AMBRA®

EBOOK

The New Economics of Imaging Centers

Introduction

The economics of imaging centers are changing. What patients value when they interact with imaging centers and what they expect after the exam is changing, too. And healthcare regulations like MACRA, MIPS, and PAMA are all putting the spotlight on ensuring that every imaging exam contributes to value-based care.

Together, it's all changing how the imaging industry operates.

The structure of imaging groups is also more distributed than ever with more physical locations due to organic growth, M&A, or growing partnerships with outside radiology groups and subspecialties. Today's imaging centers are balancing the economics of attracting patients within an increasingly cost and fee-sensitive environment.

New World Economics. Old World Technology.

The legacy technology that imaging centers run was never designed for a world that requires a new level of efficiency or one that places a premium on connected, value-based care.

The tools imaging technicians and administrative staff use every day were never created to enable images to freely flow from imaging center, to radiologist, to patient and referring physician. Instead, many imaging centers still rely on CDs, couriers, or brittle VNAs to ferry images to each point in the patient journey—all adding cost, time, and risking lost or damaged studies that contribute to the latency between exam and results.

Traditional PACS just don't support complexity like growing locations and disparate offices. Imaging centers have been left with a collection of siloed PACS that each require individual care and feeding.

Growing imaging volume and size of studies have led to a data explosion that have added practical issues around image storage. The need to store hundreds of terabytes or petabytes of imaging for disaster recovery or archiving purposes isn't just expensive, but also makes adhering to retention policies practically difficult.

Five of the Biggest Trends in Imaging

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Payers Asserting Greater Control Over Imaging

The growth in imaging as a cost driver for healthcare has increasingly come under scrutiny from payers. One major insurer just recently stated that patients must schedule their MRI or CT imaging services at independent imaging centers, and that they will typically deny financial coverage for imaging performed in the hospital setting unless it was unavoidable.

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Hospitals Reacting with Outpatient Expansion

The shift towards independent imaging centers has meant that hospitals and health systems are increasingly developing imaging services that are outside of their traditional hospital outpatient environments so that they can retain patients who are otherwise being driven towards imaging centers. It's why a recent survey of hospital and health system leaders by the Advisory Board found that 74% of them have planned outpatient expansion projects over the coming years with the goal of capturing more of their patients' healthcare touch points.

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Imaging Centers Facing Fee Pressure Are Looking to Cut Operating Costs

Independent imaging centers are also under pressure from insurers who are focused on driving down fees. In some cases, negotiating fee structures are simply too low for imaging centers to continue operation. Independent imaging centers already have a cost advantage over hospitals, with lower operating costs, fewer staff, no need to be open around the clock, and less costs to manage facilities.

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Patients Are Expecting More from Imaging Centers

With patients increasingly faced with high-deductible health insurance plans, they're taking a more consumer centric approach to their healthcare choices. Imaging centers must not only compete on price, but also win patients based on convenience from proactively ensuring patients are prepared for their exam, to providing a great front-desk experience, and engaging patients using digital channels.

It's increasingly becoming apparent what patients expect from imaging centers, and they're voicing that imaging centers need to up their game before and after the exam.

A 2018 study of 1,400 patients found that imaging centers were a go-to resource for information for patients to prepare for their upcoming exam just 19 percent of the time. While after the exam, an Ambra Health survey[2] found that 4 out of 5 patients are looking for access not only to their results, but their imaging too. Imaging centers need to do better pre and post exam.

Imaging and Interpretation. More Distributed. More Connected.
Finally, there's a general trend towards imaging production and image interpretation becoming more distributed and decentralized. Imaging centers are increasingly looking to work with outside radiology groups, or even teleradiology organizations, and gain access to radiology subspecialties to interpret imaging. It's all leading to different stakeholders in the healthcare value chain connecting and integrating systems and processes.

Case Study: Imaging Transformation at Envision Radiology

Background
Envision Imaging, part of Envision Radiology, provides diagnostic imaging services across 38 locations in Colorado, Texas, Oklahoma, and Louisiana, offering MRI's, CT scans, ultrasounds, and other imaging services to their patients.

Challenges
Envision was facing significant administrative and productivity overhead from having too many different one-off solutions based on unique technologies across their locations. With such a disparate imaging stack, it was increasingly becoming a challenge to manage costs effectively, as well as creating growing frustration around stability and risk.

