

Image-Enabling Epic: Adding More Clinical Value to Your EHR Investment

An Enterprise Imaging strategy that allows physicians to access, view and share all patient images through the Epic EHR helps streamline clinical workflows, reduce costs and improve patient care.

Thanks to government regulatory programs and an unwavering desire among hospitals to improve clinical documentation and patient data access, EHRs have finally become widely implemented. In fact, recent tallies show that EHR adoption has skyrocketed with more than 80 percent of physicians¹ and 96 percent of hospitals using EHRs.²

When it comes to EHRs, Epic Systems is the clear leader in delivering this core clinical system to healthcare providers in the U.S., with almost 20 percent market share in hospitals. Epic has a proven track record, and Epic customers like you have invested millions to install and optimize the platform. With such a sizable IT investment, it's important to ensure this tool is not only leveraged, but embraced by the clinical staff charged with using the system. The best way to optimize usability, and therefore the ROI of Epic, is to make the platform the most valuable clinical tool in your physician's arsenal.

Epic is the cream of crop at doing what most EHRs do well – capturing and managing discrete patient data. Epic EHRs provide valuable information such as patient demographics and discharge summaries along with practical capabilities like prescription ordering, that drive efficiency and improve patient care. However, Epic isn't designed to inherently capture and manage unstructured patient content.

Without seamless access to unstructured patient content clinicians are missing a huge part of the patient picture. In fact, more than 80 percent of patient images and data are unstructured and sit outside of the EHR.³

When unstructured content isn't accessible via core clinical systems like Epic, important care decisions are being made based on incomplete information. When this occurs, it opens the door to potential misdiagnosis and medical errors which significantly impact care quality and patient health. Today, five percent of diagnoses are in error which equates to 18 million primary care diagnostic errors per year.⁴ Moreover, medical images are critical to clinical collaboration, which is essential to optimizing diagnosis and treatment plans.

In today's patient-centric and highly regulated healthcare environment it's more important than ever to find a way to consolidate all structured and unstructured health data into one manageable platform that can create a more complete patient record. With more reliable data and vital patient images in place, providers can make more informed care decisions, improve patient outcomes, reduce organizational costs and meet regulatory requirements.

Exploring image-enabling options

In a healthcare environment where delivering coordinated, patient-centered care has become imperative, the ability to make medical images accessible via the EHR has become a top priority. Like most EHRs, Epic is only inherently equipped to display text-based radiology reports and not the actual diagnostic images themselves. However, making the image itself easily available to clinicians and patients via the EHR is vitally important to the clinical process and the overall care experience.

A “true EHR” really requires an unstructured content strategy that allows the EHR to access all important clinical data on a patient from across the healthcare enterprise.

There are a variety of ways you can choose to image-enable your Epic platform. A common approach is to directly interface Epic with existing Picture Archiving and Communications Systems (PACS). Furthermore, connecting cardiology and radiology PACS to Epic would provide clinicians with access to a large number of images. However, while this approach may address short-term demands, it isn't equipped to scale to meet future imaging needs and can't reduce the cost of siloed imaging solutions across the healthcare enterprise.

For example, many clinically-valuable images sit outside of PACS systems. These non-DICOM images include gastroenterology images and video (e.g. endoscopy and colonoscopy), ultrasound, dermatology images, surgery images and video, wound care photos and more. These images are typically stored in department-specific specialty systems which also are unconnected to the EHR. A PACS-based approach to image-enabling Epic would either ignore these assets or require direct interfaces between Epic and each individual departmental system to link these non-DICOM assets to the EHR. This could quickly become a costly and time-consuming programming and maintenance nightmare.

Another thing to keep mind is that it's not uncommon for radiology departments to request a new PACS system every few years. New PACS require new interfaces and possibly underlying infrastructure changes to core clinical systems like Epic, generating even more costs.

