

The 8 Mistakes People Make When Selecting an Image Exchange Provider

An effective image exchange solution can have significant positive impact on your ability to provide effective clinical services, your workflow, your costs, your patient satisfaction, and your data security.

However, this can be a complex purchase, and there are several areas that are commonly overlooked while making the choice. There are eight mistakes hospitals often make while examining their image management options.

MISTAKE #1

Failing to anticipate the increasing use of imaging by a wide range of clinical departments

Clinical departments outside of radiology generate and use their own imaging to support patient care, and are doing so at an increasing rate. Cardiology, gastroenterology, neurology, ophthalmology, oncology, pathology, dermatology, and many other areas generate “ology”-specific image data, with their own workflows.

With the move to value based care, care coordination across departments is increasingly important, particularly for an aging patient population with multiple morbidities. Each specialist needs immediate access to the appropriate imaging and related clinical information in a limited time window in order to efficiently provide patient care.

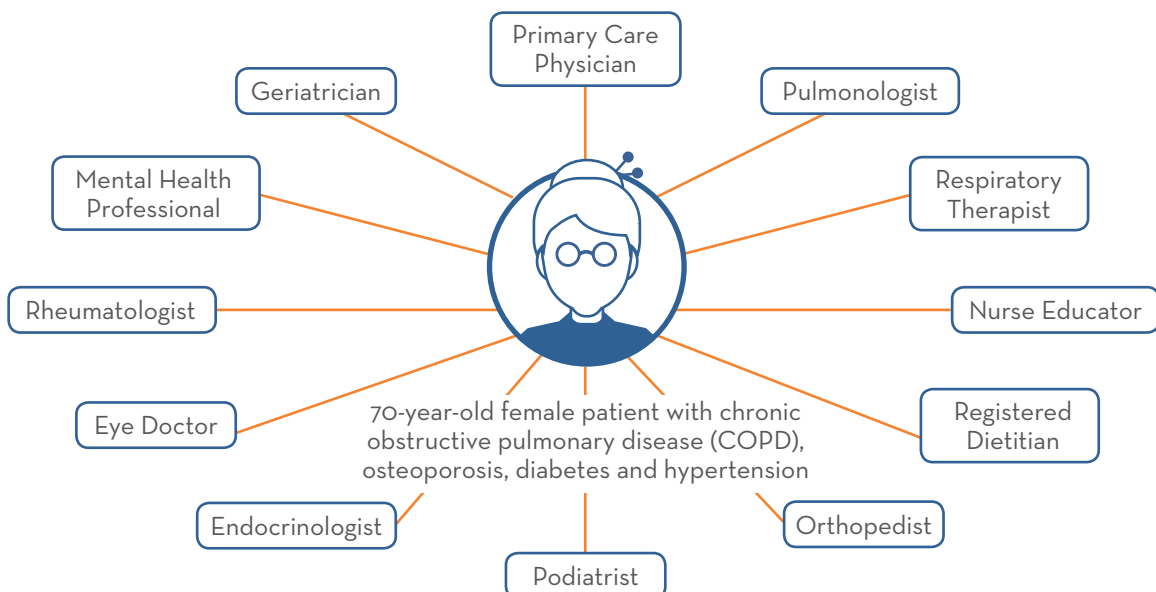
Does your image exchange provider do more than provide lip service for enterprise imaging? Are you confident that they can manage the acquisition, management, distribution, and archiving of images across all areas of your health system?

Care Coordination is Critical

The average person over age 65 has 8.7 chronic diseases.¹



Extensive care coordination and clinical information sharing is necessary for a patient with comorbidities