Goal
A priority at Envision was consolidation and reduction to fewer point solutions with the goal of a getting to one image sharing platform across Envision's locations to enable better sharing outside of the organization. With Envision Radiology performing both primary reads and overreads, they needed a solution to enable more in-depth case work on a patient by transparently sharing images between entities without requiring a major IT, security, and legal project.

[2] Consumer Survey, Era of Change: Today's Healthcare Consumer, Ambra Health

Solution

Envision chose to implement Ambra cloud image management to route imaging across their organization and to outside reading groups. Envision is routing images from two PACS systems into the Ambra workflow to instantly connect imaging and radiology with one solution, regardless of location. Cloud sharing enables Envision to engage more not only with in-house radiology, but also with half a dozen different reading groups spread across the country.
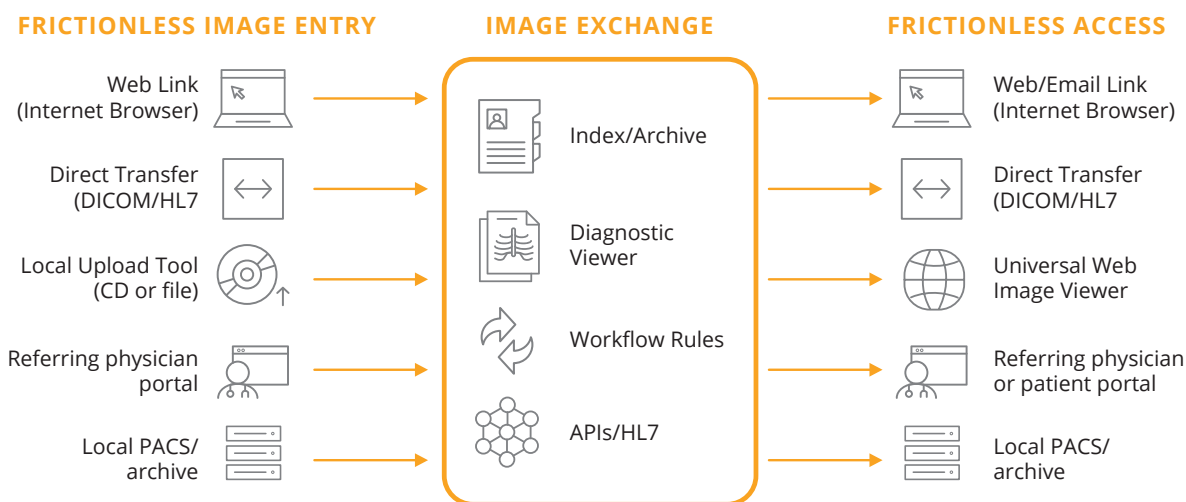
Benefits

- Simplified security footprint of organization through managed sharing
- Instantly sharing one-offs or ad-hoc studies with specialists
- Improved in turnaround time by reducing need to physically ship studies
- Reduced risk by using SOC 2 managed storage for secondary image store/disaster recovery
- Engaging with more reading groups to support Envision's growth plans

Imaging Center Technology—Change Underway

CD-Less and Courier-Free Workflows

Forget couriering CDs to radiology. Modern image workflow tools route studies instantly to the right physician for the read whether they're in-house, at another facility, or simply a reading group affiliated with the imaging center. With digital image routing, radiology can instantly access a study with just a weblink from their worklist as soon as the study is ready. It means better turnaround times on studies at a lower cost—great for imaging centers, radiology, and better for patients too.

FRICTIONLESS IMAGE ENTRY

- Web Link (Internet Browser)
- Direct Transfer (DICOM/HL7
- Local Upload Tool (CD or file)
- Referring physician portal
- Local PACS/ archive

IMAGE EXCHANGE

- Index/Archive
- Diagnostic Viewer
- Workflow Rules
- APIs/HL7

FRICTIONLESS ACCESS

- Web/Email Link (Internet Browser)
- Direct Transfer (DICOM/HL7
- Universal Web Image Viewer
- Referring physician or patient portal
- Local PACS/ archive

Image Storage Cost Reduction

Imaging centers can quickly end up with an archiving problem, due to growth in image volumes and the size of images. It's why imaging centers are moving to cloud archiving to manage their costs and reduce risk, too. Cloud archiving enables imaging centers to realize the economies of scale with cloud storage, reducing costs by as much as 40-percent over traditional storage options. And by using a SOC 2 off-site data center to store the archive, it can improve business continuity and compliance.

