After receiving thousands of comments on a proposed rule issued in January, the Centers for Medicare & Medicaid Services issued a final rule in July that defines the “meaningful use” objectives for electronic health records that providers must meet in order to qualify for bonus payments from Medicare and Medicaid. PAs are ineligible for the special payments in the Medicare program.

Under the Health Information Technology for Economic and Clinical Health Act of 2009, eligible health care providers and hospitals can qualify for a total of $27 billion in incentive payments over the next decade. Individual providers can receive up to $44,000 under Medicare and $63,750 under Medicaid, and hospitals can receive millions for implementing the technology.

During the comment period for the proposed rule, AAPA sent a letter to CMS addressing the fact that PAs were not included as eligible professionals in the Medicare incentive program. AAPA’s letter also requested that the level of recognition of PAs under the Medicaid incentive program be broadened. The proposed rule limits incentives to PA-led clinics in federally qualified health centers or rural health clinics.

In the final rule, CMS acknowledges the comments but says neither CMS nor the secretary of Health and Human Services has the legislative authority to make changes to the definition of “eligible professional.”

“We appreciate the comments that we received on the Medicare EP definition, we are unable to expand or alter this statutory definition or consolidate it with the Medicaid program EP definition as suggested by the commenters. Under the EHR incentive payment program, the law provided a separate Medicare EP definition rather than giving the Secretary authority or discretion to determine who is a Medicare EP, or who is an EP for both the Medicare and Medicaid program.”

“A legislative change is required,” said Sandy Harding, AAPA’s senior director of federal advocacy. “Unfortunately, it’s not likely to be accomplished in the remaining days of this Congress—too little time. It will be on the AAPA Legislative Agenda for the 112th Congress, which will convene in January.”

In a modification from the proposed rule, the CMS final rule divides the 25 meaningful use objectives into two categories: a core group of required objectives, which must be met in 2011-2012 and a menu set from which providers may choose to defer up to five objectives. Providers must complete a total of 20 objectives: 15 from the core list and five from the menu list.

The final rule also includes the formula for calculating bonus payments as well as a schedule for Medicare payment adjustments for services provided by providers and hospitals that fail to demonstrate meaningful use of certified EHR technology by 2015.

Requirements for meeting meaningful use objectives will be phased in over the next five years. All stage one meaningful use requirements are outlined in the final rule, and are designed to establish a baseline for electronic data capture and information sharing. Objectives for stages two and three will be developed through future CMS final rules.

A companion final rule by the Office of the National Coordinator for Health Information Technology was issued the same day as the CMS final rule. The ONC rule identifies standards and certification criteria for the certification of EHR technology. This rule is meant to ensure that providers and hospitals are using systems that are capable of supporting meaningful use functions. AAPA also submitted comments on this proposed rule.

In June, ONC published a final rule that establishes a temporary certification program for health IT allowing organizations to test and certify EHRs.

Another proposed rule issued July 8 by the Office for Civil Rights would strengthen and expand privacy, security and enforcement protections under the Health Insurance Portability and Accountability Act of 1996. Read more about it on page 18.

For more information on being a meaningful user of health IT and to read the final rules on meaningful use and certification, go to http://bit.ly/9M5Qmy.
Medical professionals see promise in mHealth
David Rios recalls being asked a number of times to evaluate a patient on multiple medications. “If I didn’t have a Palm Centro with Epocrates [medical software] to cross check this information, I couldn’t determine if we were doing more harm than good,” said Rios, who practices at Digestive Disease Consultants in Waycross, Ga. “Also, being able to look up the side effects of medication and comparing the various medications is an invaluable resource in delivering quality patient care.”

In a few instances, Rios had patients describe an unfamiliar condition. “Being able to input the information into the palm device on the spot not only assists the evaluation, but also decreases the decision-making time,” Rios said.

Use of the newest generations of PDAs, smart phones and netbooks is growing among medical professionals. Mobile health, or mHealth, (a subsegment of eHealth) is the term to describe the practice of medical and public health supported by mobile devices. Applications include the use of mobile devices in collecting community and clinical health data; delivery of health care information to practitioners, researchers and patients; and real-time monitoring of patient vital signs and direct provision of care (via mobile telemedicine).