MISTAKE #2

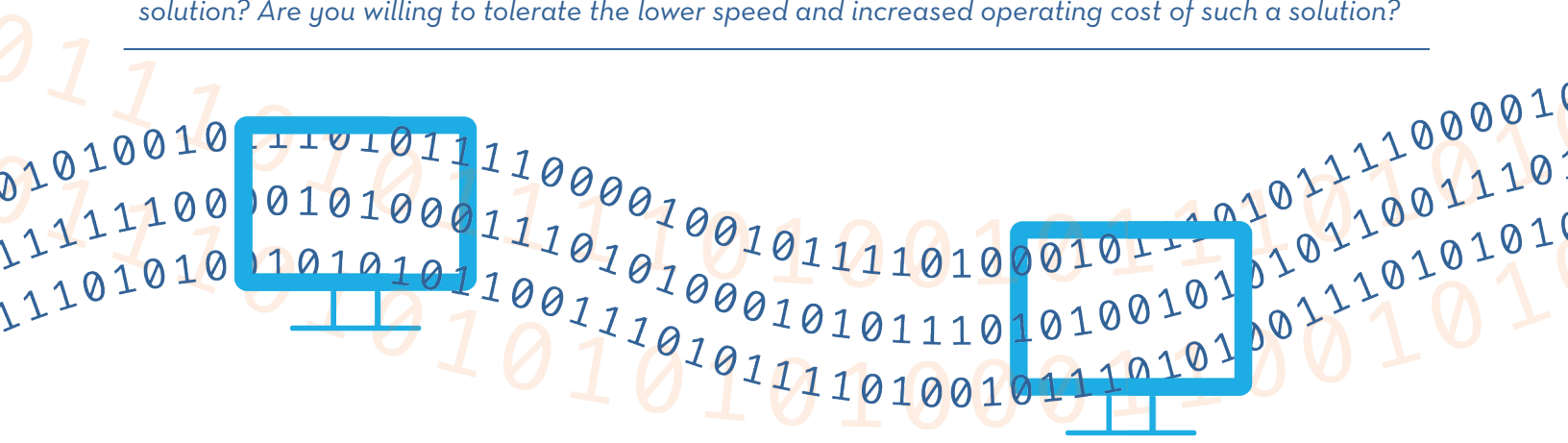
Choosing a cloud-only solution that limits fast access and increases storage cost

Providers may be tempted to favor cloud-only image exchange solutions, which may seem easier for them to manage. But there are several drawbacks to cloud-only at this stage in the industry that you might not have considered.

One of them is the speed to which you can access high volumes of large image files. Cloud processing is remote. If every bit of every image has to be sent out to a server farm located in a faraway state and then back again when it needs to be viewed, you have the choice of paying for additional bandwidth or accepting slower speeds, and even limitations of when you can upload and download large images such as 3D and 4D scans.

A hybrid system with a dedicated on-premise server in your facility integrated seamlessly with an external cloud capability, will let you take advantage of both local speed and remote processing capability. Image sharing becomes almost instantaneous. Security is also improved, since you can control what, if any, patient data is exposed outside your firewall.

Has your image exchange provider made their job easier and yours harder by relying on a cloud-only solution? Are you willing to tolerate the lower speed and increased operating cost of such a solution?



MISTAKE #3

Not paying enough attention to the vendor's cybersecurity track record and security measures

In a world where hospitals and health systems are increasingly targeted by hackers and scammers, cybersecurity must always be top of mind when acquiring any new system. Large volumes of personal health information (PHI) are acquired, converted, transmitted, displayed, and stored in the form of images.

Every device that generates, transmits, or displays medical information must be monitored. Anyone using the system must be clearly identified. Every file must be properly encrypted, at rest and in motion. Any possible breach must be instantly responded to, and the results properly reported to regulators and consumers. Many breaches exploit where and how vendors connect, so look for solutions that emphasize interoperability since they are more likely to operate in protected and know standard ways.

Data breaches can be expensive, lead to regulatory sanction, and seriously impact reputation.

What is your image exchange provider's track record with cybersecurity issues? Are you confident that they can both minimize the risk of a breach, and respond appropriately in the case of one?

ADDITIONAL SECURITY MEASURES TO CONSIDER:

- Do they have a business continuity plan and a breach notification plan?
- Have they had any breaches? If so, when?
- How do they ensure data is exchanged in a secure manner?
- Do they use a third party to perform security assessments of your information systems?
- Do they have a designated information-security officer that you can speak with?

MISTAKE #4

Not ensuring that your provider is FIPS validated to exchange with Veterans Affairs and other federal agencies

FIPS 140-2 (Federal Information Processing Standard) is required by the U.S. government for anyone using encryption (for storage or sharing) to secure data using government-validated equipment to perform the cryptographic operations. FIPS is among the requirements that allow an image exchange vendor to work with any federal agency that requires the standard including the U.S. Department of Veteran Affairs (VA) and Indian Health Service (IHS).

