Executive Summary

Are you wondering why there’s so much buzz around cloud computing? Do you know what it means to have cloud-based services working for your practice or health system? Cloud computing is more than just a passing technology trend. It’s the current and future means for conducting business around the world, from financial services to retail to health care. But what does it mean to be “in the cloud”? And how do benefits increase when services—not just software—are provided through the cloud?

This paper explains:

- How “cloud-based services” harness software, knowledge and work to achieve proven results for medical providers
- How a safe, secure, and easy-to-access cloud model can help your health care organization thrive
- How the evolution of health IT, from software to cloud-based services, will ultimately improve health care
- Why the cloud can be the most secure model available in health care because it will scale for the highest level of security protocols

Cloud-based services go far beyond delivering software. They offer a solution that’s more flexible, scalable and available. And the combination of software, knowledge and work drives improved results for all providers and all organizations on the network.

Cloud-based services represent the highest level in the evolution of health care IT. It’s time to get on the cloud or be left behind.
Cloud-based services: The future of health care IT

In recent years and with growing speed, “the cloud” has stormed the technology world. Its use and inherent values have affected a wide array of industries, as well as the average consumer using the Internet at home. People with Apple or Amazon accounts are already participating in cloud computing at a rapidly growing rate.

And yet awareness and understanding of the cloud still varies widely within health care.

A physician’s exposure may be limited to television ads touting the benefits of archiving photographs and other content online. A hospital CIO, by contrast, is more likely to have direct familiarity with cloud computing, as it has been promoted as a cost-effective technology to replace aging legacy systems. As a recent article in the Harvard Business Review reported, “Over time the economics of building and running a technology infrastructure will favor the cloud over on-premise computing.”

Why is the world moving rapidly to cloud computing? And what exactly does “cloud computing” mean?

In short, cloud computing refers to working with content that’s available at a shared online location, rather than a personal disk drive or server. All software and information is stored exclusively on an online network (and referred to as “in the cloud”) with the Internet as the point of access for all users.

As an example, here’s how the cloud stores photographs: First, a user uploads digital pictures to a secure website instead of a local hard drive. Then, that person’s circle of friends or co-workers can view those photos by connecting to that website. Sharing can take place among many people simultaneously, all accessing the same destination or URL in the cloud.

What makes cloud computing different from software and other IT approaches? And why is it important to get on the cloud now?

Unlike conventional solutions, such as installed software, cloud computing is uniquely defined by these characteristics:

- **On-demand self-service:** Any resources, from vital business functions to basic email, are available to all users at practically any time
- **Agility:** Upgrades can be made and applied across the network on one instance of software
- **Broad network access:** Availability ensured, as access is location independent—users can access services from any standardized device, like a PC or tablet, no matter their locations
- **Resource pooling:** Many can use the network at one time, accessing the same tools and functions
- **Rapid elasticity:** Compared to a traditional computing infrastructure, a cloud-based network can easily accommodate, and respond to, a rapid increase in the number of users as well as spikes in demand
- **Measured Service:** A provider of cloud services measures service in the same way an energy utility measures the amount of power it provides and makes the necessary adjustments

The federal government has even recognized and promoted the benefits of cloud computing, announcing in early 2011 a preferential “Cloud First” policy as well as a Federal Cloud Computing Strategy.

“This policy is intended to accelerate the pace at which the government will realize the value of cloud computing by requiring agencies to evaluate safe, secure cloud computing options before making any new investments,” writes Vivek Kundra, former chief information officer for the federal government. “Cloud computing will enable a fundamental shift in how we serve the American people,” Kundra continues. “Citizens able to access their health records electronically will be able to easily share them with doctors and providers and thus improve their healthcare.”

Now, we can add one more promising aspect of the cloud: enormous growth. Across industries, global revenue from IT cloud services is expected to reach $72.9 billion in 2015, up from $21.5 billion in 2010—“with spending for public cloud-based IT services growing at more than four times the rate of the worldwide IT market as whole.”

This ever-expanding adoption of the cloud suggests that business decision-makers view the cloud’s offerings as important improvements to their operation.