PA Sandra Wiley finds mobile technology to be invaluable. “Having the most up to date evidence-based medicine at your fingertips is critical to patient care,” said Wiley, who practices emergency medicine at Emory Adventist Hospital in Smyrna, Ga. She uses her PDA daily to check for drug interactions, calculate drug dosages, ensure that the most specific and appropriate tests are ordered given the patient’s symptoms and examination, and to make certain that she has considered all potential diagnoses. Her device is filled with everything from advanced cardiac life support protocols to vaccination schedules. In between patients, she uses it to read medical articles to keep current on health developments.

Growth Spurt Projected
An increase in mHealth is expected as more providers use electronic medical records and remote monitoring technologies. That, combined with an
explosive growth in medical professionals’ smart phone usage, will be a strong driver in the expanding mHealth arena. The widespread availability of these personal devices may also prove to be a key catalyst in electronic health record adoption and utilization among physicians.

According to Manhattan Research, a New York-based pharmaceutical and health care market research firm, 64 percent of physicians currently own smart phones and within the next two years that number will climb to 81 percent. The National Comprehensive Cancer Network found that more than one-quarter of the nearly 6,000 health and medical applications in the Apple App store are targeted to health care providers.

“Combined with remote-monitoring technologies, we are in a nascent and exciting period of patient/doctor collaboration where both have access to and are using real-time information to make better and more cost-effective decisions,” said Rohit Nayak, vice president of sales for physician technology solutions, MedPlus in Mason, Ohio.

David Edelson, MD, founder and medical director of Thinsite.com and HealthBridge and an attending physician at North Shore-LIJ University Hospital in Manhasset, N.Y., said, “mHealth applications make it possible to create a two-way electronic high-way of information between patients and providers.” It allows patients to send data to their physicians, providing a more real-time access to data such as blood pressure, blood sugar levels and weight that a patient measures at home or through biometrics that can automate this process. It also allows specialists to interface with patients at distant locations. For example, the Thin-cam Web application allows individuals to send a photographic food log to a nutritionist for detailed analysis.

Rios foresees mHealth becoming a daily part of a PA’s routine. “Instead of checking messages on paper, we can log in to retrieve them. Other providers, nurses and staff can constantly update each other. Many institutions still rely on beepers and phone calls. This is both time consuming and frustrating.”

**The Impact on Clinical Practice**

Rios noted that a mobile device allows for documenting and recording patient encounters in any type of setting. After an encounter, he forwards his remarks to a central record or office to be filed. This electronic record could possibly be more cost-effective, and provide clearer patient instructions.

Emory Adventist Hospital has an Internet system that for a small fee allows a patient to schedule an appointment time to...
be seen in the emergency department. If the patient is not seen by a provider within 15 minutes of their appointment time, then neither the patient nor the insurance company is charged for the visit. “Patients have responded with resounding enthusiasm,” Wiley reported. The system also allows providers to better prepare for patients prior to arrival, and significantly increases patient satisfaction by decreasing wait times.

Challenges of Implementation
The resistances to mHealth are similar to criticisms about switching to electronic medical records. Implementation will be slow, have flaws (like all new technologies) and initially may slow down providers as they adjust to change. “But as a PA I want nothing but the best for my patients, and if that means a time of inconvenience for potentially better long-term care, then I gladly welcome the change,” Wiley said.

Added Rios, “Some providers are reluctant to take advantage of hand-held technology. Students are now being taught that several mobile software applications are available and should be used. Before, we bought books that fit into our lab coats and hoped that they covered the topics we needed.”

The Price Tag
mHealth can be as cheap as two iPhones with video chat capabilities, or a highly sophisticated telemetry-based monitoring systems costing hundreds of thousands of dollars. The iPhone platform provides sophisticated technology for the development of mHealth applications and has the potential to bring costs down significantly for many new and innovative health care initiatives. “Our Thin-cam iPhone app was developed for approximately $20,000, and provides services that just five years ago would have cost at least 10 times that amount to develop,” Edelson said.

The cost of implementing mHealth has been drastically reduced by the availability of mobile phones. Smart phones can connect almost anywhere and at any time. Costs range from upfront costs of purchasing devices and software, as well as service plans, loss and damage repairs, out-of-network fees and annual fees for programs.

Edelson sees the potential for decreased health care costs through better preventive medicine efforts on a primary care level, especially with the already growing shortage of qualified primary care medical providers. “This will result in a decreased need for more costly services such as emergency room visits and expensive testing by preventing diseases instead of treating them once they’re established,” he said.

