everything we can to preserve privacy and confidentiality,” he says.

Mattison understands why online firms like Microsoft and Google want to enter the PHR world. “The Google search engine is becoming the center of web services,” he says, adding that competitors will try to draw patients with bundled services. “There’s no way to predict how that will play out in terms of the ability to mix and match services. It’s going to be really interesting to watch.”

Ironically, one possible scenario might be a virtual replay of the silos of information that have plagued healthcare for decades.

“In the future, a patient on vacation or a business trip might visit a new provider

and say, 'I've got my records up in Google up to 2008 and till 2012 in HealthVault and, oh, by the way, I was just at St. Elsewhere.' What does the provider do? In an idealized world, interoperability standards will allow migration of all information. But we're still years away from that idealized state of portability and persistence of information," says Mattison. The role of "aggregators," which bring disparate information sources into a single view, will represent one potential but complex resolution of these issues.

The PHR will unequivocally migrate, he says, into a model of summarized information—not administrative information with date and time stamps or large amounts of metadata. "That doesn't need to cross over. But primary information, such as when a patient was seen by the doctor for what, does. The PHR will become a complete, unified abstract of clinical information in a standardized format to accommodate digitized search tools to allow different cuts of the information. That allows the highly mobile person to have just the current abstract of their record, and the substrate for personalized decision support."

Still, Mattison acknowledges the U.S. market for PHRs remains embryonic and much of that has to do with its pluralistic nature. "I was in the Netherlands a few weeks ago and they were puzzled why anyone would want to share their personal record with a third-party custodian. They intend to essentially have a national RHIO that provides a PHR for 100% of their citizens. There are a lot of different views around what a PHR should be. The most likely model will probably involve adding a ton of related services like decision support for specific diseases, health maintenance and wellness advice, reminder systems,

and direct links to health and wellness products for purchase over the web and distributing the cost to or capturing revenue from these associated services," he says.

Telecommunications is another factor that will shape the PHR. "The cell phone is going to be a huge form factor" as a vehicle to extend the PHR especially for chronic disease management, says Mattison. It will incorporate text messaging and resident applications. Some applications will be strictly for reference information that, while limited due to screen size, will allow users to identify and synch with other devices—full-size screen, printer or Kindle-like devices. Other applications will be as sophisticated as anything that exists today on a PC. The smartphone is likely to replace the PC as the primary interface between the average consumer and the web, he says.

Mattison remains enthusiastic about the PHR's benefits. "Kaiser has had a PHR for two years and hooked up two million members. We've pioneered the PHR concept with spectacular results. For example, a patient came in to see the doctor, went downstairs to have a test and came back to the doctor in the same day and same visit and told the doctor the results. We release the results to the patient and the doctor at the same time. However, because the patient is only looking after one, and the doctor is looking after many, the patient got the information ahead of the doctor. We absolutely support the PHR."

Microsoft

At the Fifth Annual Healthcare Unbound conference in San Francisco earlier this month, David Cerino, general manager of consumer engineering for Microsoft's

"Kaiser has had a PHR for two years and hooked up two million members. We've pioneered the PHR concept with spectacular results. For example, a patient came in to see the doctor, went downstairs to have a test and came back to the doctor in the same day and same visit and told the doctor the results. We release the results to the patient and the doctor at the same time. However, because the patient is only looking after one, and the doctor is looking after many, the patient got the information ahead of the doctor."

Health Solutions Group, described the evolution of the HealthVault platform in the context of how the web has transformed other industries including travel and finance, in both of which he helped pioneer online services.

From 1995 to 1998, he said, 38 percent of travel agencies went out of business. “It wasn’t the web, but consumer preference to use the web” which took a fraction of the time to schedule travel as a conventional travel agency. Like it did the travel industry, healthcare will “force functions” driven by consumer demand. Twenty years ago, he said, it was possible to call five airlines and write down and compare fares. Why, he asked, is a personal physician not available in the same way? Or, why can’t pre-admission processing be done online or e-Prescribing be universally available?

