



MyVue provides patient access to images and reports and engages patients while it saves money and time at Houston imaging center

"For the first time in my practice, I feel like I'm able to engage my patients at a level that really none of my competition can."

-- Dr. Randall Stenoien, M.D., Radiologist and CEO of Houston Medical Imaging



Operating out of three locations that together conduct 40,000 high-tech exams annually, Houston Medical Imaging (HMI) would seem the ideal testing ground for a patient portal that empowers patients as it streamlines workflow. Exams are interpreted by 14 radiologists representing general and subspecialty practices in neuro- and musculoskeletal radiology, and mammography. In addition, they perform interventional procedures and pain management. HMI leverages teleradiology and telemedicine to provide these comprehensive services, and their services are finely tuned to the needs of patients and referring physicians, according to Dr. Randall Stenoien, M.D., Radiologist and CEO at HMI. He characterizes HMI as a fairly small player in an extremely competitive marketplace.

"With the competition that we have to deal with on a daily basis, I decided many years ago that we needed to focus on differentiating ourselves by providing services that our competitors could not," Dr. Stenoien said.

The goal underlying the installation of Carestream's patient portal, MyVue, at HMI, was, in fact, to provide better service to referring physicians and particularly to patients, whom Dr. Stenoien believes will become an increasingly important factor in choosing healthcare providers.

"We are definitely seeing patients shopping for imaging and I think MyVue enhances our ability to attract those patients," he said. "They're fairly sophisticated consumers and they are interested in getting the best imaging for the money."

Pioneering the use of a patient portal differentiates HMI from its competition today, just as it lays the foundation for it to be a leader when patient portals are part of the mainstream.

Less than a month after introducing this portal, however, Dr. Stenoien realized a financial benefit as well, one that could save tens of thousands of dollars in the months ahead and untold savings in the years to come.

"At some point, we're going to hit a critical mass, when patients expect to get their images and reports using MyVue," said Dr. Stenoien. "When that happens, we're going to see tremendous cost savings. It's just surprised me that we've already begun to see some of those cost savings, which I hadn't expected or budgeted for."

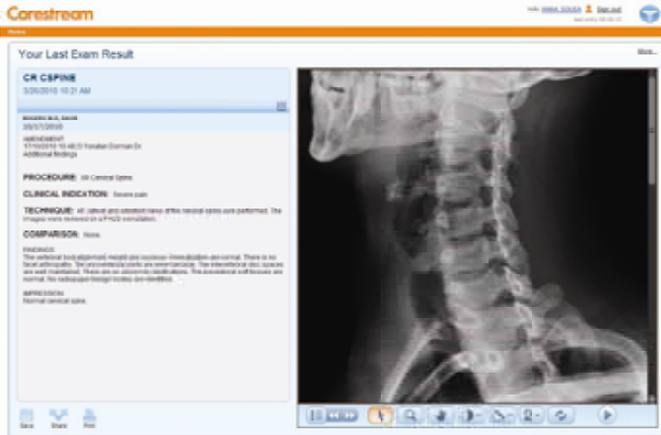


Randall Stenoien, M.D.
C.E.O., Houston Medical Imaging



How MyVue works

MyVue is to medicine what online banking is to finance. It allows patients to access their medical accounts, specifically their images and radiological reports, and manage them online via a secure account. From there they can share these images and reports with anyone or any facility they choose.



Just as online banking replaces paper statements, MyVue can take the place of CDs, DVDs and films, saving hours or even days of delay. It can eliminate the cost of putting images and reports on optical media, and sending them to requestors. It also sidesteps the possibility that DVDs or CDs might not be compatible with outside display technologies.

With full fidelity images and reports at the fingertips of collaborating physicians, MyVue can reduce duplicate exams, possibly sparing patients the additional exposure to radiation as well as additional expense to the healthcare system. It adds to patient satisfaction by engaging patients in the diagnostic process. Yet, as a zero-footprint technology, it requires minimal administrative support, so it adds little cost to a radiology practice. Those savings can add up quickly.

MyVue simplifies tough cases

Before MyVue began operating in August of 2012, patients who needed copies of their diagnostic reports or medical images had to call HMI to request that the images and reports be burned onto a CD. These requests would disrupt the normal workflow of the office, as staff would have to handle them in between their other duties, then call the patients back to the office to pick up the finished CDs. Alternatively, when the patients could not return or time was short, HMI would

have to deliver the CDs to the patients by courier or other delivery services.

