

HOSTED APPLICATIONS

If You Want the Functionality of an Application, But Can't Afford to Implement It In-House, Consider Using an Application Service Provider

Larry Stevens

Executives of Martin's Point Health Care (<http://www.medivation.com/martinspoint>), a "family" of primary care physician practices serving parts of Maine and New Hampshire, were beginning to feel pressure from some physicians and patients to offer communication services. In fact, many people had already begun voting with their feet on that issue, and a number of physicians and patients of the Portland, ME-based group had started communicating with each other via standard e-mail—a state of affairs that worried Martin's Point leaders. "We don't believe that standard e-mail provides the confidentiality and privacy needed for this kind of communications," says Medical Director Jan Wnek, MD.

The most obvious solution would be for Martin's Point to build a secure communications system. While the standard e-mail communications were worrisome, placing the organization at risk for HIPAA non-compliance, Martin's Point was feeling competitive pressures. They wanted to be the first in their market to offer physician-patient e-mail, and other groups were rumored to be looking in that direction.

On the other hand, they'd found the launch of their Web site the previous year time-consuming and costly, and many people believed that now might not be the best time to plunge into a project of similar or even greater proportions. Even if they had the funds and the staff to develop their own system, they might not have the time. "We knew what kind of work a project like this entails," says Wnek, and "we weren't ready to start something new so quickly after the previous job."

So to get a system up and running quickly, the organization decided to use an application service provider (ASP). It hired iMcKesson (<http://www.imckesson.com>) to host a Web-based provider-patient interface. The system, called PracticePoint Connect, creates a personal Web page for every registered patient in a physician's practice.

No muss, no fuss

ASPs basically provide the functionality of a software application without the need to purchase, install, or maintain either software or hardware. According to the ASP Consortium, an international advocacy group, "An ASP deploys, hosts, and manages access to a packaged application to multiple parties from a centrally managed facility." All the organization using the software needs is a connection to the Web. When users want to access the application, they go to the ASP's Web site, enter their password, and proceed to work with the software as if it were on their internal network. Generally, ASPs require no set-up, and no long-term commitment.

The only obligation on the part of the healthcare organization is a monthly fee. There are many different ASP pricing models, including the fixed fee, per-user fee, per-transaction fee, and percent of revenue models. The ASP model has been flourishing in other industries for a number of years, and its use is expected to grow rapidly over the near and medium terms. International Data Corporation says the market will grow about 91% annually for at least the next five years. But the model is just now beginning to receive recognition from healthcare organizations. A study of 56 healthcare organizations by Gartner Dataquest, reported in the April 2000 issue of *Modern Healthcare* magazine, revealed that only 46% of respondents understood the ASP model; 8% to 14% had signed or intended to sign a contract with an ASP; and an additional 19% to 25% were considering an ASP but had not made a decision. The word "considering" was taken to mean different things by different people, ranging from active consideration by executives to a vague idea on the part of one person at the organization.

Martin's Point, being a mid-sized company, fits the profile of organizations most likely to use ASPs. "The early ASP products will be geared to, and purchased by, small and mid-sized companies because they're the ones usually not served by legacy system vendors," says Gregory LeGrow, an analyst with First Consulting Group (<http://www.fcg.com>). Martin's Point is a nonprofit organization associated with about 30 PCPs serving approximately 42,000 patients.

In the past at Martin's Point, as with most organizations, virtually all patient-doctor communications, other than office visits, were conducted via the telephone. But then some patients who had become used to seeking healthcare

information on the Web wanted to use that medium to communicate with their doctors as well. For example, Patricia Linscott, a diabetic, would call her doctor frequently with questions about her condition. And she would also search the Internet. She says the "Information on the Web was too general to be helpful," and she was also concerned about taking up her doctor's time by making too many calls. Now her physicians at Martin's Point can use the new system to respond to her e-mailed questions and provide links to pages on the Web that relate specifically to her questions. While patients like Linscott would take to a Web-based e-mail system quickly, Wnek knew that not all consumers would be so enthusiastic. So, before agreeing to pilot the system, she wanted to make sure that the average consumer could use it easily. She formed a focus group of Martin's Point patients, who reacted favorably to the system. But, she points out, if the patients had reacted unfavorably to the system, she could have simply called another ASP and reconvened the focus group to see if it liked the second system any better—whereas if the organization had written its own system it might have had to struggle with rewriting it to make it conform to the needs expressed by the focus groups. Only limited modification is possible with most ASP systems. (See sidebar, "Pros and cons of an application service provider model.")

Getting the word out

The only other internal work prior to the system's implementation was to publicize it. Martin's Point ran ads in local newspapers, posted messages in doctor's offices, and held demonstrations at various clinics. But Wnek says the best way to increase member participation is for doctors to encourage their own patients to use it. "What we're seeing is that the doctors who are most excited about it are those whose patients are more likely to take advantage of it," Wnek says.

