The Reimagined EHR: Improving the Physician Experience

athenahealth

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Executive Summary

Few aspects of the physician experience are as widely reviled as the electronic health record (EHR). What should be a useful technological advance is seen by most doctors as a necessary evil - a ubiquitous one following the 2009 signing of the HITECH (Health Information Technology for Economic and Clinical Health) Act.

By 2013, nearly 80% of all office-based physicians were using an EHR[1]; yet over two-thirds of doctors today would not recommend their EHR to a colleague.[2] More than half believe their EHR has a negative impact on costs, efficiency or productivity.[3]

Feedback like this has made it abundantly clear: today's EHRs are not helping health care providers do their job. Far too many physicians are stuck with clunky systems that force them to concentrate more on clicks than care. In September 2014, the American Medical Association called for a "major overhaul of EMR systems to make usability and high-quality patient care a higher priority."[4]

After gathering extensive input from more than 5,000 providers across 15 specialties and various practice sizes, athenahealth has reimagined the EHR as a tool that respects a physician's time, designed for meaningful communication rather than just data entry.

The physician enters information in a clean, intuitive way, and can access it more easily. The visually pleasing display resembles other common online experiences, so there's less need for "how-to" training. And the physician isn't bothered by tasks others can do - those are handled by staff and the health IT vendor.

All this translates into a more satisfying, more productive experience for both providers and patients.

The Reimagined EHR at a Glance

Smart delegation that keeps work out of the exam room.
Work is directed away from the exam room whenever possible, so the physician isn't burdened with tasks that don't make good use of his or her time.

A clear view of the patient throughout the encounter.
A continuous, succinct, well-organized view of information keeps the patient story front and center at all times, and makes it easy for physicians to locate the details they need.

Easier documentation that makes sense.
Physicians can document in a way that communicates the patient's story clearly and naturally – rather than follow a series of checkboxes intended for data input.

Accelerators that speed documentation.
Built-in shortcuts and search intelligence keep documentation work to a minimum, giving the physician more quality time with the patient.

At the core of this long-overdue change is the belief that an EHR should always be improving. Because the reimagined EHR lives "in the cloud" instead of on traditional software, developers can track the way it's used and adjust the workflow to benefit those that use it. Health care providers get an EHR that's never "completed" but, rather, one that gets continually better and smarter.

The Need for a Better EHR

At least eight out of 10 office-based physicians in the U.S. are using an EHR today – not even the smartphone has a higher rate of adoption.[5] Yet, most physicians feel the EHR doesn't help them practice medicine. Many feel it even takes away from their ability to deliver quality care.

In a 2015 survey of more than 600 medical practices, 69% of respondents said they would not recommend their current EHR to a colleague.[6] If a car manufacturer received customer ratings that poor, they would be out of business fairly fast. (And cars are cheap compared to traditional EHRs.)

The problem: Most EHRs have focused on record-keeping—usually for compliance purposes—rather than assisting providers and, in turn, their patients. Until EHRs become more than just data entry vehicles, the industry won't make significant progress improving the efficiency and effectiveness of health care delivery.
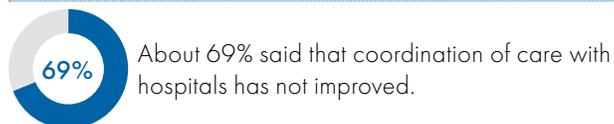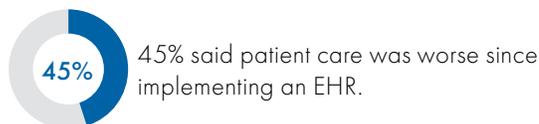
Frustration and dissatisfaction are epidemic

The unfortunate truth is that most EHRs have made physicians' lives worse. Although various studies have shown that some EHR best practices can help improve communication among care teams[7] and cut costs[8], physician response has been consistently negative when related to the ways an EHR affects a medical practice.

A survey of almost 1,000 physicians shed a light on EHRs' negative impact[9]:

Financial effect of EHRs

65% — 65% of physicians said their EHR systems resulted in financial losses for their practice.

50% — Nearly 50% believed EHRs cost too much to implement.

Clinical effect of EHRs

45% — 45% said patient care was worse since implementing an EHR.

69% — About 69% said that coordination of care with hospitals has not improved.

Even using the EHR each day is a negative experience for physicians: 67% of those surveyed dislike the functionality of their EHR system - and more than one-third doubt their EHR will be viable in five years.