Despite the cloud’s widespread growth and potential, the health IT world has been relatively late—and comparatively slow—to adopt its use. But that’s changing and the change is coming from within the industry. In a November 13, 2011, New York Times opinion piece, an oncologist and college professor called for an electronic means to reduce massive waste in health care and eliminate paper-based administration, in the way “[b]anks, FedEx and scores of other businesses” have already done.

You may be familiar with some of the health care services currently in the cloud:

- **RxHub,** using a cloud-based network to transfer prescription-specific data
- **Patient portals,** or websites that deliver services and information to patients, provided by practices or pharmacies (e.g., CVS Caremark)
- **Government-sponsored efforts such as online HIEs and NHIN Direct**

To realize exactly how cloud computing makes a difference for these and other services, it helps to know how the health IT world got to this point.
The evolution of health IT, from software to the cloud

With each stage of health IT development—and technology, in general—two points of consistent progress emerge: information becomes more readily available to participants and costs go down.

With the massive amount of data involved in HIT and the traditionally high up-front costs in implementing an IT solution, each subsequent rung on the “evolutionary” ladder has been a plus for medical practices and businesses. As models have evolved, upfront costs go down and connections to outcomes and performance visibility increase (see Figure 1).

Figure 1. The evolution of health IT from software to the cloud-based service

Software

The word “software” may conjure up images of plastic-wrapped boxes containing CDs that require installation onto a computer or server. For years, health IT vendors have offered a wide array of such software solutions, sometimes custom-built, used by practices to enter and manage patient information and handle administrative tasks.

This has proven to have limitations—and financial pain points. Software is usually associated with high upfront costs needed to get the infrastructure up and running. And when that infrastructure needs updating, new installations are required for upgrades or patches.

Most notable, software can’t offer its users or the vendor any insight into success or progress; a practice’s accumulated data exists only within the silo that is their particular office, and is visible only to them, if at all. The relationship between provider and vendor may very well end with the sale.

Application Service Provider (ASP)

With an ASP, the software delivers the same benefits but lives on the vendor’s system rather than the customer’s. This advance on the evolutionary scale can reduce a practice’s initial expenditures, however operating costs can rise: the responsibility for maintaining security, updates and technical support rests squarely with the ASP provider.

The need for ASPs arose as a response to small or medium-sized businesses whose budgets couldn’t afford expensive software. But while ASPs may deliver lower start-up costs for smaller medical practices, they still lack the value of a shared network or any visibility into a practice’s performance, growth opportunity and pertinent benchmarks.
Software as a Service (SaaS)

At this stage of information evolution, software and data finally move to the cloud. With the SaaS model, all clients access the latest, most updated software, which exists as a single instance online. There’s no need for the practice to exert any technical effort or perform any maintenance—all work is done by the provider and is stored in the cloud.

For the health care industry, this model provides marked advantages over its predecessors. Consider vital information services, like nationwide billing requirements or Pay-for-Performance rules. With SaaS, all details can be updated on a single network, available to all that access that network. It’s an ideal example of the technology evolution yielding increasingly greater information visibility.

As such, this model can easily support a nationwide provider database for health care needs like orders, referrals, and globally deployed vocabularies and templates. It can also act as a single communications connection to multifarious payers, clearinghouses, hospitals, and pharmacies. And, in terms of costs, SaaS providers tend to charge a monthly fee rather than requiring the upfront investment seen in the earlier software and ASP models.

But for all the advantages of a SaaS solution, there’s a major shortcoming: The vendor has no particular investment in the practice’s results. No services are provided beyond the software and there’s no staff behind the scenes taking over client work, monitoring regulatory change or providing additional value to the customer. That all changes at the highest point in this technological evolution—cloud-based services.

The benefits of cloud-based services for health care

With each instance of progress detailed above, IT delivers software that’s more flexible, scalable and available, with lower and lower upfront costs. Clearly, these are big plusses.

A cloud-based service goes even further. It extends and amplifies those baseline benefits by injecting continually evolving knowledge and back-office services into the cloud, where they drive improved results for everyone on the network.

This three-pronged approach to health IT—software, knowledge and work—is the hallmark of a cloud-based service. Together they constitute a powerful combination of elements that define the most sophisticated level of IT evolution.