Privacy and Security Concerns
Privacy and security concerns exist with most types of mobile information, said Edward M. Zabrek, MD, CEO of FutureCare and director of the Zinio project, which works to convert current texts and journals onto a device that doesn’t require a live Internet connection.

“There will always be concerns about potential data leakage over a mobile wireless network, however lost paper charts pose just as great a risk for falling into the wrong hands,” Zabrek noted.

A secure system should have a 256-bit encrypted network. Mobile devices should be password protected and/or biometrically encoded for secure and private access, with a rapid time out and remote destroy mechanism.

Here to Stay
With wider acceptance of touch screen tablets, mHealth will likely receive even more impetus to grow among health care professionals. Even technophobic providers have found the iPhone and Android operating systems intuitive and easy to use without consulting a user manual. “I believe that mobile information and reference material on devices will further compel medical professionals to adopt and adapt to mHealth as a way of life in the upcoming decade,” Zabrek said.

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How proposed privacy and security changes could affect your practice

Much has changed since the Health Insurance Portability and Accountability Act became law in 1996. Across the country, various methods of electronic health information exchange exist, and because state privacy laws vary greatly, there has been little uniformity in the privacy and security of electronic health information.

Back when HIPAA was new, the Office for Civil Rights, which has regulatory authority over HIPAA privacy and security rules, tended to give practices the benefit of the doubt for violations that were not deemed egregious. But proposed privacy and security rules announced by Health and Human Services Secretary Kathleen Sebelius in July will likely mean a brighter spotlight on HIPAA-covered organizations.

“I do think there is going to be greater scrutiny. In the early days of HIPAA Privacy enforcement, the OCR was very much geared toward helping providers understand the rule and achieve compliance and was very forgiving,” said Amy Fehn, partner with the health law firm of Wachler & Associates in Royal Oak, Mich. “There has been a lot of criticism by privacy advocates that HIPAA enforcement is not strict enough. I think that these revisions send a message that providers should understand the rule and be in compliance by now and OCR is going to be stricter with enforcement.”

The proposed HIPAA revisions came about through the Health Information Technology for Economic and Clinical Health Act, or HITECH, a part of the American Recovery and Reinvestment Act of 2009. If approved, the proposed rule would strengthen and expand enforcement of HIPAA pri-
vacy, security and enforcement rules to give individuals more rights to access their health information and restricting the disclosure of some of that information to certain third parties.

- require business associates of HIPAA-covered entities to follow most of the same rules as the entities.
- set new limits on how protected health information is used for marketing and fundraising.
- prohibit the sale of protected health information without patient authorization.

Fehn said PAs should be aware of some revisions to enforcement provisions. Under HITeCH, certain language in the HIPAA Privacy, Security and Enforcement Rules would be changed to make it clear that HHS is not required to try to resolve noncompliance cases of willful neglect by “informal means,” which Fehn defined as “an educational approach, where OCR would allow the entity to submit corrective action plans to bring the entity back into compliance.” In cases of willful neglect, OCR can decide to skip the step of resolving the situation informally and move directly charging the entity with a violation. Once charged, the group would still have the chance to address the HHS compliance concerns.

Fehn noted that the language changes would still allow HHS to resolve noncompliance issues informally, such as instances where the covered entity would not have known about a violation by exercising reasonable diligence, or in cases where the violation is due to reasonable cause.

“The gist of it seems to be that if a covered entity is making good faith efforts to comply, it is likely to be considered ‘reasonable cause’ rather than willful neglect,” said Fehn.

The Slow Road to Security
There is still uncertainty about how prepared health care organizations are to implement the new privacy and security requirements. According to a 2009 survey of 196 health care IT and security professionals by the not-for-profit Healthcare Information and Management Systems Society, health care organizations have made “relatively little change since the [2008 HIMSS survey] across a number of important areas of the security environment.” Reasons given for this included inadequate security budgets and lack of organizational plans for dealing with security threats. Nearly 75 percent of the respondents who performed risk assessments found that patient data at their organization was at risk.

The survey also found that while firewalls and user access controls are being used at most organizations, not all of them are using encryption methods when patient data is transmitted. And less than half of respondents indicated that stored data is encrypted.
HHS is offering assistance to providers in the implementation of privacy and security measures through Health IT Regional Extension Centers. In April, HHS in April announced a $267 million investment to establish 60 Health IT Regional Extension Centers, which will provide technical support services to at least 100,000 primary care providers within two years. The intent is to help providers become meaningful users of certified electronic health records, a requirement for providers who participate in the Medicare and Medicaid EHR incentive program outlined in ARRA.