The Doctor Might Not See You Now

Several observational studies have looked at eye contact as a measure of physician attentiveness and interaction with patients. Other studies have surveyed physicians about face-to-face time with patients. The results all point to one conclusion: Using an EHR has been getting in the way.

Study 1

Physicians spent, on average, **33% of the exam looking at their EHR.**
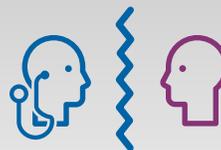
The patient's gaze was **unknown 25% of the time.**[12]

Study 2

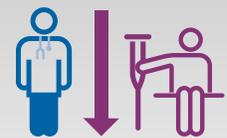The doctor spent nearly **40% of the appointment** looking at the EHR.

32% of the total time in the exam room was **spent in silence.**[13]

Study 3

70% of physicians say their EHR **cuts down on face time** with patients.

26% say it decreases their **ability to manage treatment.**[14]

It gets worse. Poorly designed EHRs are jeopardizing more than financial stability and the delivery of care – they may be negatively affecting physicians' health. One study that looked at physician stress found that primary care providers with the highest number of electronic medical record functions also had the highest amount of stress.[10]

When you consider that the federal government has spent $28.1 billion in health IT incentive payments,[11] this is an industry failure of tragic proportions.

The documentation burden: Curse of the data glut

Physicians have told us there was a certain genius and efficiency in the notes they used to write on 3x5-inch index cards. The process wasn't perfect, but it led to concise, useful patient summaries. What replaced it—electronic medical records—now resembles a "random collection of information and numbers more than anything readable or coherent."[15]

Telling a patient's story in a clear, purposeful manner, the very essence of the index card, has been given short shrift in favor of gathering enormous volumes of structured data for regulatory compliance.

This misguided approach has put an excessive burden on the physician to enter data, click around screens, and scroll for information. An improved EHR experience must remove this from the process - and get back to the art of the summary.

4 Symptoms of a Failing EHR

1. Excessive data entry. With practices facing heightened accountability to reduce costs, improve quality, and deliver a better patient experience, the reimagined EHR needs to focus on capturing what is relevant—and necessary—for each patient.

2. Sloppy workflow. Improved methods of data entry don't help much if the physician is still saddled with entering that data. A thoughtful workflow places as many tasks as possible outside the exam room, to be handled by other clinical staff. Tasks inside the exam room should be those only a physician can do.

3. Clunky to use. An EHR should deliver a clear, continuous view of the patient that eliminates unnecessary scrolling and clicking. The patient story should always be front and center, not lost within the encounter.

4. Slow to respond. A static EHR simply can't respond well to change - and can't serve the needs of medical groups. Today's EHR must be able to evolve right along with the evolving health care landscape, and should include experts who can track physician needs and update workflows on short notice.

A physician-inspired evolution: The 4 cornerstones of an improved EHR experience

Reimagining the EHR at athenahealth has been about learning from physicians, as much and as often as possible. With our unique ability to track every keyboard click and action across our network of providers, we can continuously develop, evaluate, and improve.

This method of iteration has always been part of our EHR, and resulted in top usability rankings from KLAS in 2013 and 2014.[16] But we still understood that the EHR needed a radical transformation to truly serve physicians' needs, to be so useful that health care providers would think differently about the role an EHR could play.

The development process

athenahealth clinical and user experience teams worked in close partnership with providers—in stark contrast, many EHRs have been developed without significant physician input. We gathered feedback from more than 5,000 providers across 15 specialties, from practices of all sizes, through user surveys and testing.

Our teams also met with providers to understand their unmet needs, and what they wished for—or hated—in an EHR environment. Some were athenahealth clients, many were not. We met with physicians who refused to adopt an EHR (some had very novel paper workflows) and tried to understand their reluctance.

Testing and learning... and testing and learning

At every phase of development, we tested the new EHR with hundreds of trial users, and then tweaked and modified and retested. With the kind of immediate insight you can only get with a cloud-based platform, we can actually track how providers are using the EHR. When physicians say a task is taking longer than usual, we can measure the time. When they say the ordering workflow is better, we can see if they're placing orders more efficiently. This level of visibility is impossible with a closed software system.

Testing and learning alongside our clients—shoulder-to-shoulder on the same single instance of software—is fundamental to our services. And it was the key to developing an EHR that could improve the physician experience. Here's what we focused on to make that happen.

1. Smart delegation that keeps work out of the exam room

This is a fundamental need for a medical practice and a long-standing principle of the athenahealth EHR: Remove work from the doctor whenever possible and delegate it elsewhere.