Cloud-based Software

Software is the core of any cloud-based health IT network. The right software provides an easy-to-use framework with which to manage your practice’s workflows, from scheduling to the patient encounter to billing and order management. And since all of the network’s participants (in this case, medical practices) use the same instance of software for the same purposes, you have opportunities to gauge and benchmark your performance against that of similar practices. With that level of knowledge, you can easily monitor your revenue, efficiency and ultimately, your improvements.

Figure 2. Services from the cloud deliver an effective three-pronged approach

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Software</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Monitors, fixes broken claims</td>
<td>• Intuitive, easy-to-use</td>
<td>• Eligibility checking</td>
</tr>
<tr>
<td>• Creates new rules for everyone on the network</td>
<td>• Performance benchmarking</td>
<td>• Claim submission / follow-up</td>
</tr>
<tr>
<td>• Formulary checking</td>
<td>• Fast implementation</td>
<td>• Denial &amp; results handling</td>
</tr>
<tr>
<td></td>
<td>• Real-time updates</td>
<td>• Document management</td>
</tr>
<tr>
<td></td>
<td>• Complete PMS, EMR &amp; Patient Communications Functions</td>
<td>• Reminder calls</td>
</tr>
<tr>
<td></td>
<td>• Web-native, On-demand</td>
<td>• Build and maintain free lab &amp; Rx interfaces</td>
</tr>
<tr>
<td></td>
<td>• Guaranteed availability</td>
<td>• Performance coaching</td>
</tr>
</tbody>
</table>
Since the software only exists in the cloud, the vendor can make regular updates to the network instantly available to all clients. With cloud-based software, there’s no waiting around for new disks or downloads, no costly upgrades or labor-intensive changes. All updates are simply waiting for you the next time you access the network.

Networked Knowledge

What if a cloud-based network’s software was infused with continually updated intelligence? A vendor could then deliver a smarter system to its customers, every day. In the universe of health IT, that additional knowledge could mean your practice can keep up with the ever-changing set of payer and government standards, all without lifting a finger. Fresh information is embedded directly into the software and appears automatically as part of your electronic workflow.

New ANSI 5010 payer codes. Meaningful Use and Pay-for-Performance program requirements. Updated clinical guidelines and protocols. A cloud-based service can embed updates into your various workflows where they are easy for staff to capture or act on. This saves you and your staff precious time revising paperwork and researching updates; you can spend your workday—and save money—by concentrating on patient care and running your practice more smoothly.

For instance, this kind of intelligence can deliver instant access to drug interaction or allergy alerts, which “pop up” during a patient encounter; it can lead to easier capture and more accurate reporting of Meaningful Use measures; and it can get you paid more and faster, aligning your practice with new payer standards, or adding reasons for claim denials into the system, thus allowing all other practices in the network to avoid those denials in the future.

And the more participants there are on the network, the smarter the entire system gets. Each practice’s experience contributes to an aggregate level of knowledge, as illustrated in the denial example above. To go one step further, a cloud-based service pairs that experience with world-class expertise that informs the network and, in turn, all of the practices on it.

Consider a busy solo practitioner in a rural setting, or in a bustling metropolitan health system for that matter. This doctor may never acquire the knowledge needed to ensure she receives all incentive payments from available programs—in fact, the doctor may not even know which ones exist. But due to size and scale, what’s often referred to as “comparative advantage,” a cloud-based service can employ highly knowledgeable experts, including health care professionals, to advocate for client practices and share learning with all providers on the network.

Security in the Cloud

While cloud-based services offer you increased visibility, flexibility, and do work on your behalf, security is still the most important aspect of any health information technology solution. It’s a given that health information must be kept confidential, as required under HIPAA and HITECH regulations. Dependable HIT security combines confidentiality, integrity, and availability.

Although some medical professionals may be reluctant to have information “out there” on the cloud, it’s safe to say that cloud-based services offer distinct advantages in providing security:

- The ability to back up data at a secure location that’s geographically separate from the primary location.
- The ability to apply a uniform, high level of security, privacy controls, and resources that can continually improve over time. By scaling security and controls over an entire network, individual practices and health systems benefit from a level of investment that they’d be unable to leverage on their own.
- A single, integrated database platform that makes information available without the risks inherent in cobbling together multiple information platforms.

