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Should Your Medical Practice Use Cloud-based Computing?

Maybe you should ditch the servers and join the movement

By Marisa Torrieri | December 23, 2011

When Candice O'Brien, administrator for Massachusetts-based Amherst Pediatrics in Amherst, and Fairview Pediatrics in Chicopee, decided to swap each practice's client-server-based EHR, billing system, and practice management system to cloud-based versions eight months ago, the motivation was mostly financial.

With CMS' "meaningful use" EHR incentives in the pipeline, plus the movement toward data-sharing in the healthcare world, O'Brien wanted her practices to have access to the latest and greatest applications without having to shell out money to maintain the technology.

"A large part of going to the cloud ... was a financial decision, and the other part of it was the ease of operation and the security," she recalls. "The other part was not needing to have the servers onsite for maintenance, and the fact that if anything went down or anything happened, we weren't on a waiting list to get service."

Today, the benefits of the switch have extended well beyond money. In fact, when asked about "the cloud," O'Brien gushes about the physicians who take their iPads to the hospital when they do patient rounds, and how she can catch up on data entry in the evening in the comfort of her own home. And in late August, she didn't worry about whether Hurricane Irene would wreak havoc on both practices' servers.

"Over in the Fairview office, they lost power, and the water was coming through the windows, but they still had their iPads," she recalls.

O'Brien's experience exemplifies why many more practices are shifting to "cloud computing" for all of their data needs, from scheduling and accounting to billing and EHR use.

Still, many physicians and administrators at practices who crave life in the cloud are wondering whether leaving behind their office-based servers is a good decision. If your practice is one of those asking "can we live in the cloud?" here's what you should consider.

The growth of cloud computing

Often referred to as "software as a service" (SaaS), cloud computing has come a long way in recent years, as today's computers can transmit heavier doses of data much more quickly. The term "cloud" is controversial among IT types because it is broad and can mean many things — from "public cloud" services where a service provider hosts and updates an application from a remote location, to "private cloud" scenarios, which can exist either in practice or off-site.

These days, practices tend to be interested in the public "cloud" option, using a remote, hosted service to access, manage, and update applications that, in a traditional client-server scenario, reside on multiple in-house servers.

Thanks largely to mandates such as CMS' meaningful use EHR incentive initiative, as well as a growing comfort level with computer-based technology, more and more practices are ditching their paper-based ways. And as they are doing this, they're also starting to explore the vast world of "cloud" services.

For small and medium-size practices especially, cloud computing makes sense.

Unlike large hospitals, many practices — especially those that are independent, or have fewer than 10 staff members, physicians included — don't have dedicated IT staff or the space to house an on-premises data center, complete with servers and other equipment.

This makes the idea of doing everything in the cloud much more appealing, says Chris Witt, a healthcare IT consultant for WAKE Technology Services, Inc., headquartered in West Chester, Pa.

"All physicians should be concerned with is the Internet and a device like a laptop or a tablet," says Witt. "They should not have servers onsite."

Under a cloud computing model, data is stored in a remote data center, and accessed through the Internet, rather than at a practice site; therefore, end users don't need to have knowledge of computing systems or worry about making upgrades.

Cloud payment models are different, too. Instead of paying upfront for a piece of software and maintenance, users often pay a monthly service fee.

"There's literally nothing I can think of that you can do on a local server that you can't do in the cloud," says Jim Elliot, VP of marketing for ADP AdvancedMD. "And in most cases, the cloud produces far superior economics."

Elliot says most of AdvancedMD's clients — as well as practices in general — are still using legacy client-server applications.

"The hesitancy [of physicians] is a combination of these legacy products being inexpensive or already paid for and a lack of understanding of the monthly subscription model where you 'rent' your [practice management] and EHR applications," Elliott says.

Your practice in the cloud

Practices that opt for server-free living don't hesitate to brag about its advantages.

The first is easy access to applications — such as an EHR or practice management system — from anywhere, anytime, as long as there is an Internet connection.

Practices that live in the cloud also find life a little roomier. O'Brien says she was able to put space once occupied by wires, servers, and backup servers at her Amherst-based practice to better use.

"We actually made a conference room out of it," says O'Brien. "These things take up a lot of space."

Another advantage is that with the cloud, practices don't have to worry about making updates as new compliance standards and requirements change. This equates to a savings of both time and money.

Derrick Berger, a former corporate IT manager turned practice administrator for Brazosport Urology, a small Lake Jackson, Texas, practice, says the process of maintaining a server is a time-consuming one.

"I knew from my background that I didn't want to pay for storage space, and even if it was only one server, it would take a lot of my time," says Berger, whose practice has been completely cloud based for four years. "Having to manage a network server is a process that entails updating the database with every new release, cleaning the database, doing data backups, and being on the phone all day working problems out."

Before you take to the skies

As expected, living in the cloud isn't an entirely utopian experience.

For one thing, cloud computing can't exist without an Internet connection. So if your practice's routers aren't working correctly or if there is a natural disaster threatening your Internet service, accessing data may present an unexpected challenge.

"In a cloud, you're probably going to have one DSL or broadband [connection] and that's going to be your single point of failure," says Berger. "We were in Hurricane Ike and that took us down for 10 days."