First, we identify work that athenahealth teams can take on for providers, to move tasks not just out of the exam room, but out of the practice (this has always been an essential component of athenahealth services). Next, we determine which tasks patients can do – reviewing and updating their health information before a visit is a perfect example. Then, we move clinical in-office tasks to nurse practitioners, medical assistants, and other staff. The physician should only be doing work that only a physician can.

This approach offers distinct advantages for meeting quality measures. The athenahealth Quality Management Engine℠ surfaces relevant clinical measures where each can be met and recorded with the greatest ease and the least disruption, by the most appropriate staff member. For example, an orange visual alert (below) reminds clinical staff to record a patient's medications during intake – this satisfies a core Meaningful Use measure before the patient even walks into the exam room.

In another example, the physician doesn't have to manage all orders, and can permit nurses to request common orders throughout the workflow; the physician then easily signs off on orders at the exam's end.

Intake: An example of work delegated outside the exam room

Visual alerts remind clinical staff to record quality measures

2. A clear view of the patient throughout the encounter

Another core concept behind the reimagined EHR is that dense patient information gets boiled down to an essential narrative for the physician. During the exam, the patient's story follows a sequential nature, with a clear, chronological view that delivers an immediate snapshot to the physician and eliminates the need to search for last visit's information or today's vitals. Some workflow details:

- A newly designed patient facesheet (below) provides a concise summary, highlighting the most critical patient information. Through our research and testing, we believe this is the quickest way to brief providers effectively before the encounter. Providers always have access to details without having to wade through bundles of information. They can even add personal details about a patient that display near the patient's name, to help ease initial conversation in the exam room and inspire a closer physician-patient relationship.

An improved facesheet: the story of the patient at a glance

- A basic three-part layout displays during the exam. The provider documents the encounter in the middle – a literal center of information. The patient's chart and recent activity is always accessible on the left, via simple navigation. And tucked in on the right is the ordering "shopping cart," which compiles orders throughout the encounter, similarly to a retail website's cart.

Exam: A simple, sequential layout of information, from left to right: past, present, future

- Problem-based flowsheets illustrate the patient's evolving story in either a table or graph. This quickly shows a patient's status over time in a natural, yet structured way. The flowsheet includes any associated meds, vitals, and lab results, and providers can simply drag and drop other relevant meds or results to add them.

Problem-based flowsheets quickly tell the story over time
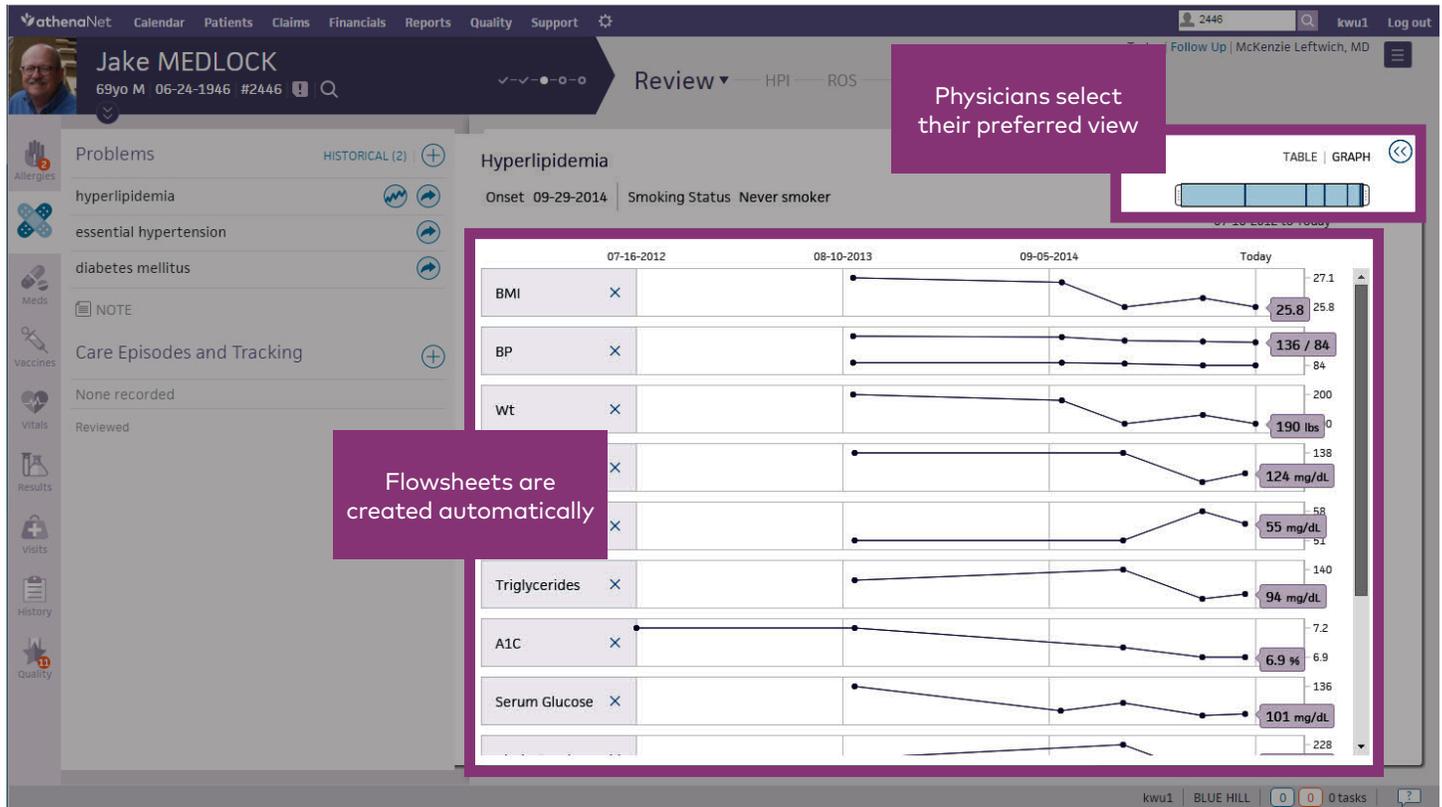
3. Easier documentation that makes sense