Perhaps most important, a cloud-based network can offer a level of constant monitoring that’s simply impossible with paper-based and client-server software models. Paper files can get lost or misplaced and there’s little ability to determine exactly who has touched (or even altered) a record.

Recognizing the immense value in HIT security, cloud-based service providers learn and share best security practices with industry organizations like the Cloud Security Alliance, which are in the process of adding a health care group to its existing business groups. And the security-focused health care organization HITRUST is expanding its scope to include work done in the cloud.

This persistent dedication to optimal security and the attention paid to it over the cloud ensures peace of mind for users.
Back-Office Services

The final piece of the three-pronged approach to cloud-based service offerings can be a revelation to practice managers and office staff. It’s the provision of expanded back-office services, eliminating administrative duties that devour time and prevent you and your staff from focusing on practice growth, strategy and other value-add efforts.

Our data show that the average provider needs to process hundreds of documents each month. A cloudbased service provider can take over these tasks, tracking every claim, managing any denials, posting your EOBs and payments. A cloud-based service can receive and classify every one of your faxes. Any document your practice needs to see, from a faxed lab result to a claim that needs review, is placed in your cloud-based “inbox,” always routed to the right staff member.

A cloud-based service provider does all that for you and more, with the goal of improving your practice’s efficiency and financial health, and providing you with clear metrics so you can track your performance and make strategic decisions for your future.

Choosing the right Cloud-based service

When selecting a cloud-based service, it helps to keep this in mind: A cloud-based service is not just a product. It’s a service provided by and continually supported by people. To begin, make sure your service satisfies the primary advantages of any cloud-based offerings:

1. **Low upfront cost**—Since there’s no hardware to purchase, beyond a laptop that can access the Internet, there is little to no upfront investment required.

2. **Optimal mobility**—You should be able to access your information anytime, from anywhere.

3. **Integrated services**—For health care providers, this means any and all functions—practice management, EHR, patient communications and care coordination—operate smoothly from the same platform.

As you move beyond these initial requirements, you should look for a cloud-based service that will identify the array of problems a practice experiences and tackle them with up-to-date knowledge and tireless backoffice work.

Your cloud-based service for practice management, EHR, and care coordination should...

- Track, monitor, and fix broken claims
- Create and push out new database “rules” that automatically benefit every practice
- Keep your software updated and prepare your practice for ANSI 5010 and ICD-10 changes
- Identify Pay-for-Performance incentive opportunities and make it easy for you to capture program measures
- Provide formulary checking
- Alert the provider to potential drug interactions—in real-time, during the patient encounter
- Deploy appointment reminders and offer health information via patient portals
- Employ a document service team to process and manage faxes and paperwork in the cloud

Perhaps most important, the right cloud-based service should act as a partner, not just a vendor. You’ll want an organization that provides an account manager to help monitor your practice’s performance, serve up benchmark comparisons to similar practices on the network, and provide valuable insight and coaching. A partner will share your risk, be rewarded for improving your financial performance and be invested in your ultimate success.

Put it all together, and the right cloud-based service will make the most of its easily accessible data and expertise and make it work for you with improved collections, reduced days in accounts receivable, more efficiency, and alleviation of your sharpest administrative pain points.

The athenahealth difference

As use of the cloud quickly expands, athenahealth is well positioned to deliver unparalleled cloud-based services for practice management, EHR, and care coordination. Our services will get you paid more and faster, give you more control over patient care, and help you realize long-term financial health. In short, we get doctors paid for doing what you do best—delivering patient care. Since we feel that a collaborative partnership is the best way to achieve that, we don’t get paid unless you get paid.
Our robust approach to delivering software, knowledge and work through the cloud has led to measurable successes for our 32,000 providers. On average, practices on the athenahealth network enjoy:

- 12% increase in collections
- 35% decrease in days in accounts receivable (DAR)
- 3.8% increase in patient visits
- 16% fewer no shows
- A 98% physician adoption rate of our EHR

Our integrated cloud-based services are designed to help your practice succeed. In addition to our practice management, EHR and patient communication services, we’ve recently added a care coordination service, athenaCoordinator. This new offering enables efficient care coordination that benefits everyone in the health care supply chain: hospitals, providers, surgical centers, imaging centers, and more.