Improved Patient Service

Imaging centers are increasingly competing for patients. A study by the Journal of the American College of Radiology, found that 51% of patients stated they preferred immediate access to their studies. A study by Ambra of 1,237 healthcare consumers last year found that 80-percent would like their imaging to accompany their report. Image-enabling a patient portal can automatically provide a patient with their imaging and report, all as a standard part of the imaging workflow.

Multi-Location Sharing

Imaging centers and radiology groups are increasingly distributed in different locations and different organizations. It means unmanaged sharing where disparate groups are using different tools and technologies to upload, and accessing imaging isn't just inconvenient, it can create security risks, too. Cloud image management tools provide a single HIPAA compliant stack that ensures secure access to studies without requiring each party to maintain a technology stack.
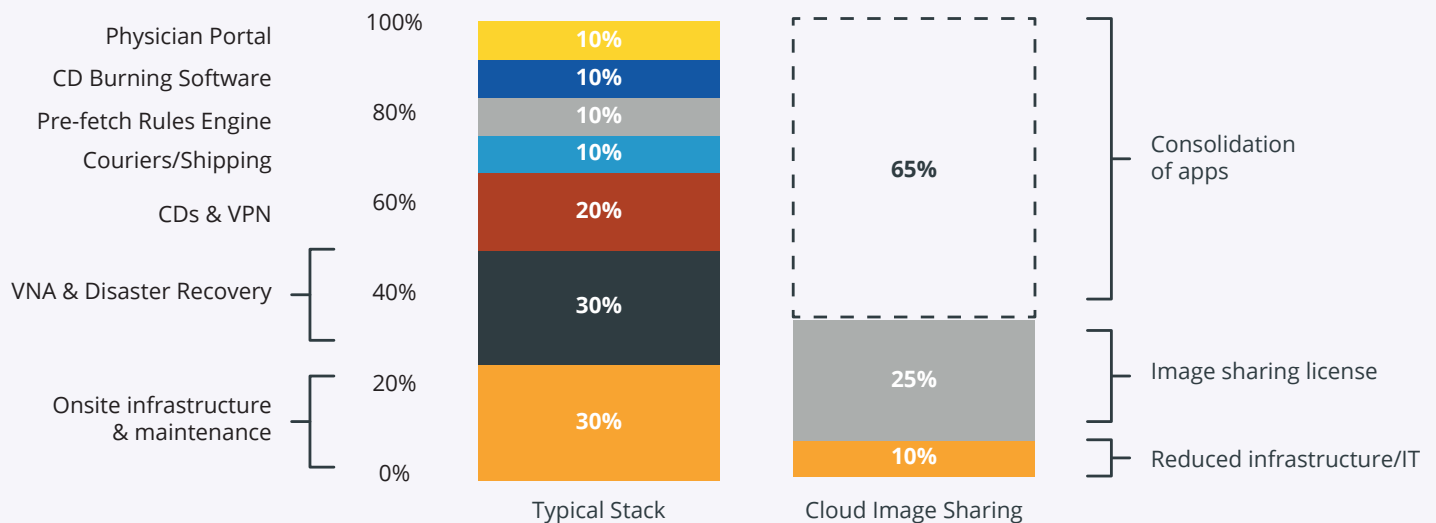
Maintenance Reduction Using Cloud Apps

On-premises applications for storing and managing imaging at each location all have a substantial hidden cost structure. For example, upgrades, patches, fixes, as well as ensuring they are available and responsive all creates recurring costs whether with IT staff, or simply maintaining hardware and software. Shifting it to the cloud cuts it all out, saving significant ongoing cost.

ON-PREMISES

Software Licensing Cost

Customization & Implementation

Hardware

IT Personnel

Maintenance

Training

CLOUD COMPUTING

Subscription Fees

Implementation, Customization, & Training

Stack Simplification and Consolidation

Many imaging centers are faced with imaging tech stack proliferation and the administration overhead and maintenance of it all just drains resources. Maintaining multiple PACS apps, CD burning software, HL7 tools, separate VNAs, and disaster recovery tools all adds up, especially across different locations. Cloud image management suites roll it all together into one platform for sharing and archiving leading to less cost and more ease of use.