Community health care providers who work with a FIPS-validated vendor are enabled to give better care to veterans by seamlessly sharing medical images and other clinical information to reduce wait times, improve patient satisfaction, and support clinical decision making.

Is every part of your image exchange provider's offering FIPS compliant? If not, are you aware of the compliance risks in your workflow?

MISTAKE #5

Not planning adequately for increasing image file sizes and volumes

No matter how large image files are now, they will get larger. 3D and 4D scans are rapidly becoming more popular. Resolutions are increasing and the use of images in diagnosis and treatment are becoming more common in every clinical area. Physicians are increasingly working with other departments to create treatment plans, and consult over shared images, often at remote locations. And new imaging modalities are continually arising and prove their clinical benefits.

Any system that does not have enough bandwidth will choke, causing delays and even crashes. Aside from picking a hybrid cloud solution (because you did not make Mistake #2), you should always plan for more bandwidth than you currently think is necessary.

Is your image exchange provider capable of providing expanded bandwidth at a reasonable price? Does their offering incorporate the continuous increase in bandwidth requirements as a routine planning element?



Digital Breast Tomosynthesis studies average about 450 MB in size but can be as large as 3 GB. This increase in file size may slow digital image transmission.

MISTAKE #6

Not scrutinizing a vendor's patient authentication system

Increasingly, patients are demanding and getting more access to their personal healthcare data, online, 24/7/365. This data now includes images. With more hospitals and providers sharing medical images directly with patients, you must ensure that your vendor has a data governance system with a multi-step authentication system that gives the correct patient access to the correct exam.

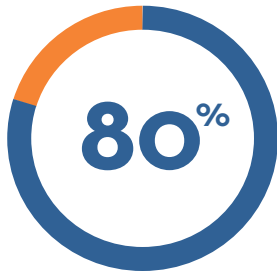
Has your image exchange provider paid specific attention to role-based access control for any employees involved in the portal? Is there a robust audit trail capability? Do they provide a multi-factor authentication method that is still easy for patients to use?

MISTAKE #7

Inadequately considering the opportunity for increasing patient engagement

And, aside from the security aspects, patient interactions with their image data should be intuitive, simple, and provide a way to increase engagement. Healthcare providers need an image exchange vendor who can provide value-added digital tools to enhance the patient experience.

Does your image exchange vendor provide a digital health solution so patients can electronically store, request, and send records such as mammograms in a secure environment?



of healthcare decisions in households are made by women.²

They are a key demographic to engage. Digital solutions such as Mammosphere gives easy and secure access to priors, and helps to improve patient outcomes.

MISTAKE #8

Not examining the vendor's data hygiene practices

Duplicate patients, records attached to the wrong patient, obsolete records, records with incompatible formats, and data lost altogether are common problems in image management implementations. It's tempting to make processes automatic in order to increase throughput, however, data mistakes can have serious impacts to patient safety.

But this also increases the risk of introducing dirty data into your network, data that is then difficult, time-consuming, risky, and expensive to clean again. Your vendor should give you the flexibility to build in a customized workflow to include a human gatekeeper in the loop who can reconcile data in accordance to your data governance policy before it is sent to storage. Your vendor should also provide a clear audit trail to document how discrepancies were resolved. This ultimately helps to avoid medical errors.

Does your image exchange provider pay the necessary amount of attention to this resolutely unglamorous topic? Do they have a good track record of data cleaning, reconciliation, monitoring, and reporting?

REFERENCES

- 1: Davis PhD, Richard Chung, MD and Deborah T Juarez, ScD. "Prevalence of Comorbid Conditions with Aging Among Patients with Diabetes and Cardiovascular Disease." Hawaii Medical Journal. Published Oct 2011. Accessed March 2018. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3215980/>
- 2: "Women and Health Care: A National Profile, Key Findings from the Kaiser Women's Health Survey, Chapter 7." KFF Henry J Kaiser Family Foundation. Accessed March 2018. <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/women-and-health-care-a-national-profile-key-findings-from-the-kaiser-women-s-health-survey-chapter-7.pdf>

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With its beginnings in medical image exchange, lifeIMAGE now orchestrates the flow of any and all clinical information across the patient's journey, in real time, to help care teams and researchers make informed decisions.

Founded in 2008, lifeIMAGE has spent the past decade innovating and building an interoperable network ecosystem connecting hospitals, physicians, patients, life sciences, medical device, telehealth and EHRs.

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