Putting the power of the cloud to work for practices

athenahealth’s approach not only benefits providers. We also drive improvement in the processes around clinical care, as in the case of Meaningful Use, as well as in health care billing and practice management. The power of the cloud can be tapped to reveal inefficiencies and breakdowns in the system to drive down costs. This allows payers and providers to improve the way they work together and focus on the overall improvement of patient care and health care.

Driving unparalleled year one success with Meaningful Use

Our teams dedicated to the Meaningful Use program have been indispensable in doctors’ pursuit of satisfying measures and getting paid for their efforts. As of December 31, 2011, 81% of our providers had successfully attested, compared to the national average of 9%. As of February, 2012 almost 85% of our providers have attested.

At one point, physicians taking part in the incentive program had been hampered by the requirement to provide patients with a printed clinical summary after each office visit. But because we can track every provider across every measure, we were able to identify areas where they were struggling. And in the case of clinical summaries, for example, we made changes for every provider and saw immediate improvement.

As Figure 3 illustrates, once we adjusted the practice workflow in the cloud, client performance on this measure improved dramatically in a very short period of time.

For the latest updates on Meaningful Use, visit athenahealth.com/MU.

Shining a light on payer reimbursement

With a single network of shared payer knowledge, athenahealth has been able to provide a deep look into payer performance, to create a tool for doctors and health organizations that speaks directly to their bottom line. For the last seven years, we’ve sifted through data to develop PayerView (Figure 4), a clear ranking of payers that’s intended to elevate the transparency and accountability in health care information exchange.
A rural practice thrives on the cloud...and achieves Meaningful Use

Evergreen Family Practice is a busy health care provider in rural Roseburg, Oregon, about an hour south of Eugene. Evergreen sees about 250 patients a day and employs a staff of more than 100, including 11 physicians. Care providers at Evergreen already use athenahealth’s practice management service, athenaCollector® and the electronic health record service, athenaClinicals®. In late October, the practice’s leadership decided to go further, purchasing athenaCommunicator®, our cloud-based patient communication service.

As a successful practice making full use of athenaOneSM, our full suite of cloud-based services, Evergreen is notable in their attestation to Meaningful Use, the federal government’s incentive program to ensure that medical practices adopt electronic health records. Last summer, all of the practice’s physicians attested to Meaningful Use, qualifying each doctor at Evergreen for up to $18,000 in year one incentives. This proved an added value of cloud-based services, as athenahealth made an array of resources available to all its eligible providers so they could successfully meet the required Meaningful Use measures.

“Meaningful Use scared the heck out of me,” says Jonathan Winders, chief operating officer at Evergreen. “I didn’t know where to turn to. There were so many different conflicting stories from different places about what Meaningful Use meant and how you were going to meet it and is your EHR going to be certified. It was frightening. It was almost paralyzing fear and there just wasn’t a good go-to resource for that.”

Winders soon learned that athenahealth had a major program in place that came with a guarantee: eligible practices would receive incentive payments in the first year that they qualified under the program.

“I knew we were going to be okay, and as Meaningful Use developed and as athena developed their product along with that, it was evident that we would be fine,” he says. “We had the experts on staff at athena. We had weekly conversations with our account manager who kind of walked us through the process and what this was going to look like. Getting signed up was a breeze and actually meeting Meaningful Use was very simple. It was a delight.’’

In addition to empowering Evergreen physicians to attest to Meaningful Use, athenahealth’s cloud-based services also allow the practice to function at a high level with an efficient staff.

“Without athena’s cloud-based services we would have a much larger staff. We would have much slower payment processing times. We would have a lot of infrastructure to manage in terms of storage for EOBs and paper forms and envelopes. We’d have much higher postage costs,” Winders says. “It would be awful. I wouldn’t want to go back and I can’t think of any other solution that offers the depth of services and the benefits that athena’s partnership does.”

