

Data transfer software at heart of new e-health system

IT Agfa digital image repository one of four major components of provincial initiative

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The company building the digital image repository at the heart of the province's e-health system says its software will allow a patient's diagnostic information to be transferred quickly and securely across the province.

The digital image repository being built by Agfa Inc. is one of four major components of the province's one-patient, one-record e-health initiative.

It is the most expensive aspect of the project announced to date.

The two-year, \$9-million project will allow the storage in a central data centre of diagnostic images and reports from X-rays, CT scans, ultrasounds and MRIs that will be accessible from any health care facility in the province.

Dave Wilson, director of marketing for imaging and informatics with Agfa HealthCare Canada, says the New Brunswick project is still in the planning stage.

"This is really an evolution of what the province started a long time ago," he says.

Many hospitals and regional health authorities are already using digital image repositories either built by Agfa or by General Electric.

In addition to the image repository, the other components of the e-health initiative include the client registry, the provider registry and the interoperable electronic health record.

The client registry is being built over two years by Initiate Systems Inc. for \$1.9 million while the provider registry and interoperable health record are being built over two years by Orion Health for \$4 million.

The province has awarded xwave a \$5.6-million, three-year contract for systems integration and maintenance.

Gary Folker, managing director of business development for xwave Healthcare, said his firm is focused on making sure the software for the patient records, client and provider registries and the digital image repositories are working together and able to share information.

xwave is also helping healthcare professionals to adjust to working with the e-health system.

When it comes to moving patient diagnostic images around the province and accessing both the images and diagnostic reports, both commercial Internet and a private, health care system-only network will be used, says Wilson.

Family doctors accessing patient information at their offices or at home will be able to use their existing high-speed Internet service and secure websites to retrieve patient images and reports, he says.

Patient images and reports will also be transmitted within the provincial health-care system using a dedicated, secure private network.

Confidential patient information will be protected by a combination of network hardware and software, says Wilson.

"We do a lot of armouring of the system " | we have a firewall up front (and) we also have authentication services that authenticate the users when they log in to the system," he says.

"If you hack into the system without an authenticated ticket, you're not going to be able to get access to the data.-

In addition to these measures, the information on the network will be encrypted, he says.

Wilson says the Agfa system and its security measures have yet to be breached.

"We do a lot of work with the U.S. and the Canadian military and, as a result of that, we've put our software through a variety of different-party tests and analysis. They come back and tell us where there may be gaps and weakness and we come back and fill those gaps and weaknesses.-

The Agfa data centre will work with other Agfa software in use already in the province, as well as software designed by competitors, he says.

While a single X-ray image can range in size from eight megabytes to 80, the Agfa system will not require extensive computer network upgrades in the province, he says.

"We're using compression technology to deliver that image across the network. That reduces the need of the network to be super fast," he says.

"Depending on where you are and the bandwidth, you can have compressed (images) or full fidelity if you are a radiologist and you want to do a diagnosis.-

The client software used to access patient information has low hardware requirements, he says.

The Agfa digital image repository system will be rolled out slowly, integrating one facility at a time to ensure information is transmitted and received accurately and securely.

"That's probably the biggest chunk of work."