For too long, EHR documentation has been a means to fulfill regulatory needs, via scrolling pages and checkboxes. In the improved EHR experience, documentation is treated as a way for physicians to communicate clearly to themselves, other providers, and patients.

There are critical sections of the exam—History of Present Illness and Assessment and Plan, for example—in which telling a clear, concise, sensible story has enormous value. When patient information is plainly conveyed, as with the old index cards, it's instantly understandable to all providers across the continuum, as well as the patient.

To tell that story in those essential areas, physicians are encouraged to enter free text, by either typing or using a speech-to-text tool. Templates are still supported if that's preferred; but the reimagined EHR emphasizes free text as the best way to produce a simple, clear narrative, and the EHR makes it easy to enter.

4. Accelerators that speed documentation

To make documentation as rapid as possible, the EHR workflow includes a number of accelerators, intelligent shortcuts designed to:

• optimize efficiency

• save time by eliminating unnecessary, repetitive typing

• help the physician focus on the patient instead of the screen

Here's how accelerators work: As a particular problem is documented, the EHR offers a series of options that the physician is most likely to enter next. Instead of typing, the physician simply selects an option.

For instance, when the physician enters a diagnosis, the EHR automatically recommends the common orders and medications associated with that diagnosis (shown below), available for the physician without typing. These options have been "learned" based on the previous behavior of the physician, the practice, and providers across the athenahealth network, as well as the patient's history.

Another key accelerator is the presence of Epocrates drug monographs embedded directly inside the EHR workflow – a benefit that no other EHR offers. This alleviates the need to stop and hunt for dosing information while with a patient.