Figure 4. Tracking—and ranking—payer performance with the power of the network

<table>
<thead>
<tr>
<th>Major Payers</th>
<th>2010 Weighted Average</th>
<th>2009 Weighted Average</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAR</td>
<td>25.2</td>
<td>26.1</td>
<td>-3.4%</td>
</tr>
<tr>
<td>National Commercial</td>
<td>24.1</td>
<td>25.5</td>
<td>-5.5%</td>
</tr>
<tr>
<td>Regional</td>
<td>27.4</td>
<td>28.7</td>
<td>-4.5%</td>
</tr>
<tr>
<td>BCBS</td>
<td>24.0</td>
<td>25.9</td>
<td>-7.3%</td>
</tr>
<tr>
<td>Medicare</td>
<td>25.8</td>
<td>25.5</td>
<td>1.2%</td>
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<tr>
<td>Medicaid</td>
<td>48.6</td>
<td>57.2</td>
<td>-15.0%</td>
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<table>
<thead>
<tr>
<th>FPR</th>
<th>2010 Weighted Average</th>
<th>2009 Weighted Average</th>
<th>% Change</th>
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<tr>
<td>DAR</td>
<td>96.3%</td>
<td>95.5%</td>
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<tr>
<td>National Commercial</td>
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<td>96.8%</td>
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<tr>
<td>Regional</td>
<td>95.0%</td>
<td>94.2%</td>
<td>0.8%</td>
</tr>
<tr>
<td>BCBS</td>
<td>95.1%</td>
<td>94.7%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Medicare</td>
<td>96.0%</td>
<td>94.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>85.4%</td>
<td>83.5%</td>
<td>2.3%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Denial Rate</th>
<th>2010 Weighted Average</th>
<th>2009 Weighted Average</th>
<th>% Change</th>
</tr>
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<tbody>
<tr>
<td>DAR</td>
<td>5.9%</td>
<td>6.3%</td>
<td>-6.3%</td>
</tr>
<tr>
<td>National Commercial</td>
<td>4.9%</td>
<td>5.0%</td>
<td>-2.0%</td>
</tr>
<tr>
<td>Regional</td>
<td>7.6%</td>
<td>7.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>BCBS</td>
<td>7.3%</td>
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<td>Medicare</td>
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<tr>
<td>Medicaid</td>
<td>19.8%</td>
<td>18.1%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

For more information about PayerView, visit athenahealth.com/PayerView.

And in an effort to illuminate the growing problem of physicians—especially pediatricians—not getting reimbursed properly for vaccines, athenahealth launched VaccineView (Figure 5) in October 2011, using the same principles and networked knowledge behind PayerView.

Using data drawn from athenahealth’s network, the study found that certain vaccinations are being under-reimbursed nearly half the time (47%) when the total cost to the physician, beyond the cost of acquisition of a specific vaccine, is considered.
Figure 5. Tracking—and revealing—reimbursement patterns through networked knowledge

<table>
<thead>
<tr>
<th>Procedure Code</th>
<th>Description</th>
<th>Volume</th>
<th>Unique Medical Groups*</th>
<th>Group Payer Months**</th>
<th>CDC Cost</th>
<th>% Below CDC Cost</th>
<th>% Below CDC Cost +17%****</th>
<th>% Below CDC Cost +28%****</th>
</tr>
</thead>
<tbody>
<tr>
<td>90660</td>
<td>Flu Vaccine Nasal</td>
<td>45,900</td>
<td>74</td>
<td>882</td>
<td>$20</td>
<td>1.8%</td>
<td>50.7%</td>
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<tr>
<td>90716</td>
<td>Chicken Pox Vaccine SC</td>
<td>36,506</td>
<td>78</td>
<td>1,189</td>
<td>$81</td>
<td>3.4%</td>
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<td>75.9%</td>
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<tr>
<td>90680</td>
<td>Rotovirus Vacc 3 Dose Oral</td>
<td>23,679</td>
<td>46</td>
<td>905</td>
<td>$70</td>
<td>3.0%</td>
<td>50.3%</td>
<td>78.7%</td>
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<td>90707</td>
<td>MMR Vaccine SC</td>
<td>18,988</td>
<td>51</td>
<td>759</td>
<td>$48</td>
<td>5.1%</td>
<td>52.8%</td>
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<tr>
<td>90698</td>
<td>DTAP-HIB-IP Vaccine IM</td>
<td>15,318</td>
<td>38</td>
<td>591</td>
<td>$75</td>
<td>11.7%</td>
<td>46.0%</td>
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<tr>
<td>90649</td>
<td>HPV Vaccine 4 Valient IM</td>
<td>9,226</td>
<td>35</td>
<td>330</td>
<td>$130</td>
<td>2.1%</td>
<td>47.3%</td>
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<tr>
<td>90723</td>
<td>DTAP-HEP B-IPV Vaccine IM</td>
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<td>18</td>
<td>312</td>
<td>$71</td>
<td>0.0%</td>
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<tr>
<td>90696</td>
<td>DTAP-IPV Vacc 4-6 YR IM</td>
<td>2,719</td>
<td>16</td>
<td>154</td>
<td>$48</td>
<td>1.9%</td>
<td>20.1%</td>
<td>64.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.9%</td>
<td>47.2%</td>
<td>78.7%</td>
</tr>
</tbody>
</table>