Cliff Robertson, MD, chief medical officer at Franciscan Medical Group (<http://www.fhshealth.org>) in Tacoma, WA, agrees with Wnek that the ASP model allows smaller organizations to quickly implement cutting edge technology, even when budgets are relatively limited. He is well aware that many medical groups and hospitals across the country have implemented Intranets that give doctors access to things like lab reports. But Franciscan Medical Group has been a bit slow in setting up this functionality. "We can look around and see other organizations have brought in this technology, and we have a need to catch up. But unless we're willing to wait a year to get it up and running, the vendor hosted [ASP] model was our only option," Robertson says.

Even if Franciscan had had the time to implement an internal system, it would have been difficult to get their 65 independent physicians to agree to purchase and install a single software application, especially when the entire concept of Web-based communications was foreign to many of them.

Robertson turned to Elysium Clinical Messaging, from Axolotl Corporation (<http://www.axolotl.com>). The system allows physicians in the medical group to receive clinical information and other communications from each other electronically. Doctors can access information over the Web, but they don't have to. Those who don't have Web access in their offices can have the data transmitted by fax. Or they can set the system to send data over the Web but automatically print it out. "We wanted doctors to have a lot of flexibility in how they use this, even if they just want it to replicate the old paper-based system," Robertson says.

However, most of the physicians are finding that it's to their advantage to use the Web to gain access to data. For one thing, doctors can tag these messages with instructions and annotations, and then send them electronically to other staff or physicians. Additionally, doctors can access the system from any location that has Web access. The biggest advantage of the ASP model to Robertson is that it allowed Franciscan Medical Group to get the system implemented quickly. But another benefit is that the model eliminates the need to figure return on investment, a requirement for many organizations when they opt to purchase an in-house system. This is important, Robertson says, because so far at least, there really is no cost savings associated with the system: *Its main advantage is not lower cost, but availability.*

Always available

In the past, if the group's doctors received a call at night and they needed information from the hospital or a lab, they'd have to ask someone to fax it to them. The process often took half an hour or more. Now doctors can get the same information in seconds.

Currently, Franciscan Medical Group only uses the system for connectivity for professionals. But in the near future it will be expanded to patients, who will be given their private Web pages, just like the ones given to the doctors

now. Doctors will be able to send the reports they receive, such as lab results, to the patients' pages. The system will also be used for physician-patient e-mail.

While the ASP model has allowed Robertson to get up to speed quickly, he isn't entirely turning his back on in-house systems. In fact, he believes that eventually his organization may very well opt to build its own connectivity system. "This has been proof of concept for us," he points out. It provides the organization with a quick and easy success. It is helping Franciscan sell the idea to consumers and physicians. But once the organization has a critical mass of advocates for such a system, it may opt to develop an intranet that provides the same connectivity. The advantage is that it will provide a single place for users to get administrative information along with clinical data. Medium-sized organizations like Franciscan eventually may opt to bring the functionality in-house through an intranet. But individual physicians or small group practices do not have that option. For them, the ASP model is the only reasonable way to get the functionality of applications normally purchased only by larger organizations.

Solo doctors

Brian Keefeis, MD, is one doctor who decided to go it alone with an ASP charting system, Medscape Chart Note (https://www.medicallogic.com/products/logician_internet/index.html). His seven-doctor group, Affinity Health Group in Albany, GA, had to find a new means of charting after it left a larger group that it had been associated with for a number of years.

The larger group had a legacy charting system; so after the break-up, Affinity physicians considered bringing in a similar system. But then they found out how much it would cost. Considering licensing fees and hardware costs, the group would have had to shell out almost \$800,000. "That was way above what was realistic for a group like ours," says Keefeis.

So the members of the group went in two different directions. All the doctors except Keefeis went back to the old pen and paper charting system. Keefeis signed up for Chart Note, which costs him \$100 a month. Chart Note provides a series of templates, each of which relates to a different kind of encounter. Because Keefeis types the data in the specified fields, he eliminates the need for transcription services, which he says used to cost him about \$1,500 a month.

Like the other systems discussed above, Chart Note allows doctors to set up individual Web pages for patients. Keefeis expects to use that feature eventually. However, he says, the population of patients he treats tends not to have computers; so he will not set up that feature for a while.

Disadvantages

While the ASP model allowed Keefeis to use an application that he could not afford to purchase outright, he does see two disadvantages.

First, the model doesn't integrate with his office's business systems. This is a problem with ASPs in general, because often they are not customizable. Chart Note can't, for example, pull demographic information from or send data about patient encounters to the billing system. Accordingly, it does require some double entry. Second, if Keefeis can't get on the Web because of problems with his Internet service provider or the ASP, the application is unavailable. When that happens, Keefeis has to hand write notes about each visit and enter them into the system when it is back online. However, he is quick to point out that his colleagues who use paper charts have an analogous problem when charts are missing or at a different location.

First Consulting Group's LeGrow adds that there are risks with early healthcare ASP adopters. "The market is still emerging, and there are a number of unknowns," he says. "A lot of the newer companies will be bought out, and you may end up being served by a company that you're totally unfamiliar with."

He suggests that one way to play it safe is to use a company that sells its product outright but also offers it as an ASP model. That way, if you are not satisfied with the ASP service, you can opt to purchase the product outright. (See sidebar, "Questions to ask before signing up with an ASP.")