On July 13, HHS, announced two final rules, one that defines the meaningful use objectives and includes measures to protect security and privacy. The other final rule identifies the technical capabilities required for EHR technology to be considered certified, and for information to be protected. For more on those rules, go to www.hhs.gov.

The Privacy and Access Debate

As PAs and other providers begin to weigh in on the proposed HIPAA privacy and security revisions, a number of questions arise with regard to privacy versus access. The Office of the National Coordinator for Health IT, which is charged with the development of a nationwide health IT infrastructure, has released a white paper related to these issues. The paper, Consumer Consent Options for Electronic Health Information Exchange: Policy Considerations and Analysis, is co-authored by Melissa M. Goldstein, an associate professor in the department of health policy at The George Washington University Medical Center.

Providers and patients are not necessarily at odds when it comes to the privacy of, and access to, health information, Goldstein said. “Providers are very interested in protecting and promoting the privacy interests of their patients. But many patients—though not all—are very concerned about the possibility of breach of their information. They want their data exchanged. They just want to make sure that the systems that are set up are cognizant of their privacy issues too. Both [groups] have the same concerns, and the challenge is figuring out how to integrate both concerns into a working system.”

One way patient information is currently protected is through consumer consent—patients authorizing various parties to have access to and/or share their health information. Goldstein’s white paper describes five existing models of patient consent, which are based upon five models developed by the 42-state-member Health Information Security and Privacy Collaboration:

- **No consent** Patient information is automatically included in an electronic exchange
- **Opt-out** Some pre-defined set of data (such as labs) is automatically included in the exchange, but patients are given the chance to opt-out in full.
- **Opt-out with exceptions** Same as opt-out, but patients can choose which data they want removed from the electronic exchange, or only allow certain providers or organizations to receive the information.
- **Opt-in** No patient data is included in an electronic exchange; patients must say they want their data shared. But patient information is either all in or all out.
- **Opt-in with restrictions** Same as opt-in except patients can choose which data they want shared and/or which providers they want to see their information.

From a privacy standpoint, the paper notes that “Electronic exchange systems that utilize the opt-in or opt-out choice models that allow for some level of granularity generally are considered more protective of patient choice and privacy than those that do not provide granularity of choice.”

But when the choice involves a patient deciding which providers can have access to their health information, could that have an impact on patient care? The paper acknowledges that, “from a provider perspective, coordination of care may be compromised by their inability to get ‘the full picture’ of a given patient.”

The paper later notes that providers are likely to favor an “opt-out” option of patient consent because it usually gives providers access to health information for a larger number of patients than opt-in models. Another concern is whether having additional patient information available to providers could cause them to be held to a higher standard when making care decisions. The paper notes that so far, the impact of electronic exchange of health information on providers’ medical malpractice liability can’t be determined.

The paper also examines the role that state privacy laws play in this discussion, noting that “states vary greatly in their requirements for [patient] consent and disclosure,” and that “the lack of uniformity is often viewed as one of the most complex challenges of implementing electronic exchange.”

The white paper notes that there is insufficient research to determine whether one model might be more effective than another.

“We don’t know a lot of details because there are no studies yet. The entities that are pursuing health information exchange are typically very new,” said Goldstein, adding that patient consent alone can’t bear the burden of protecting privacy and security of health information.

“We’re also talking about the structure that protects privacy—security methods like encryption; the ability of an ex-
change to only take the information it needs; the collection, paying attention to what you collect; paying attention to what you disclose,” Goldstein said. “We haven’t really developed those structures around health information exchange. There are movements toward it… but at this point, we’re relying a lot on patient consent to access and share their information.”

**The Patient Gatekeeper**

If patient data is often at risk, what should be done to develop those security methods? One school of thought is that security should be enforced by not only access controls, but also by encryption. In a paper titled “Patient Controlled Encryption: Ensuring Privacy of Electronic Health Records” co-author Kristin Lauter, PhD, of Microsoft Research proposes that patients should be allowed to generate their own decryption key and use that key to encrypt their records. According to the paper, PCE would allow the patient to selectively share records among health care providers using a hierarchical encryption system, which in theory would prevent unauthorized access to medical data.

Lauter explained that a practice would register with the EMR system, and the patient would then give access to the practices of their choosing.