At Houston Medical Imaging, some patients come from hundreds of miles away, even from other states. In the past, requests from these patients posed additional challenges. Not only did CDs have to be created, often special delivery was also needed. This required more time by staff and separate billings, which HMI staff had to arrange to cover the high cost of delivery – a process that could take days.

MyVue dramatically reduces the time and cost for such difficult requests, as demonstrated by a case that occurred soon after the software was installed.

In early September, HMI fielded a request for images from a patient who had returned to his home out of state. “The front desk transferred the phone call to me; I looked up the patient account in MyVue; I asked for the (patient’s) email, and 20 minutes later, the patient had the images,” said Diego Roldan, HMI general manager.

In an email several weeks later, the patient thanked the HMI staff for their quick response. “I have used your online MyVue data system and it is excellent,” he wrote. “The next time we visit your office, we are planning to bring some of the prior CATS executed in other locations to add them to your database.”

MyVue promises many more savings in the months and years ahead. In just the first three months since MyVue was installed, more than half of incoming patients signed up. Even more impressive, said Dr. Stenoien, “We’re seeing more than half who are already active in their account – actually logging on, accessing the application, and downloading their images to their computer or sharing them with other users. It’s been amazing how interested patients are in this.”

Each patient who signs up receives a unique login. This allows them access to the results of their exams and related images, then the final report days later by HMI’s design. They can share this access with “guests,” such as consulting physicians, subspecialists, or institutions to which the patient is being referred. Guests simply click the link provided them by email, then register to view the study or patient portfolio.



Cost savings pile up

General Manager Roldan estimates that MyVue could save HMI \$14,764 per year. This estimate is based on the assumption that just 5% of HMI patients – a conservative number – will request images and reports annually and that each request for a CD would save \$7.69 per exam by transferring the same data electronically using MyVue. The estimated CD costs were based on media and other materials, courier costs required for one out of five requests, labor of the front desk staff or medical records, and equipment plus maintenance for burning CDs. Now the front desk at HMI has transitioned from burning CDs to helping patients register for MyVue and educating them in its use.

Cost element	\$ per Exam on CD or DVD (over 5 years)
Staff cost to burn CD (average of 4 minutes)	\$1.19
Media cost	\$0.21
Courier (FedEx, Postage etc)	\$3.85
Folder/envelopes	\$0.05
Ink and ribbon	\$0.08
Eliminate CD/DVD burners, maintenance	\$4.00
Total Cost per Exam	\$9.38
MINUS cost of patient portal implementation, which includes: HR cost to support registration and education, and MyVue	(\$1.69)
Total Savings per Exam	\$7.69

“If we can save around \$15,000 each year because we offer this service to patients, and we also save time for them and in our own operation, those are good benefits,” Roldan said.

The cost of operating MyVue is extraordinarily low due to the combination of its zero-footprint design and intuitive interface that does not require downloads or dedicated application training. At HMI, MyVue functions as a stand-alone patient portal running off the center’s Carestream Vue PACS. But it can be embedded into an existing hospital information system

or electronic medical record. Consequently, MyVue may provide the added benefit of helping facilities qualify for federal funds by addressing “meaningful use” criteria that require hospitals to offer a certain amount of patient access to medical data.

Possibly qualifying for federal funds was not a consideration when Dr. Stenoien first looked into MyVue. Neither was saving time or money.

“I was more interested in increasing what I had to offer to patients and to our referring and consulting doctors,” he said. “It’s a pleasant surprise that we’re seeing cost savings so soon after we began offering this service.”

Engaging patients early

The use of MyVue at HMI evolved from nearly a decade of collaboration with Carestream. Since 2004, the Houston-based imaging practice has depended on Carestream technology and expertise for its PACS. Last year HMI added Vue Motion, which provided referring physicians access to exam data archived on its servers. With that, HMI “saw a boost in business,” said Dr. Stenoien, and with the addition of MyVue, is now taking the next logical step: “We are now moving Carestream technology into the homes of our patients...and patients are really excited about it. MyVue has engaged my patient population in a way I never would have imagined.”