Moving towards a better solution: Enterprise Imaging

A more future-proof path to image-enabling Epic is to take an Enterprise Imaging approach that incorporates a Vendor Neutral Archive (VNA), enterprise viewing technology and image acquisition and connectivity tools. Enterprise Imaging unites imaging information throughout a healthcare enterprise – using capture and connectivity solutions to consolidate patient images in PACS and other non-DICOM specialty archives – into a single, standards-based VNA that communicates seamlessly with all IT systems, including Epic. A centralized enterprise viewer integrated with Epic provides clinicians with both referential and diagnostic views of all images within the context of the patient record in the EHR.

Enterprise Imaging doesn't offer a one-size-fits-all technology solution. Organizations that take both a holistic and incremental approach, therefore, tend to be most successful. An effective Enterprise Imaging strategy needs to create a framework for standardization, provide resources to meet workflow needs and allow flexibility for organizational growth. To accomplish this, organizations should consider four key capabilities that can be implemented in any order:

Connect: Capture all medical images and related documents and integrate them with existing PACS and/or EHR systems.

Manage: Manage imaging content across the enterprise in a single repository with a VNA.

View: Access and interact with medical images and reports in any format and in a single view across the enterprise. Also provide access to other departments across the enterprise to imaging and document information that don't need EHR access, but do need access to unstructured information.

Share: Distribute images and data at the point of care through an image-enabled Epic EHR viewing capability, a health information exchange (HIE) and other resources.

By adopting an Enterprise Imaging strategy, hospitals and health systems can ensure medical images get into the hands of physicians and other clinicians for more informed decision making, while streamlining clinical workflows. As a result, organizations can make significant strides towards improving care quality and outcomes, reducing costs and meeting value-based reimbursement requirements.

For more information on implementing an effective Enterprise Imaging framework, download the eBook [Enterprise Imaging: See What You've Been Missing](#)

Experiencing the benefits of enterprise image enablement

Applying an Enterprise Imaging strategy to image-enable Epic can provide a wealth of benefits to end-users and management alike, including the following:

Improves physician satisfaction and engagement

With Enterprise Imaging, physicians can securely access images via Epic from any device. With easy access to more patient data, physicians begin to see more value in the system and will use the Epic EHR on a more regular basis. This supports the organization's investment and makes it a more valuable tool as more physicians use it.

Streamlines clinical workflow

By integrating an enterprise viewer with Epic, you eliminate the need for clinicians to log into multiple systems or toggle between browsers to view patient images, giving them back valuable time to focus on their patients. When up to 35 percent of a clinician's time is wasted due to the lack of interoperable systems, it's easy to see why efficiency is so important.⁵

Facilitates image sharing and care coordination

By image-enabling Epic using an Enterprise Imaging approach, you can provide referring physicians both inside and outside your enterprise with access to the same patient images, which promotes collaboration. Furthermore, enterprise-wide image accessibility eliminates the need to burn image CDs for patients to carry from provider to provider, improving satisfaction.

Enhances patient care

Easier accessibility and more complete patient data support well-informed care decisions. Providing access to this information at the point of care allows physicians to identify trends from one central location, helping reduce potential readmissions and discharge delays. Ultimately, this improves care quality and outcomes.

Improves patient engagement

Centralized image access makes it easier for providers to interact with patients while showing them their images. This enriches the physician-patient relationship, helping patients better understand their condition and improving patient compliance to treatment recommendations.

Reduces duplication costs

When providers can easily access imaging studies from multiple sources and clearly see if a test has already been performed it reduces duplication costs. Ultimately this lowers the cost of care and decreases the chances of unnecessary radiation exposure as well. This is a valuable benefit when you consider that 32 percent of duplicate tests occur due to the lack of information sharing,⁶ costing the U.S. about \$12 billion annually.⁷

Looking Ahead

Organizations need new technologies and strategies to help them succeed in today's highly regulated and patient-centered environment. For Epic EHR users, adopting an Enterprise Imaging strategy helps complete the patient record by making medical images, photos, videos and documents available at the point of care. This not only enables providers to make more informed decisions that improve care quality and outcomes but also streamlines workflows, improves regulatory compliance, enhances the patient experience and lowers costs. Enterprise Imaging enables Epic EHR users to see what they've been missing by delivering more complete patient information for better care.

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Sources

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