As a result of the Hurricane Ike experience, Berger now uses a cellular Internet access card to access the Internet wirelessly at the practice full time. The cost is about \$30 a month, and the speeds are a noticeable 25 percent to 30 percent slower, but the card allows its user to access data anywhere that there is cellular service.

Berger says many practices are reticent about using cloud-based services because they don't feel like they are in control of their data.

"If they can touch the data on the hard drive, they can sleep better at night," he says.

The concern is legitimate, says Witt, because physicians don't actually know where their data is residing in the so-called "cloud."

Another issue is that switching to a cloud-based service can also be time consuming upfront. If, for example, you use an EHR from one vendor and you want to upgrade to a practice management system from another vendor, you will have to check to make sure all technology is compatible. And even if

everything checks out, it's hard to tell how fast and reliable a system is when you aren't testing it in your own practice, says Berger, who also authors a blog for the Practice Notes section of PhysiciansPractice.com.

The reason reliability is difficult to gauge is due to data mapping, the process of taking your data that is mapped from another vendor, and then attempting to put it into a new system that recognizes those data points.

And while cloud computing is often touted as a more cost-effective way to live in an increasingly paperless world, the cost of cloud life is still a chief concern for practices — and with good reason. While most cloud services involve paying a one-time startup fee and a recurring monthly charge, there may be other purchases a practice needs to consider. If, for example, a practice opts for a cloud-based EHR, they may have to switch to a compatible practice management system, and take on another stressful monthly fee.

Experts suggest practices take inventory of their equipment and its capabilities to get a better idea of the costs and time involved with a switch.

"Does the office already have computers for all the staff? If not, these will need to be purchased, set up, and maintained," says Witt. "Do all the computers have access to the Internet? Since [cloud] solutions are delivered via the Internet, access is required. Is the bandwidth you currently have adequate?"

Finally, the cloud isn't fail proof.

Recent incidents of data loss with big computing giants have shown that if practices aren't managing data on their own premises, data backup needs to be a chief concern.

Making the switch: what to consider

As with traditional, client-server technology, not all cloud-based services are the same. If your practice is considering life in the cloud, here are a few of the key considerations to keep in mind:

Speed and reliability. All vendors will peddle so-called reliable, speedy cloud computing applications and services. But how can a practice whittle down its top choices? "There are a couple of approaches everyone should take at a minimum," says Witt. "Talk to multiple references. Have your questions prepared and well thought out. Secondly, negotiate a contract with service-level agreements that include uptime guarantees and performance metrics."

HIPAA and security. Just because your data resides on a remote server doesn't mean it's protected from potential privacy breaches. Healthcare IT consultant Fred Pennic suggests that practices require cloud vendors to specify who will have access to the data at a remote hosted environment and confirmed they are trained in HIPAA compliance.

"Make sure whoever you're hosting [your data] with is HIPAA compliant, and has a team of people who are experienced and have an understanding of who owns your data, and where it is," says Pennic.

Compatibility. For practices that only want to switch to a single cloud-based service (such as an EHR) while keeping their existing technology, it's important to make sure there won't be any compatibility issues. But instead of outright asking a vendor if they support a particular technology or system, Berger advises practices to ask vendors questions like "who do you interface with the most?" or "who are your biggest interface clients?" rather than asking if their product interfaces with a particular brand. "The

vendor will say yes, because they can do this in theory, but in reality it could take them six months to build the interface," says Berger.

Legal protection. Let's say your cloud service provider goes out of business. How do you access that data? "That's a concern for everybody," says Witt. "Anybody that signs up for these contractual-type services needs to get some kind of agreement." Contracts should cover how a practice would get its data back in the case of the vendor going out of business or termination of services. "You need to have documented in the contract how you get your data back and in what timeframe," says Witt.

Data backup. The way a cloud service provider backs up its data isn't something most practices think a lot about, but Witt thinks they should. "Some kind of data corruption or malicious employee activity may not be detected immediately but may necessitate a restore from some point in time," says Witt, who suggests practices verify that their cloud vendor is performing data backups. Pennic suggests practices ask their vendor to provide evidence of compliance audits or third-party reviews, such as SSAE 16 or SAS 70 audits.

Even with all of these considerations, Witt says he expects cloud computing to take off as more and more practices see the merits of living without servers through the experiences of their peers.

"I think you're going to see more practices doing it," says Witt. "Moving your computing needs, regardless of what they are, to the cloud, is a far better solution than trying to keep them in-house."

In Summary

You've heard about cloud-based EHRs. But can your practice actually live in the cloud? Here are a few things to consider:

- Unlike large hospitals, many practices don't have dedicated IT staff or the space to house an on-premises data center, complete with servers and other equipment. This makes the idea of doing everything in the cloud much more appealing.
- With the cloud, practices don't have to worry about making updates as new compliance standards and requirements change. This equates to a savings of both time and money.
- One big drawback: Cloud computing can't exist without an Internet connection. So if your practice's routers aren't working right or if there is a natural disaster threatening your Internet service provider, accessing data will prove a bit harder.
- For practices that only want to switch to a cloud-based service such as an EHR, it's important to make sure there won't be any compatibility issues with existing technology. But instead of outright asking a vendor if they support a particular technology or system, consider asking vendors questions like "who do you interface with the most?"
- While most cloud services involve paying a one-time startup fee and a recurring monthly charge, there may be other purchases a practice needs to consider.

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