Clicking the + displays assessment and plan options before the physician begins typing
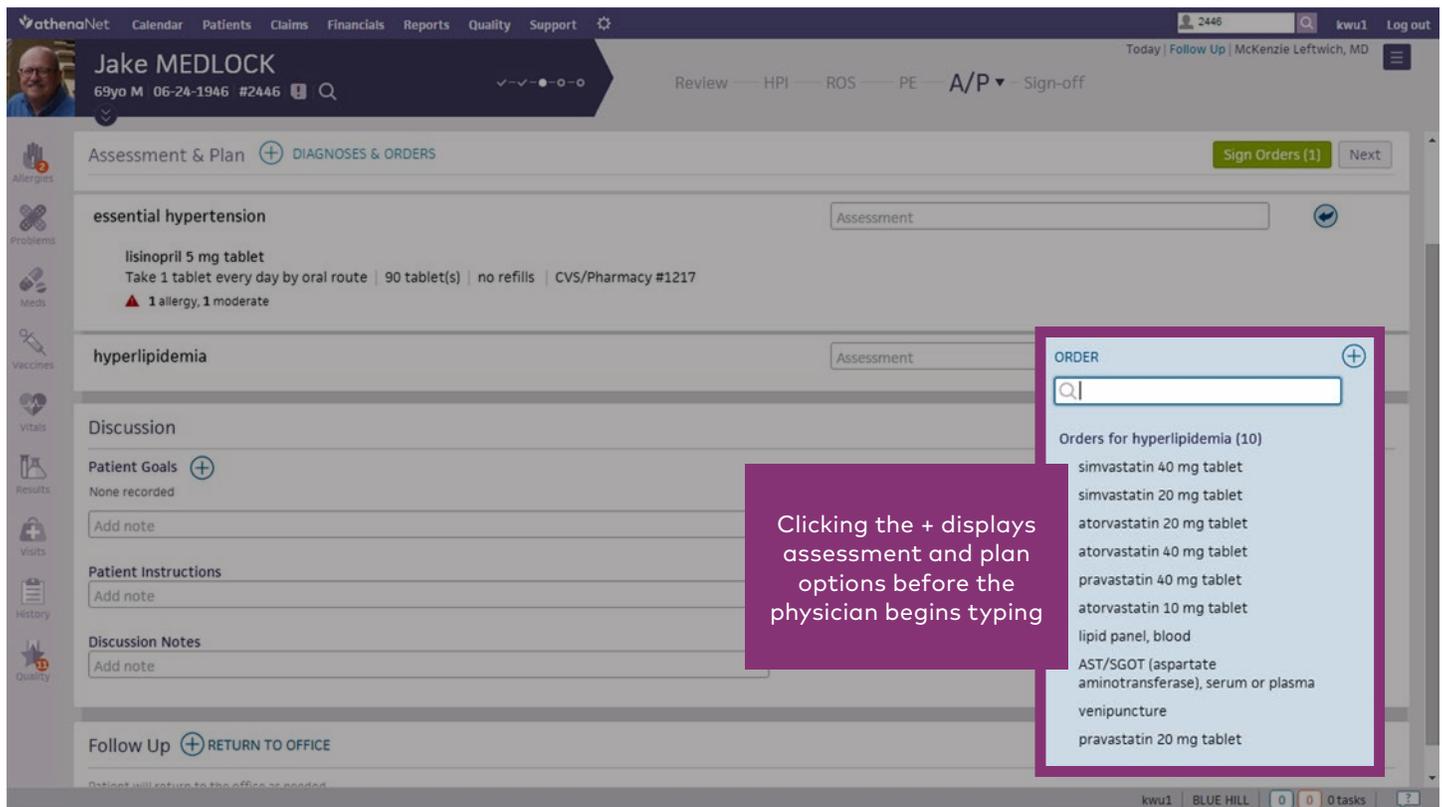
Initial Results

**Documenting patient visits:** As of mid-September, 315 health care providers had been using the redesigned EHR. Within the first week, they completed documentation during the patient visit 78% of the time, on average, and steadily improved in the months to come. By week 16, documentation was completed 84% of the time during the visit.

Closing encounters: As seen in Figure 1, providers also steadily improved how often they closed encounters the same day as the patient visit – meaning more completed work by day's end, and fewer encounters to reopen the next morning.

After four weeks of using the EHR, the average rate of same-day closed encounters was 71%. By the twelfth week, the rate had risen into the 80% range. The increase continued: For all weeks following the four-month mark, at least 85% of encounters were closed the day of service. This success illustrates an ease and fluidity to the workflow that enables providers to complete work in a timely manner.

Figure 1. Providers steadily improve their ability to close encounters the same day as the patient visit.

