How to Time Your Cloud Transition: A Radiologist's Perspective

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Healthcare systems embarking on the transition to the cloud should approach this with careful consideration and strategic planning. Collaborating with cloud service providers can leverage advanced technologies like artificial intelligence (AI) and machine learning to improve patient care, diagnoses and treatment outcomes. However, investing in a migration strategy is crucial to ensure a successful transition to the cloud and smooth adoption.

To shed light on this quickly evolving topic, Kieran Anderson, group publisher at *Applied Radiology,* spoke with Sonia Gupta, MD, chief medical officer in enterprise imaging of Change Healthcare in Nashville, Tennessee, which is now part of Optum. In addition to this important role, she is also a board member of the American Board of Artificial Intelligence and Medicine and serves on the editorial advisory board of *Applied Radiology.*

Benefits of moving to the cloud

Each year, radiologists around the world review billions of medical images, representing a vast amount of diagnostic information that is crucial for patient care. Imaging data constitutes a staggering 90% of all healthcare data, underlining its importance in diagnoses and treatments for millions of patients.[1]

"For radiologists, thinking about the cloud is really important because we have more data than we know what to do with, and we need to store it in an efficient way," said Dr. Gupta. "We're streaming thousands of images, and imaging has only gotten more complex in recent years. Now is the time to start thinking about the cloud. The cloud can help radiologists view images more quickly and efficiently to improve their workflow, which means patients get results faster and can access care quicker."

Storing images in the cloud allows healthcare systems to adapt to what Dr. Gupta calls the "geographic migration" of patients in a post-COVID world. "A lot of patients have moved and want to take their images with them to new facilities. If you have good interoperability and a good cloud strategy, it's easy for patients to have all their healthcare data available to take with them. Therefore, utilizing cloud storage can make it easier for new doctors involved on the patient's care team, to have historical information," she explained.

Reduce the radiologist's burnout

The cloud can address the rising rates of burnout in radiologists. It's been reported that 54% to 72% of diagnostic and interventional radiologists exhibit burnout symptoms.[2] In the face of declining Medicare reimbursement, radiologists are under more pressure to maintain a high level of accuracy while simultaneously assessing a substantially higher number of cases and images.

"A lot of that burnout is because our IT systems are behind," said Dr. Gupta. "Using the cloud decreases wait time for images to load, which adds up throughout the day, month and year. Being able to improve clinical care for our patients also impacts us as radiologists because we want to take care of patients and improve their lives. But that can get lost in the daily grind of IT challenges."

Plan now to transition to the cloud

Healthcare systems can start planning to transition to the cloud by focusing on their radiology departments' biggest challenges and workflow issues – and investigating how the cloud can improve those areas. "Thinking about the problems you're trying to solve will help you figure out what your cloud strategy should be," she said.

Establishing an implementation timeline is an important initial step,

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as well as understanding your organization's current internal IT resources and external resources through vendor partners.

According to Dr. Gupta, a successful transition begins with building consensus among stakeholders within your system and soliciting advice from other systems, such as large IDNs that have already moved to the cloud and smaller practices that are still considering their options. This can provide an understanding of potential "best practices" for approaching the "cloud journey."

Another important consideration is understanding your organization's clinical and IT priorities across departments. This approach can help determine your strategy for a smooth transition to the cloud. Dr. Gupta advises taking a phased approach within this strategy. Many Optum customers choose to initially move to a cloud archive that stores patients'

historical imaging and data, before implementing a cloud viewer, also called a cloud workflow. "At Optum, a lot of our customers have had great success with this first step," she said.

A cloud viewer is unlike on-premise infrastructure in that it allows radiologists and department staff to securely access, view and manage images and data remotely. It offers flexibility and scalability to enable real-time collaboration, AI integration for image analysis, and seamless integration with electronic health records systems. Cloud viewers improve workflow by enhancing efficiency, accessibility, and collaboration among healthcare professionals, ultimately improving patient care delivery.

Further, patients' clinical images aren't constrained to the radiology department. They flow through the hospital system, from surgery and gastroenterology to dermatology and

beyond. Given this, defining your organization's vision of cloud adoption for enterprise imaging is important because there are differences in what constitutes "enterprise imaging" between organizations.

When organizations are ready to embark on the journey to adopt the cloud, Optum is ready to help. "Enterprise imaging is how your organization wants to define it, and Optum just wants to be the partner in that journey," she said.

References

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2) Nader Ashraf Fawzy, Muhammad Junaid Tahir, Saeed A, et al. Incidence and factors associated with burnout in radiologists: A systematic review. *European Journal of Radiology Open.* 2023;11:100530-100530. doi:https://

...transitioning to the cloud today will give healthcare leaders.the flexibility to move forward without taking on the financial burden of replacing outdated legacy infrastructure in the future.