6. HEALTHCARE IT'S UNFULFILLED PROMISE: WHAT WE'VE GOT HERE IS FAILURE TO COMMUNICATE

by Jeff Goldsmith

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As someone who has followed the past 11 years of the healthcare IT saga closely, it is hard to feel good about the progress made so far. Although President Obama seems to have caught healthcare IT fever, clinicians and line managers everywhere I visit are in full-blown revolt against their IT systems. For all the hype, clinical IT is still depressingly stupid and difficult to use. My colleague Ian Morrison refers to clinical IT as a PET—a Perpetually Emerging Technology.

Clinical IT also remains very costly both to install and to maintain. Name another industry where automation actually increases operating costs! Laying off chart pullers and coding experts at the price of doubling the size of the IT department—and that *after* an eight- or nine-figure IT implementation—isn't a big win for productivity improvement. Institutions like Geisinger and Partners HealthCare that have made so much progress using these tools are in years 12 to 15 of their installations.

Ask your clinicians the crucial question: Has clinical IT enabled them to spend more time with their patients? What you'll hear is a resounding "No!" Many are taking their work home with them to complete their charting.

"Newfangled Electronic Silos"

Bob Wachter, chief of the Division of Hospital Medicine at UCSF Medical Center in San Francisco, in his excellent blog *Wachter's World,* complained that clinical IT in his institution was so unwieldy that his residents had to invent a new clinical tool to summarize the condition of patients at each shift change (Wachter 2008). Within a few weeks, the nurses in his hospital and residents at a sister hospital pleaded with his residents to share the new tool with them.

Because information is so difficult to record and to find, doctors have no time to read nurses' notes, nurses have no time to read doctors' notes, and pharmacists don't have time to read or understand the patient's chart when they fill orders—they just process their order queue and go home exhausted at the end of the workday. As Wachter says, what the tens of billions invested in clinical IT has so far bought us is a bunch of "newfangled electronic silos." What happened to "clinical transformation"?

The answer is, in clinical IT, documentation has become an end in itself, not a means to an end. We've forgotten the purpose of documentation, which is not simply to get paid but to enable communication across the care team. Although it is tempting to blame the vendors, management is fully codependent with this failure and shares the blame. If we want better results, we need to shift the focus of IT vendors and healthcare management by demanding better IT solutions and by using the tools differently.

We need to recognize that horizontal communication is the key to effective clinical IT.

Implications for Hospital Leaders

Move clinical and patient communication online. Younger physicians and managers no longer communicate inside silos. In fact, a lot of them are online pretty much all the time, an impressive fraction of that time on Facebook or in the blogosphere. The emerging clinical problem-solving framework isn't a face-to-face meeting (an appalling waste of time) but rather instant messaging, texting, and instant convening of online discussion groups, iChats, and Skypes (telephone calls over the Internet). Clinical IT needs to become much more like groupware. Instead of fighting your younger workers by restricting web access, why not begin building instant messaging and online communities into your IT infrastructure?

It isn't merely clinical decision making that ought to move online, but patient communication as well. New tools like Myca's Hello Health are putting patient-doctor and doctor-doctor communication online in Facebook-like interfaces. Physicians and patients can choose the modality that works for them—online video, text or IM, email, phone, or in-person interactions—and launch them off the desktop, supported by an easy-to-use electronic/personal health record.

Physicians are creating their own online communities, enabling real-time communication about actual clinical care issues. These communities might be national, like Sermo, or based in communities, like Ozmosis. These peer-to-peer networks are enabling physicians to post case information (depersonalized for compliance with the Health Insurance Portability and Accountability Act, or HIPAA) and convene discussions about what to do.

Gen Y caregivers and patients will not wait for appointments or meetings. Give your younger clinicians, management staff, and patients the tools to meet up online, and you'll be amazed at how much better your organization works. Wachter was right: Clinical IT needs to look, feel, and work a lot more like Facebook, or our young people will simply kluge their way right around our systems and create their own.

Fix the user interface. Despite what the vendors tell you, their "solutions" are colossal time wasters. It still takes *way* too long not only to document but also to find information in the clinical record. Crucial information about the patient's current condition is either entombed deep in the record, 12 clicks below the main screen, or somehow hasn't reached the record yet. The graphical user interfaces (GUIs) appear unchanged since Windows 95. They are not only very difficult to use but ugly as well.