“The way I would see the system being implemented is that all the doctors, nurses and PAs in that practice would be given access to the record. I don’t see any reason why a patient would differentiate between their individual health care providers within a particular practice. So what would happen is that the PA might have their own identity registered with the system, but the access would be delegated to all the providers at once, for a given practice. The patient basically says, “This is my doctor’s office; I want them to have access.””

“Maybe they go to another practice for a different reason, a specialty or something like that, and other different lab results were generated. So maybe they don’t want to automatically have those lab results also sent to their main doctor, or maybe they do. That’s something that they can decide.”

Lauter noted that, on the surface, the system would be very similar to EHR systems PAs and patients might be already using.

“It’s just that under the covers they would know that instead of all their information being stored in the clear and being available to the company who collects the records, all their information would be stored in an encrypted form, and that they really do control their own privacy.”

Lauter says the development of national privacy and security standards is a crucial step in the process of the country’s shift to an electronic health record system.

“If we just go full steam ahead and try to make this really easy for everybody to use, then we could end up in five years with a system where everybody’s records are compromised, essentially. Privacy is usually the last thing people want to think about ahead of time.”

**Area That IT Can Most Impact**

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<th>Area</th>
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<td>Improve Quality Outcomes</td>
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<td>Reducing Medical Errors</td>
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<td>Proving Competitive Advantage</td>
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<td>Enabling Practitioners to Obtain Data Remotely</td>
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*Source: Healthcare Information Management and Systems Society 2010 HIMSS Leadership Survey*
Malaria is a preventable and curable disease. Yet, 250 million malaria cases—and nearly a million deaths—occur annually, reports the World Health Organization. People living in the poorest nations are the most vulnerable to the disease, especially those in remote, rural areas prone to stock-outs of antimalarial drugs.

In rural Tanzania, health facilities are using mobile devices, text messages and electronic mapping software to increase access to essential medicines and save lives via a public-private partnership program called SMS for Life. Health care workers take advantage of this everyday technology to generate stock availability of artemisinin-based combination therapy drugs and quinine injectables. Stocks-outs in the country’s rural health facilities have greatly decreased since the pilot project began, according to a recent WHO report.

Programs like SMS for Life speak to the promise of mHealth—the use of mobile telecommunications and multimedia technologies in health care delivery—to revolutionize medicine and improve the quality of health care PAs and other clinicians provide to underserved populations domestically and globally.

“Cell phones with SMS texting make up over 2.4 billion users worldwide, mainly in countries where smartphones are not supported because of lack of infrastructure,” said PA Allan Platt, who teaches students about mHealth at Emory University School of Medicine.
of Medicine. “This can be the platform that bridges the digital divide with health applications operating on the SMS system. Vodafone and the United Nations Foundation have partnered to develop and distribute creative solutions, including free, open-source software for mobile devices that is lowering the barriers to access to vital health data, even in resource-poor environments.”

But in order for mHealth to transform the way in which health care is delivered, health research is conducted and health providers and patients are educated, experts say hardware and software developers and end users and everyone in between have to be on the same page when it comes to collaboration and capacity building—whether you are talking Paris, Texas or Kiribati.

“Capacity building is a very interesting term,” said Barbara Mittleman, MD, director of public-private partnerships for the National Institutes of Health. “What constitutes capacity depends a little bit on what you understand that to mean. That could be technical capacity; it could be service capacity; it could be human capacity or it could be analytical capacity; and that is not an all-inclusive list. One of the things that seem to travel underneath the whole capacity discussion is the notion of sustainability. You wouldn’t build capacity if you didn’t want the capacity to last and move into the future. All of these things exist not in isolation but rather in an ecosystem with one another.”

Mittleman moderated a panel discussion on the topic last year during the first-ever mHealth Summit, a public-private partnership of the Foundation for NIH. She challenged mHealth stakeholders and thought leaders to be responsive to one another because having the conversation isn’t enough.

“It’s what do we do to translate the conversation into new activities, into more synergy and to greater efficiencies, and ultimately into greater improvements in public health,” she added.

In the case of the health care industry, that may be easier said than done. While the industry is quick to embrace the latest in medical technologies, it has traditionally been slow to use information technology and services. One thing the stakeholders involved seem to agree on is the need for more research into what works and what doesn’t work in mHealth.