“There are survivors [in the industry] and those who don’t survive. Things are going to start moving,” asserted Cerino, who joined Microsoft Health six months ago. The unit’s vision is “to improve health around the world, with software.” Having been part of the digital revolution in banking and travel, Cerino said the same kind of consumer-based revolution is occurring in health.

“The HealthVault ecosystem puts the citizen in the middle. This data is yours,” he said. Microsoft took the platform approach because the complexity and size of healthcare, 16 percent of GDP, demands it. “It’s got to be a collaborative effort, and with people moving around, the data has to be tracked.” As a result, in October 2007 Microsoft launched HealthVault as a platform for online healthcare collaboration.

“Microsoft will never tell you that we are a subject-matter expert in health. We want partners who are subject-matter

experts. And it doesn’t matter if a person uses Google or Microsoft, we’re competing with the filing cabinet.”

Cerino said that was the case with travel—Orbitz was the first travel agency with online B2B capability; followed by Expedia and Travelocity. “We want to get the information out there to move consumers to do things. We’re both [Microsoft and Google] trying to do really good things,” he said.

HealthVault is a software and services platform, a “rich client” to more than 50 devices—glucometers, exercise machines and so on—and 75 partners. There have been about 10,000 downloads of the API. The platform is analogous to PayPal, whose primary relationship is with online retailers and their applications. “Experiences are always via partners. We don’t expect HealthVault to be a consumer brand. There’s a lot of value in having a platform that people trust. It’s not a PHR. A PHR end goal is to store data; the end goal of HealthVault is to” facilitate information sharing.

Conclusion

If you examine the PHR deeply enough you can see that it encapsulates the future vision of healthcare IT: a patient-centered interoperable data network for the secure sharing of standardized information. “The key question,” says Kaiser’s Mattison, “is if you imagine a doc 10 years from now and a patient comes in you get a partial record. You have 20 patients waiting in line. Are you going to track down each of those patients’ fragmented records? Or is there a mechanism for automatically blending and filtering the information? And is there a more trusted source than the others? There likely will be conflicting problem lists and conflicting allergy lists. How do you adjudicate who the most trusted source is?” he asks.

“Microsoft will never tell you that we are a subject-matter expert in health. We want partners who are subject-matter experts. And it doesn’t matter if a person uses Google or Microsoft, we’re competing with the filing cabinet.”

“We’re entering an era of increasing amount of conflicting information. The longer you keep an EHR on an individual, the more conflicting information will appear. Maintenance of information will become one of the key challenges of healthcare informatics: filtering, processing, inferencing, display. At what point do we get into errors of treatment and diagnosis because the flood of information is so great that we become totally reliant on automated inferencing systems? It really is a brave new world of more information than you can manage. We may have to go back to talking to the patient more as the ultimate source,” says Mattison.

Google’s Krasner says her personal view is that the PHR model most likely to succeed is the one that best fits into a person’s daily workflow—like talking on the telephone, doing email and calendaring. “If there’s a way to make it a daily feature—calories, nutrition or blood pressure—that appeals to the chronically well/fitness buffs and to the chronically ill, to a wide range of people, then the PHR will succeed. The value proposition of just ‘We’re a beautiful user interface’ won’t work. It may not be a PHR but a news service. It doesn’t have to be this allopathic model.”



REGISTER NOW

www.scottsdaleinstitute.org

FALL CONFERENCE 2008

Hosted by Northwestern Memorial Hospital
“Realizing the Promise of Healthcare IT”

September 25-26, 2008

What our members say about our conferences:

“Extremely valuable, lots of Monday-morning value.”

“Excellent content. Great opportunity for audience participation and comment.”

“I learned a lot from the speakers and the attendees.”