Our vendors need to be told to buy iPhones and Macs and learn by using them how to fix the appalling user interfaces in our clinical record systems. We need to use modern data visualization tools to organize individual records and to separate communications surrounding patient care from orders and actual care documentation. The systems need to use tools like Mac's Spotlight, a new search technology, to find facts about individual patients and to update their current status. We can organize patient files in a visual chronology like Mac's Time Machine to enable us to parachute into the past to find out what we know and don't know about patients. (Time Machine lets you automatically back up everything on your Mac so you can easily go "back in time" to recover files.)

From my experience with vendors, I know that the user interface always loses to the clinical silo advocates ("Let's build PACS v7.2!") in competing for engineering attention. Unless users tell vendors to fix their time-sucking interfaces and reward those vendors who get it, we're going to continue burning up scarce clinical time "feeding the machine" instead of caring for patients. Tell the vendors they need to figure out how to double the amount of time our nurses and doctors spend caring for patients, or we're not going to renew their contracts.

Fully automate the revenue cycle. What is killing providers right now is the absence of payback from IT investment. That's because we're looking in the wrong place for the savings. Despite the hype about clinical IT, the largest cost reductions will come from fully automating the revenue cycle and eliminating most of the hospital's finance department. The technical capacity to eliminate what Gartner Inc.'s Wes Rishel has called "swivel-chair integration"—vast rooms full of hospital billing clerks talking to vast rooms full of health insurers' payment processors—already exists.

We need to move aggressively to real-time adjudication and payment of medical claims. As part of health reform, administrative simplification is likely to get a further boost. But easy-to-use, web-based interfaces developed by athenahealth or Availity have already given many physician practices and some hospitals the tools to frame and settle their claims in real time. They've already closed the electronic loop, even with the current partially standardized billing process. If you don't want a vendor-driven solution, learn from the Massachusetts Health Data Consortium (www.mahealthdata.org) and other regional efforts to automate the revenue cycle.

Make the personal health record really personal. Twice in the past 20 years, we've thrown a ton of federal and foundation grant money

How likely is it that the following will be seen in your hospital's area by 2015?

| Very Likely (%)	Somewhat Likely (%)	Somewhat Unlikely (%)	Very Unlikely (%)
41	52	7	1
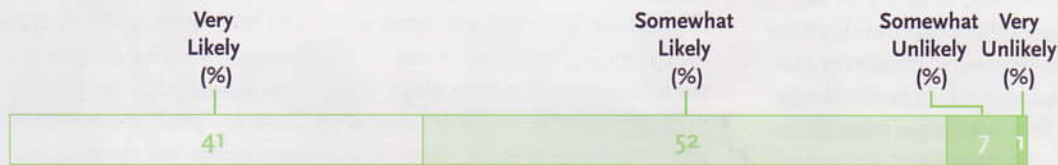
Research supports the usefulness of online interventions such as smoking cessation, nutrition improvement, and assistance with other behavior-dependent, chronic conditions. Online sites will play a larger role in helping people monitor and improve their health status in 2015

Very Likely (%)	Somewhat Likely (%)	Somewhat Unlikely (%)	Very Unlikely (%)
39	54	6	

RevolutionHealth.com and Myoptumhealth.com allow users to search for health information, check symptoms, find physicians, and interact with other users. Online sites such as these will play a larger role in helping people monitor their existing medical conditions

Very Likely (%)	Somewhat Likely (%)	Somewhat Unlikely (%)	Very Unlikely (%)
14	39	40	7
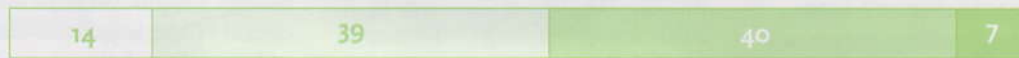
MyMedicalRecords.com and Google Health are online electronic health record services that allow patients to store their personal health record, upload images, and share their health experiences with others (e.g., insurance company or caregivers). By 2015, a majority of patients will have established such a personal health record

Very Likely (%)	Somewhat Likely (%)	Somewhat Unlikely (%)	Very Unlikely (%)
55	37	8	1
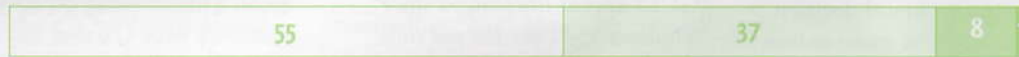
In 2008, 9% of the nation's hospitals used electronic health records in at least one unit. By 2015, this proportion will increase to 50%, in part because of the economic stimulus package passed in February 2009