According to the Roll Back Malaria Partnership, or RBM, that is exactly what is happening in Tanzania. Launched in 1998 by the World Health Organization, UNICEF, the United Nations Development Programme and the World Bank, the RBM is an effort to provide a coordinated global response to the disease. When the SMS for Life pilot project began in three districts in the country in September 2009, 25 percent of all health facilities did not have any ACTs in stock. By the time it ended earlier this year, 95 percent of all health facilities in the districts had at least one ACT dosage form in stock. The number of people with access to malaria treatments rose to 888,000 from 264,000, which helped reduce the number of deaths related to the disease.

The partners who collaborated with RBM on the project are Novartis, Vodafone, IBM and the Tanzanian Ministry of Health and Social Welfare. Each partner brought something different to the table to create an efficient, effective, sustainable program that is improving health care delivery in the country.

Paul Davey, of Vodafone, the largest global mobile service provider, noted that the paradigm is shifting. “When we begin to work in partnership in the area of mobile health care, in order to build capacity, we have to get over the idea that mobile health care is actually very expensive,” he said, pointing out that SMS for Life costs less than $100 a month in service fees.

That is the total cost for the entire program that benefits nearly a million people.

“This is actually a very low-cost program,” Davey said. “In terms of sustainability, it’s very sustainable. It’s fundamentally being paid for by the Tanzanian government. It’s not aid funded or backed or supported by any charitable foundation as such. This is a straightforward commercial program. It’s a proper commercial proposition.”

Platt, the new editor of the Journal of Physician Assistant Education’s “Technology in Education” section, noted that the harbinger of things to come is seen in creative applications, such as Frontline SMS Medic, a simple SMS-based portable medical record system that works anywhere there is cell phone service. He said EMIT is another mobile data collection system that allows fieldworkers to fill in forms on their cell phones from any location. And transmit them to a database.

“SMS texting applications can bring culturally appropriate and literacy-appropriate health messages to underserved populations in a very cost-effective manner,” he said. “Cell service has penetrated all strata of our society, and health care providers should help generate health prevention messages. SMS texting and voice can be used to take histories, send vital signs, monitor disease and track progress. Many African countries, India and Mexico are sending out HIV/AIDS education and malaria prevention messages via SMS texts.”
Help with HIT and Health Literacy
AHRQ Releases Timely Toolkits

The Agency for Healthcare Research and Quality has a broad range of tools and resources for clinicians on a wide variety of topics, including health information technology, public health preparedness and quality and patient safety. This month we feature a few of them.

**Toolkit to evaluate health information technology**

AHRQ has developed tools to help health care organizations plan for, implement and evaluate health information technology. These tools describe and recommend strategies for addressing some of the common challenges organizations encounter when working with health IT systems. The site [http://healthit.ahrq.gov](http://healthit.ahrq.gov) has links to key topics on clinical decision support, computerized database registries, consumer health IT applications, electronic medical record systems, electronic prescribing, telehealth, health IT in small and rural communities and health information exchange.

With the large investments required for health IT projects, stakeholders are increasingly demanding to know what the actual value of these projects has been—or will be. Evaluations allow you to determine whether or not what you set out to do has been accomplished and to help you to understand what has worked in a given project and what has not. Evaluations must therefore be an integral part of any health IT project. The AHRQ National Resource Center developed a toolkit to help project teams think through the process of drawing up an evaluation plan of their project. The [Health IT evaluation Toolkit](http://healthit.ahrq.gov) is intended to help demystify the process of creating a plan to evaluate your health IT project.

Section I outlines a step-by-step process for a team to determine what goals of a given project are, what is important to their stakeholders, what needs to be measured to satisfy those stakeholders, what is truly feasible to measure and how to measure those items. Section II includes a list of measures that are often employed in health IT projects. Each of the provided tables shows possible measures, suggestions on data sources that can be leveraged for each measure, cost considerations, potential pitfalls and general notes. Section III contains some examples of a variety of implementation projects. The tool kit, quick reference guides and links to additional information can be found at [http://bit.ly/dpym2R](http://bit.ly/dpym2R).

**Toolkit to help address health literacy**

Health literacy is the ability to obtain, process and understand basic health information and services needed to make appropriate decisions. More than a third of patients have limited health literacy. Limited health literacy is associated with poor management of chronic diseases, poor ability to understand and adhere to medication regimes, increased hospitalizations and poor health outcomes.