SCOTTSDALE INSTITUTE MEMBER ORGANIZATIONS

Advisors

Paul Browne, Trinity Health
 David Classen, MD, CSC
 George Conklin,
 CHRISTUS Health
 Amy Ferretti, Carefx
 Deborah Gash, Saint Luke's
 Health System
 Tom Giella, Korn/Ferry
 Steve Heck, Navigant
 Consulting
 Nick Hilger, Ingenix
 Marianne James, Cincinnati
 Children's Hospital
 Medical Center
 Jim Jones, Hewlett Packard
 Thanos Karros, Exogen
 Gilad Kuperman, MD,
 New York Presbyterian
 Hospital
 Adam McMullin, Hill-Rom
 Mitch Morris, MD,
 Deloitte LLP
 Patrick O'Hare,
 Spectrum Health
 Jerry Osheroff, MD,
 Thomson Reuters
 Brian Patty, MD, HealthEast
 M. Michael Shabot, MD,
 Memorial Hermann
 Healthcare System
 Joel Shoolin, DO, Advocate
 Health Care
 Bruce Smith,
 Advocate Health Care
 Cindy Spurr, Partners
 HealthCare System, Inc.
 Judy Van Norman,
 Banner Health
 Kevin Wardell,
 Norton Healthcare

Advocate Health Care,
 Oak Brook, IL
 Alegen Health, Omaha, NE
 Allina Hospitals & Clinics,
 Minneapolis, MN
 Ascension Health,
 St. Louis, MO
 Banner Health, Phoenix, AZ
 BayCare Health System,
 Clearwater, FL
 Billings Clinic, Billings, MT
 Catholic Health Initiatives,
 Denver, CO
 Cedars-Sinai Health System,
 Los Angeles, CA
 Charleston Area Medical
 Center, Charleston, WV
 Children's Hospitals & Clinics,
 Minneapolis, MN
 Children's Memorial
 Hospital, Chicago, IL
 CHRISTUS Health, Irving, TX
 Cincinnati Children's Hospital
 Medical Center,
 Cincinnati, OH
 DeKalb Medical Center,
 Decatur, GA
 Hackensack University
 Medical Center,
 Hackensack, NJ
 HealthEast, St. Paul, MN
 Heartland Health,
 St. Joseph, MO
 Integris Health,
 Oklahoma City, OK

Intermountain Healthcare,
 Salt Lake City, UT
 Legacy Health System,
 Portland, OR
 Lifespan, Providence, RI
 Lucile Packard Children's
 Hospital at Stanford,
 Palo Alto, CA
 Memorial Health System,
 Springfield, IL
 Memorial Hermann
 Healthcare System,
 Houston, TX
 Munson Healthcare,
 Traverse City, MI
 New York City Health &
 Hospitals Corporation,
 New York, NY
 New York Presbyterian
 Healthcare System,
 New York, NY
 North Memorial Health Care,
 Minneapolis, MN
 Northwestern Memorial
 Healthcare, Chicago, IL
 Norton Healthcare,
 Louisville, KY
 Parkview Health,
 Ft. Wayne, IN
 Partners HealthCare System,
 Inc., Boston, MA
 Piedmont Healthcare,
 Atlanta, GA
 Provena Health, Mokena, IL
 Saint Luke's Health System,
 Kansas City, MO

Saint Raphael Healthcare
 System, New Haven, CT
 Scottsdale Healthcare,
 Scottsdale, AZ
 Sentara Healthcare,
 Norfolk, VA
 Sharp HealthCare,
 San Diego, CA
 Sparrow Health, Lansing, MI
 Spectrum Health,
 Grand Rapids, MI
 SSM Health Care,
 St. Louis, MO
 SUNY Downstate,
 Brooklyn, NY
 Sutter Health,
 Sacramento, CA
 Texas Health Resources,
 Arlington, TX
 Trinity Health, Novi, MI
 Truman Medical Center,
 Kansas City, MO
 University of Missouri
 Healthcare, Columbia, MO
 University of Pittsburgh
 Medical Center,
 Pittsburgh, PA
 Virginia Commonwealth
 University Health System,
 Richmond, VA

SPONSORING PARTNERS

INGENIX. EXOGEN Deloitte. hp invent
 CAREfx NAVIGANT CONSULTING KORN/FERRY INTERNATIONAL
 CSC Hill-Rom THOMSON REUTERS
 EXPERIENCE. RESULTS. Enhancing Outcomes for Patients and Their Caregivers™

STRATEGIC PARTNERS

KLAS Honest. Accurate. Impartial. HealthTech