

# Extending Interoperability: Reaching Beyond Simple Data Exchange

## Top hospital complements EMR with ECM interoperability

Ranked as one of America's top three hospitals, the Cleveland Clinic embraces the integrity of innovation that puts patients first, while extending its global reach for providing world-class patient care. Headquartered in Cleveland, Ohio, the Cleveland Clinic treats patients from across America and from more than 80 nations in more than 60 facilities located in Ohio, Florida, Canada and Abu Dhabi.

Recognizing that the patient benefits of an electronic medical record (EMR) extend to many areas, including helping physicians make better decisions quickly and reducing wait times for both patient registration and the retrieval of patient medical records at the point-of-care, the Cleveland Clinic continually looks for ways to effectively improve EMR implementation and availability.

Designed to adapt technology to the way providers best operate, an EMR conceptually helps close the gap between geographically dispersed providers, physicians and patients for ongoing medical care. However, the Cleveland Clinic realized that in order to attain the full potential of its EMR for optimal patient benefit, it had to both address functional areas of the organization that were fragmenting the EMR between disparate clinical systems and document-centric processes that still rely on paper.

## Increase physician communication and collaboration

"The ideal goal is interoperability. That is really the best opportunity for optimal care," states Robert S. Juhasz, DO, Associate Medical Director at the Cleveland Clinic's Willoughby Hills Family Health Center. Extending interoperability to reach beyond simple data exchange and include electronic content management – regardless of document origin – allows automatic document sharing between disparate hardware and software systems, regardless of vendor, machine, facility or location, and encourages effective user communication and collaboration.

The Cleveland Clinic turned to OnBase for its enterprise content management (ECM) solution. Its proven history for successful tight integration solutions with EMR systems, including those offered by Epic Systems Corporation, demonstrated the performance the Cleveland Clinic required. Developed by Hyland Software Inc., OnBase is an integrated suite of ECM software solutions, including core capabilities in document imaging, electronic document management, workflow, COLD/ERM and records management.

## Electronic access to documents directly from EMR applications

The Emergency Department (ED) and patient registration were among the first areas addressed using OnBase Document Imaging and Front Office Scanning (FOS). Although the main campus had developed a mainframe solution to scan driver's licenses, it was not deployable to other facilities and did not make the captured electronic documentation available to Epic users. Additionally, the same patient information had to be presented multiple times for multiple encounters within the same health system – a constant source of frustration for employees and patients alike. By implementing FOS at the point-of-registration, patient documents, including driver's licenses, can be captured once and be immediately available to authenticated users, regardless of facility. Document imaging provides the ability to scan ED documents, directly associate them with the patient EMR and make them instantly available from the EMR interface with a simple mouse-click.

Giving hospital employees access to documents directly from their familiar applications supports existing processes and encourages high end-user adoption rates, as stated by Dan Slates, Director of Integrated Enterprise Applications. "Keep the tools simple ... if you do it wrong, the phone rings off the hook. If you do it right, everyone loves it."

Capturing documents gathered over time from multiple sources, including Health Information Management (HIM) and Medical Records, and automatically inserting them into the Cleveland Clinic's transactional processes, extends the benefits of established workflows. Replacing the stacks of paper that bog down processes with electronic documents that allow concurrent viewing, contain collaboration tools, and have an audit trail reduces frustration and improves communication and efficiencies. "With OnBase, the information is at the right place at the right time, for the right person," states Dr. Juhasz.

FOS also helps to provide auditable compliance to the "Important Letter From Medicare" mandate, which extends eligible patients the right to appeal an impending discharge. Upon registration, filters indicate if a patient is eligible because of Medicare status or age, and the letter is printed, signed by the patient and then scanned into OnBase using FOS. From that point on, the letter is available directly from the EMR and can be tracked electronically during the entire patient stay, including when it is presented to patients 48 hours prior to discharge.

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## Millions of documents instantly available at physicians' fingertips

With electronic documents instantly available at the point-of-care, patient care is improved as focused attention is directed at making the best decisions, not trying to locate paper records.

"Before, it could take anywhere from minutes to days to obtain the necessary documents in a patient's medical record, if needed. Now, the information is there at the time when you need it," affirms Dr. Juhasz. He continues, "You only have a certain amount of time with patients. Having records online enables physicians to crunch the process time and spend more time with people. This empowers patients to comment during the visit and provide more information, which contributes to better care. Patients are tremendously pleased."

The ECM integration with Epic also delivers test results directly to the physician's Epic In Basket as soon as they are scanned into the system, allowing physicians to evaluate results and make better decisions more quickly. "If you put the results where physicians expect to find them, instead of just a message that the document is on its way, it is a huge win," states Slates. "The integration with the EMR was seamless...we are just electronically enabling the physician's normal workflow. There really wasn't any end user training."

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## Paperless procedures reduce operational costs

The Cleveland Clinic's hosted and rapidly deployable packaged solutions, including disconnected scanning, document imaging and EMR integration solutions, allow individual facilities or departments the ability to rapidly deploy when the time is right, while benefiting from the best-practice knowledge obtained from solutions rolled out previously.

Hosting Web-based workflows additionally encourages "green" initiatives, as the costs of paper printing, storage and shipping are dramatically reduced with multiple copies of documents previously required for billing and coding in a paper-based process no longer necessary.

In addition, by hosting its own disconnected scanning services, the Cleveland Clinic was able to eliminate an \$140,000 annual cost for an outsourced hosted document imaging provider. "We saw ROI [return on investment] in about two weeks," Slates notes.

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## Self-service referral research extends efficiencies to the global healthcare community

The Cleveland Clinic uses OnBase to fill in the gaps between not only disparate systems, but also between organizational workflows and workflows that extend themselves into the larger healthcare community, such as industry collaborations, consultations and referrals. "When referring patients from the general family medicine and pediatrics to a specialist, physicians are able to pull up the record and see all of the previous notes of the referring physicians and procedures that were done. The feedback from colleagues has been excellent," states Dr. Juhasz.

By providing OnBase EMR documents to physicians using Dr. Connect, the free Epic Systems collaboration site AffiliateLink, consulting physicians who are not employees of the Cleveland Clinic can sign in to the site and have self-service access to the applicable documents and information that contribute to better decision-making, without needing the assistance of hospital employees.

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## Future enterprise solutions include electronic EKG reference documents at point-of-care

The Integrated Enterprise Applications group has a list of 30 to 40 departments that want to be next on the list for solutions across the enterprise. Not surprising for the hospital system ranked number one in the nation for its cardiac care, the Cleveland Clinic's number one requested OnBase document from physicians was an electronic EKG available at the point-of-care. Planned for roll-out with the OnBase Integration for GE Muse™, electronic EKG images will be available for reference when the diagnostic test results are received in the Epic In Basket. "Sometimes, a picture is worth a thousand words," Slates notes.

Other clinical solution requests include a solution for integrated scanning from Epic to OnBase that will enable staff to add additional documents directly to OnBase from Epic's Cadence® and Prelude® interfaces, and a solution to allow the inclusion of high-quality retinal scans as part of EMRs for Executive Health physicals. Other enterprise-wide requests include solutions for administrative departments such as Human Resources (HR) and General Counsel.

Bridging the EMR gap with its OnBase solution supports the Cleveland Clinic's commitment to excellence in patient care through innovation, research and compassion, and removes the processes that add time, frustration and cost without adding any value.

"Everyone downstream is impacted in a positive way. It is a more complete history, a comprehensive repository," states Dr. Juhasz.

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