Very Likely (%)	Somewhat Likely (%)	Somewhat Unlikely (%)	Very Unlikely (%)
50	44	5	1

A new role for healthcare providers will be to build trust among patients that their private health information will be confidential and secure

Very Likely (%)	Somewhat Likely (%)	Somewhat Unlikely (%)	Very Unlikely (%)
34	51	13	3

A uniform system will have been created with strict rules and sanctions to ensure that EMR systems provide adequate security and protection for patient information

Very Likely (%)	Somewhat Likely (%)	Somewhat Unlikely (%)	Very Unlikely (%)
12	46	36	6

A study that examined how to manage fever in children reported inaccurate information on 37 of 41 websites. Online consumer health information companies (e.g., WebMD) will be monitored by a governing body such as the National Institutes of Health to ensure valid and reliable health information is being disseminated

*Note: Percentages in each row may not sum to exactly 100% due to rounding error.

down the rat hole attempting to create community data repositories for clinical information. First CHINs (community health information networks), now RHIOs (regional health information organizations) have consumed vast amounts of time and funding to create antiquated, local server-based solutions to identify patients across communities. It is remarkable how few users have been willing to pay for the end product. I forecast a similar fate for the ambitious personal health record initiatives by Microsoft and Google. It will take more than a decade for clinical information to migrate to the cloud (the Internet).

In the next decade, however, we will be able to make the personal health record really personal. Technology exists today to put crucial patient information (meds, allergies, recent clinical history,

What Practitioners Predict

Nearly all respondents agreed that technology's potential to improve patient care and health status will be more completely realized by 2015 than it is today. For example, 93 percent think online sites are likely to play a larger role in helping people monitor and improve their health status (e.g., by offering online smoking cessation and weight management programs). As many agreed that patients will log on to sites like RevolutionHealth.com to monitor existing medical conditions. But respondents were almost evenly split about whether a majority of patients will have established an online personal health record, such as those offered by Google Health, by 2015, with 53 percent thinking it likely and 47 percent disagreeing.

What will providers' role be in 2015? According to 92 percent of respondents, the proportion of the nation's hospitals using electronic health records in at least one unit will rise from 9 percent in 2008 to 50 percent in 2015, in part because of the federal economic stimulus package passed in February 2009. Indeed, 94 percent said a new role for health providers will be to build trust among patients that their private health information is confidential and secure. Such assurances will be possible, according to 85 percent of respondents, because by 2015 a uniform system will have been established to ensure electronic medical records systems provide adequate security.

Finally, respondents were of mixed views as to whether online health information companies like WebMD, Google Health, and Revolution Health will be regulated by an organization such as the National Institutes of Health to ensure the information they are disseminating is valid and reliable, with 58 percent thinking it likely and 42 percent disagreeing.

major chronic disease risks) on USB-accessible mass storage devices on the patient's keychain. Tomorrow, we'll use tools like HP's remarkable Memory Spot—a miniature, wireless data chip that can contain up to four gigabytes of information, plus encryption and operating instructions—and simply write this information on the patient directly, in permanent jewelry, in tattoos, or on the back of a driver's license. We'll hop right over bar coding and RFID (radio-frequency identification), technologies that are too porous and slow to transfer data for personal health information, to new, personal mass storage media. When patients show up, we will simply obtain their permission and access their records right on the spot, so to speak.

The Challenge Ahead

Clinical and administrative IT in healthcare seems stuck in an early 1990s time warp. We need to move to real-time access to information, and elevate communication within the care team and between the care team and patient to a higher status than documentation and ordering. We need to use IT to create productivity increases ranging from 60 percent to 200 percent for our clinical or administrative workforces. Otherwise, there won't be anywhere near enough people to care for us baby boomers when we really need you.

Reference

Wachter, W. 2008. "Why the Medical Record Needs to Become More Like Facebook." *Wachter's World* [Online information; retrieved 8/31/09.] http://community.the-hospitalist.org/blogs/wachters_world/archive/2008/09/11/why-the-medical-record-needs-to-become-more-like-facebook.aspx