*Unique Medical Groups Count represents the number of medical groups included for this vaccine.
**Group Payer Month Count is the number of observations over the sample period.
***% Below CDC Cost represents percent of Group-Months in which allowable were below CDC published costs.
**** % Below CDC Cost +17% or 28% represents percent of Group-Months in which allowable were below CDC published costs plus the 17% or 28% recommended by the AAP

NOTE: A Vaccine Trade Name glossary is located in the appendix on page 12.

For more information about VaccineView, visit athenahealth.com/vaccineview

**athenahealth: The future of cloud-based services and a national health information backbone**

There are currently 32,000 health care providers using athenahealth’s services and that number grows every year. Our patient panel currently numbers over 25 million. As the network grows, it gains greater knowledge from its participants’ experiences, getting stronger and smarter every day.

Looking into the near future, athenahealth’s vision continues: To build the nation’s health information backbone. The 40 interfaces we built into state vaccine registries, as part of our robust program to help eligible clients achieve Meaningful Use, are a recent example of our dedication to that vision. And as more health care providers, payers and government agencies share knowledge and intelligence in the cloud—and thereby improve health outcomes—athenahealth believes this will have long-term positive effects on the entirety of health care, the practice of medicine and society as a whole.

athenahealth has recognized the power of the cloud and has taken it further to create one-of-a-kind cloud-based services, helping medical practices achieve the control over patient care and the level of financial health they richly deserve.

**To learn more about how athenahealth can help your medical practice, visit athenahealth.com or call 866.817.5738.**
Endnotes


5. Ibid p. 33.

6. Ibid.


9. athenahealth data.

10. Information about security provisions in the HITECH Act can be found here: http://www.hhs.gov/ocr/privacy/.

11. To learn more about the Cloud Security Alliance go to https://cloudsecurityalliance.org/.

12. athenahealth data

    **Increase in Collections, Decrease in DAR metrics:** Our clients see an average 12% increase in collections and 35% decrease in days in accounts receivable.

    DISCLAIMER: Based on a weighted average for athenahealth clients with valid pre-athenahealth benchmark data that had their 15-month anniversary with athenahealth during 2010.

    **Increase in Patient Visits metric:** Doctors on athenaClinicals®, our cloud-based EHR service, are more productive than ever, seeing a 3.8% average increase in patient visits.

    DISCLAIMER: Based on a comparison of the average change in patient visits for clients without athenaClinicals with that for clients that had their six-month anniversary on athenaClinicals during the year ended May 31, 2010.

    **No-Show Rate metric:** Our athenaCommunicator® clients see, on average, an 16% lower no-show rate.

    DISCLAIMER: Based on a comparison of the highest no-show rate among clients with athenaCommunicator® and the average rate for appointments without the service for the year ending August 2011.


Notes on graphs and figures

Figure 1: Information presented in this figure was presented previously as part of webinar presentation.

Figure 2: Information presented in this figure was presented previously as part of webinar presentation.

Figure 3: Information presented in this figure was presented previously as part of webinar presentation.

Figure 4: Information presented in this figure was presented previously as part of webinar presentation.

Figure 5: Information presented in this figure was presented previously as part of webinar presentation.
we connect care™

A leading provider of cloud-based services and mobile tools 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.