Imaging Center Technology —Change Underway

JEFFERSON RADIOLOGY

Background

Established in 1963, Jefferson Radiology, recently acquired by MEDNAX, is the largest private practice radiology group in Connecticut and has affiliations with 7 regional hospitals. Jefferson Radiology offers a breadth of imaging services as well as diagnostic and therapeutic radiology expertise.
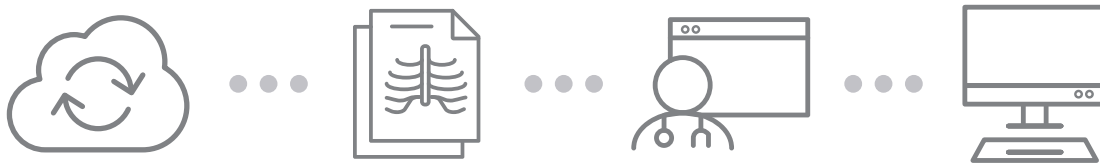
Challenge

Faced with fragmentation in their imaging workflow that relied on CD burning, couriers and shipping, third party VNA and disaster recovery, HL7 listeners, and proprietary

portals across their locations, Jefferson was looking for a single cloud VNA to create a more connected imaging workflow that routed images, incorporated priors, and connected with patients and referring physicians, while in turn simplifying their stack.

Solution

Since deploying Ambra's cloud image management, Jefferson Radiology estimates over 30% in cost savings since switching from their legacy exchange vendor to a cloud VNA . Referring physicians have cited ease of use and reliability as key benefits.

Reimagined Workflow

At Jefferson Radiology, prior studies are pre-fetched from the cloud VNA and searched across the network. If prior studies are found, they are normalized into the workflow. Patient imaging is automatically sent to the radiologist workstation where reporting is completed. Studies and completed reports are auto-routed back to referring physicians through a custom cloud-branded portal. In keeping with their patient centric view, Jefferson makes studies available to patients through an easy-to-access electronic link.

"Ambra enabled us to image-enable our patient and physician portals, integrate with our RIS, ease access to images, and be collaborative."

—MICHAEL QUINN

Chief Technology Officer
of Jefferson Radiology

Technology Checklist for Imaging Centers

AREA	CRITERIA	CAPABILITY
Workflow	Multi-site, multi-location image routing	☐
	Automatic image routing to subspecialties	☐
	Imaging exchange over internet	☐
	Share images within and beyond the imaging group	☐
Viewing	Provide zero footprint mobile viewer for radiology	☐
	Provide FDA 510(k) diagnostic viewer for radiology	☐
Integration	Provide imaging download for patients	☐
	Provide download for referring physician	☐
	Integrate with multiple, disparate in-house PACS	☐
	Modality worklist integration	☐
Management	No on-premise hardware or software	☐
	Store DICOM and non-DICOM data	☐
	Cost effective image archiving and disaster recovery	☐
	Automatically prune and eliminate images	☐
	HIPAA and SOC 2 compliant	☐

Where Next

The economics of imaging has changed. But the good news is that the technology to make the economics work to your advantage has changed too. Groups like Envision Imaging and Jefferson Radiology have realigned their image management tools to cut cost and flow imaging faster and more efficiently. In an increasingly competitive environment, the dividends can be substantial, reducing administrative and maintenance costs by 30-80%—while improving patient service.

There's never been a better time to turn imaging economics in your favor.

CONTACT US TO LEARN MORE

ABOUT AMBRA HEALTH

Ambra Health is a healthcare cloud company dedicated to making digital medical image management accessible to all, from anywhere. Our powerful cloud-based suite streamlines the medical image exchange process and connects patients, care providers, and facilities worldwide. We work with some of the largest hospitals and health systems such as Stanford Children's Health, Weill Cornell Medicine and Memorial Hermann as well as private practices, imaging centers, clinical research organizations, and health information exchanges. Discover what the power of the cloud can do for your healthcare enterprise at **ambrahealth.com**.