This service has been integrated with exceptional ease, which came as another surprise. “I expected the phones to be ringing and my IT people to be complaining and yelling at me,” he said. “But there’s been none of that.”

Dr. Stenoien describes the migration to MyVue as seamless, which he attributes to the inherent simplicity of the software.

“Our patients are able to log on and then access their information by themselves the vast majority of the time, without help from our staff,” he said. “It’s really surprised me how little extra work it’s caused our IT department.”



Statistics gathered by HMI staff show that between August 8 2012, when HMI introduced MyVue to patients, and the end of October 2012, 2,662 patients had registered. Of these, more than half (1,480) actively used their accounts. During that timeframe, the IT department at HMI received just 47 phone calls asking for help, the majority of them related to password reset or external network issues. This is

substantially fewer than might be expected. According to the IT research and advisory company, The Gartner Group, industry norms show that, on average, each software user makes 1.2 calls per month to a service desk. These calls range from password resets to complex issues that require hours to diagnose and solve.

Patient Engagement Study Results for MyVue:

MyVue: Houston Medical Imaging
Three-Month Duration with 8,276 Patients Involved

31%
of PATIENTS
NEEDED A CD

50%
of PATIENTS
ACTIVATED
MyVue

Less than 2%
of Patients needed
HELP DESK
SUPPORT

The dramatic difference between the IT industry norm and the number of help calls placed by MyVue users reflects the planning that Carestream put into the product, according to Neville Skudowitz, MyVue product manager.

“We understood the challenges that we would be facing with this type of product, and we really did a lot of work in advance to identify situations that could cause issues so they were covered,” Skudowitz said. “This is the kind of process that really helps to develop the right information to make the product simple and easy for the patient community.”

Starting on the right foot

Making a good first impression is critically important to the adoption of MyVue. Patients must know that a patient portal will make their lives easier – not more difficult, said Stephanie Perez, who works the front desk at HMI. She and other staff at HMI introduce MyVue exactly this way, describing its function and use, as they begin the process of enrolling patients.

“We’ve had patients standing in front of us and we’d be explaining to them that they’re going to get two emails – a welcoming email and then an email that tells them how to log on,” Perez said. “In a matter of seconds, it’s on their smart phone and they say, ‘Oh, I’ve already got it.’”

Each patient leaves HMI with a patient education kit, developed by Carestream, which includes videos and a page of frequently asked questions that cover any issues that might come up. A “quick reference,” also developed by Carestream, explains what to do next – how to view and download images and reports to their PCs, and how to share them with others.

“We didn’t try to include everything in these materials, but rather the main things patients need to know so that when they leave the facility after their exam, they have what they need in order to use the product effectively,” Skudowitz explained.

When challenges did arise, they typically were related to issues other than MyVue itself, such as finding the email with the user ID and password, password reset and using the most recent version of Internet Explorer.

Case Study | Houston Medical Imaging (HMI) in Houston, Texas



"MyVue is very well-suited to users," said Zeljko Lazarevic, HMI director of IT. "We just had to inform some of them how to implement the software on their older systems."

A survey of the HMI patients who activated their accounts showed that 90.9% said MyVue was easy to use; 7.8% said they needed minor assistance; 1.3% (1 person) said the portal was difficult and not intuitive enough.

The survey also found that 88.3% said they would like to continue accessing images through the Web and to share exams with others – 3.9% said they would not, and the remaining 7.8% stated no preference.

A bright future

With MyVue, HMI is breaking new ground, said Dr. Stenoien. "We're doing something innovative in terms of empowering patients and making them better healthcare consumers."

What patients expect from medical practices will continue to increase, said Dr. Stenoien, as Web-enabled information assumes a larger role in consumers' everyday lives. MyVue is a link in the chain of medical information that ultimately will comprise a health information exchange (HIE) connecting regional hospitals, imaging centers and physicians.

As an example, a young patient describes how, in the past, she had to return to HMI to get her CDs or films when they were requested by other doctors. "With MyVue, it's just so much easier," she said. "I've grown to expect it just because you know technology is growing everywhere else, and now it's finally happening in the medical field."

"With the advent of HIE, and the sharing of information that's going to happen over the next few years, I see MyVue as an important part of that service in terms of being able to share information with patients," Dr. Stenoien said.

ACCESS, MANAGE, SHARE.