Universal precautions are specific actions that minimize risk for everyone when it is unclear which patients may be affected. Health care workers take universal precautions when they minimize the risk of blood-borne disease by using gloves and proper disposal techniques. Health literacy universal precautions are needed because providers don’t always know which patients have limited health literacy. If you assume that everyone may have difficulty understanding, then you will create an environment where all patients can thrive. Research suggests that clear communication practices and removing literacy-related barriers will improve care for all patients, regardless of their level of health literacy.

This toolkit is designed to help adult and pediatric practices ensure that systems are in place to promote better understanding by all patients, not just those you think need extra assistance. It can be downloaded at [www.ahrq.gov/qual/literacy/](http://www.ahrq.gov/qual/literacy/). Additional resources related to the toolkit are located at [www.nchealthliteracy.org/toolkit/](http://www.nchealthliteracy.org/toolkit/).

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The Future of Twitter in Health Care

With its 140-character simplicity, Twitter is a tool that makes communication to the masses quick and easy. Some health systems are using it to communicate with patients and bring in new ones. But could (and should) it be used in health care for more than just its broadcast capability?

PA Professional asked Lee Aase, manager of syndication and social media at Mayo Clinic, for his perspective on whether Twitter can be used by PAs and other providers as another high-tech tool in the practice of medicine.

When and why did the Mayo Clinic join Twitter? What were some of the original goals in doing this, and how successful has this venture been so far?

Our first reason to start on Twitter was defensive: to keep someone else from claiming the Mayo Clinic name and impersonating Mayo. So at first, starting in April 2008, we were just automatically tweeting links to news releases, and weren’t really interacting.

In February 2009, we decided to get more personal and interactive in Twitter, and the results have been amazing. We now have more than 58,000 followers who get our updates. Building this platform enables us to apply Twitter creatively as we see opportunities arise.

How does Mayo currently use Twitter? Are there signs that this is improving access to and quality of care to Mayo patients?

We have used Twitter as a way to broaden and deepen the pool of questions coming in to our weekly syndicated radio program, Medical Edge Weekend. Instead of just getting calls from our local area, we get them literally from around the world. In one recent program, we had questions tweeted from North Carolina, Australia and Indonesia.

We’ve also done Twitter chats with USA Today reporters about articles in which our physicians are quoted as subject experts. This gives us a chance to discuss topics in more depth, beyond what can be in the pages of the newspaper.

We’ve had some interesting stories of readers/tweeters who have become patients at Mayo Clinic because of these efforts. After a Twitter chat with a Mayo doctor, one patient decided to visit the clinic to get a second opinion on her chronic wrist pain. According to a blog post by the patient, that conversation led to a new diagnosis and surgery that corrected the problem.

What are you hearing from providers about Mayo’s use of Twitter?

We have conducted some training classes on Twitter, and have several physicians and others who have become active, but we still have a long way to go. Physicians and others are supportive of Mayo using Twitter as an institution, even if they’re not personally involved. We look forward to providing more training and developing more creative applications for Twitter and other tools.

What is the future for Twitter at the Mayo Clinic?

I think the future of Twitter is bright, but whether it’s on Twitter or some other replacement platform five years from now, this kind of communication will continue to grow. The beauty of Twitter is that it enables many-to-many communications and serendipity. If you’re looking for an answer, you can just post your question even if you have no idea whom you should ask. But the answers seem to find you.

Social media observers noticed an increase in the number of hospitals using Twitter beginning in 2009. How do you see Twitter’s usage expanding in the next three to five years for health care systems?

Because of privacy concerns and HIPAA, providers can’t interact safely with patients about their individual cases. That’s the main limitation. For public health discussions or emergency communications or scores of other applications, though, it’s quite powerful. If the conversations aren’t about individual patients but are instead about general best practices among providers, for instance, that can be a powerful application. It may not be that Twitter itself will be the vehicle for such conversations but perhaps something with Twitter functionality that is intended only for medical professionals. I think we could see more of that kind of platform arising.

What is the key to maximizing the tool of Twitter in health care?

To get the most out of Twitter, you need to just dive in and understand how it works and what it can do. Then you’ll see ways it can help you do your work more efficiently and effectively.

Lee Aase is manager of syndication and social media at Mayo Clinic. His team’s focus is providing high-quality news resources for journalists and using social media to engage directly with patients and health care professionals. You can follow the Mayo Clinic on Twitter by tweeting @mayoclinic.