Same-Day Encounter Close Rate

# of Weeks Using the EHR
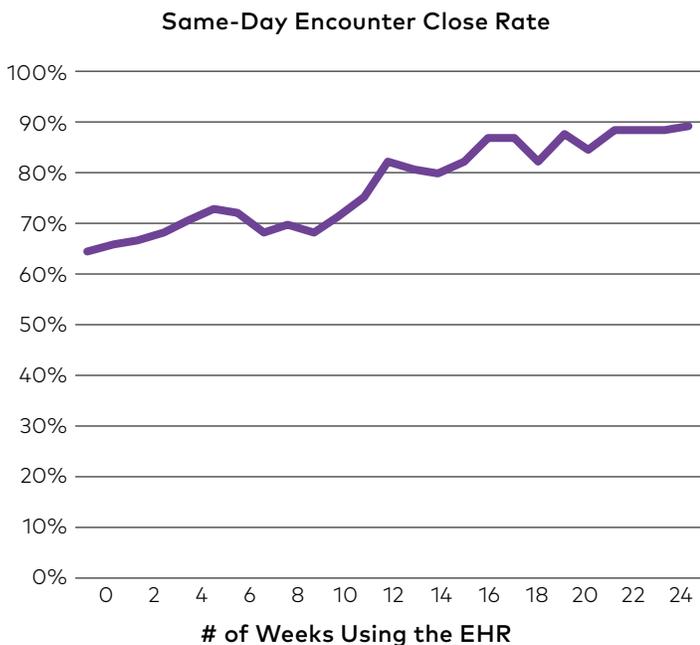
Including orders and a diagnosis: Another sign of efficient documentation is how often providers attach orders and enter a diagnosis during the encounter, rather than after.

The rate of attached orders surpassed 80% from the second week of use, and stayed steady at 90% or better by week 13. The rate of entered diagnoses reached 98% within the first week, and stayed there (or better) every week that followed.

An intuitive user experience – designed to keep on improving

From banking to travel to grocery shopping, we are already familiar with how digital tools work, and how they can improve our day. In fact, the average person spends over 30 hours a month accessing about 27 different apps on their smartphones.[17]

With that in mind, athenahealth designed the EHR to be as intuitive as the best consumer applications, to be as easy to use as any well-designed app or website. That way, any provider can easily discover and understand features, and start using the system right away.

Take ordering, for example. As described earlier, clinical staff and providers can order as they go, whenever it's most convenient or appropriate to the encounter. Orders accumulate in an online "shopping cart," with a single place to "check out,"where a physician can sign off on the orders. This intuitive approach mimics the way "ordering" occurs just about everywhere else in our online lives.

If this process doesn't flow well for physicians, athenahealth teams will know about it. And they'll work to update it. That's because the reimagined EHR lives on a cloud-based platform (like all athenahealth services), far easier to modify than installed software. Developers identify when a majority of providers are having difficulty at a point in the workflow, and then make changes to address that problem. This flexibility is perhaps the most valuable attribute of cloud technology, and a necessity for an EHR to continually respond to industry changes and physician needs.

Looking beyond the interface, working behind the scenes

There's a critical component of the reimagined EHR that goes beyond the user experience: the people behind the EHR, experts in clinical care workflows and quality programs, who take on work for providers every day:

- Executing tasks that can be managed more efficiently at scale, including receiving and managing clinical documents

- Tracking clients' performance and use, and making adjustments based on top performers and best practices

- Maintaining the Quality Management Engine, a continuously updated database that embeds quality measures where each can be met with minimal effort – essential in the transition to value-based reimbursement

Industry requirements change far too often for a static EHR. By thinking of the EHR as an evolving, responsive service, an important shift can take place – one where the EHR is no longer a source of frustration but delivers relevant, purposeful information in a way that satisfies its users.

This is the reimagined EHR, and it's poised to improve the health care experience for doctors and patients like no EHR has before.

The athenahealth difference

The reimagined EHR is designed to make the process of using an EHR exceptionally easier and beneficial to delivering care. But the right EHR must be supported by the right partner. One that helps medical practices tackle the complexity of new reimbursement structures while wicking away the work that can weigh down a practice's operation. For more than 67,000 providers, this is where the cloud-based services of athenahealth come in, with a proven combination of software, knowledge, and services:

- **Software –** Our cloud-based software is continuously updated, giving you actionable insight at the point of care. Clinical guidelines and quality measures surface where they're easiest to satisfy and least obtrusive, outside of the exam room as much as possible.

- **Knowledge –** The athenahealth Clinical Intelligence team stays on top of program measures and continuously updates our Quality Management Engine, which embeds Meaningful Use, PQRS and other program measures into the most optimal point of the workflow. Providers stay up-to-date on clinical measures and reporting requirements, while staying focused on patients.

- **Services –** Our back-office teams remove administrative work from practices so they can spend time on higher-value tasks. We manage and digitally route incoming clinical paperwork, answer patient calls after hours, track and coach practice performance, and more. For complex challenges like PQRS, our experts help providers select measures they're most likely to succeed with, adjust the selection if performance is lagging, and report the data on their behalf.

Find out more at 866.817.5738 or athenahealth.com.

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Notes

athenahealth

A leading provider of cloud-based services for medical groups and health systems. Our mission is to be the most trusted service to health care providers, helping them do well by doing the right thing.