Healthcare tends to follow other industries in terms of technology. So it is likely that the use of ASPs will grow, even if that growth doesn't turn out to be quite as dramatic as it is with non-healthcare corporations. Certainly each

healthcare organization has to decide for itself if the model is right for it. But just as surely, in the search for a new application, the ASP model should at least be a consideration.

Reprints of this article (MN0103001) are available for download at: <http://www.corhealth.com/reprint.asp>

California HealthCare Foundation

<http://ehealth.chcf.org/index.cfm>

This site has a number of very comprehensive reports on all areas of healthcare including ASPs. New reports are added regularly. As of this writing, it has four relevant reports:

- *ASPs and Medicaid Health Plans*
- *ASPs: An Executive Report*
- *Medicaid Health Plans: Are Application Service Providers Right for You?*
- *Community Clinics: Are Application Service Providers Right for Your Clinic?*

First Consulting Group

<http://www.fcg.com>

This company wrote many of the reports for the California HealthCare Foundation, so you can get many of the reports listed above at this site as well. This site has one additional report: *Application Service Providers: Unveiling the Mystery for Health Plans*.

All About ASP

<http://www.aspindustry.org>

The All About ASP site provides a number of helpful brochures, including "A Buyer's Guide to Application Service Provisioning."

ASPnews.com

<http://www.aspnews.com>

This site provides industry news, and analysis. Some of the articles are useful to ASP clients. The site's ASP directory lists most of the healthcare ASPs. One of these is "Five key criteria for assessing an ASP" at http://www.aspnews.com/analysis/analyst_cols/article/0,2350,4431_503851,00.html.

ASP Connection

<http://www.aspconnection.com>

This site has industry news, articles, and reports, including dozens of articles on healthcare ASPs. News includes acquisitions and partnerships.

searchASP.com

<http://searchasp.techtargt.com>

This is a Web search engine limited to ASP-related material. Provides thousands of hits on topics related to healthcare ASPs. However, as with most search engines, many hits are off the mark.

WebHarbor.com

<http://www.webharbor.com>

Provides news and information to both ASPs and their customers. The site also includes case studies. It has more than 20 articles on healthcare ASPs.

Pros And Cons Of An Application Service Provider (ASP) Model

PROS

- Application can be accessed from any computer via the Web. There is no need to install software on each computer that accesses the system.
- Implementation time is normally very fast. Many systems can be implemented in days.
- Need to understand how the software works "under the hood" is reduced, because the ASP handles all support.
- Most ASP systems eliminate the need for capital investment such as hardware or software licensing costs or implementation costs.

- Levels of performance, such as application up-time, are the responsibility of the ASP, not the client organization. In fact, many ASP contracts include performance guarantees.
- ASP systems require less powerful hardware than "fat client" systems.
- Some healthcare organizations prefer the accounting implications of incurring an operational cost vs. depreciating a capital cost.

CONS

- Many ASP systems do not interact with other software the healthcare organization is using. As a result, double entry may be required.
- Most systems are limited in the extent to which they can be customized.
- The healthcare organization is ultimately responsible for HIPAA compliance and will be at risk if the ASP doesn't implement confidentiality and other regulations correctly.
- Web-based systems carry with them the risk of connectivity problems. If the Web is down, either at the healthcare organization or ASP site, the application can't be accessed.
- While many customers look to the ASP to handle security, doing so may result in problems if the ASP doesn't perform adequately in this regard.

Questions to ask before signing up with an ASP

1. What experience does the ASP have in the healthcare market? What is its age, size, customer/reference base, help desk and technical support experience, average ASP staff tenure? Its long-term vision?
2. Does the ASP offer a single vendor solution, or can it offer a number of different applications to choose from?
3. What level of service does the ASP offer? Are different levels available?
4. Who are the ASP partners? What is their experience? Who provides the first line of support?
5. What is its pricing model? Are upgrades included in the cost?
6. What is the contract duration? Can the application be brought in-house or transferred to another ASP?
7. What response time can be expected? Does the ASP guarantee network performance or only system and application performance?
8. How are problems resolved? What are the levels of escalation?
9. How and when will performance reporting be handled? How will performance penalties be levied if service level agreement targets are not met?
10. How are software upgrades performed? Who verifies configuration?
11. Does the ASP understand the privacy, security, and EDI requirements to comply with the Health Insurance Portability and Accountability Act of 1996, and how does it plan to comply?
12. Is the application stored on a dedicated or shared server?
13. What connections are available: Internet, secure line, VPN?
14. What hardware and software are required at the client site?
15. How will ASP software interact with currently installed applications?
16. Will the application scale? How many users can the ASP handle given organizational growth?
17. How does the ASP handle security—firewalls, encryption, tunneling or physical locks, personnel selection, training, audits? What are the controls to separate data from other ASP clients' data?
18. Who is hosting the data and how will it be backed up? ASP or subcontractor? Number and locations of data centers?
19. How are data transferred in the event the application is brought back in-house or transferred to another ASP? Will client data be resold? How often is its disaster recovery plan practiced?