

GET ON THE CLOUD

# A QUICK GUIDE TO MANAGED CLOUD HOSTING FOR MEDICAL PRACTICES

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## Introduction

Cloud hosting—storing, managing, and accessing data and applications on remote servers over the internet—is changing the health IT game for medical practices. It enables seamless access to critical information across different locations. By embracing cloud computing, your practice can streamline operations and foster greater innovation.

Practice owners and executives, IT administrators, and physicians grapple with higher costs, staffing shortages, and other challenges. They are increasingly aware of the benefits of leveraging the public cloud. If your practice is currently hosting health IT software on premises or at a co-location facility, this e-book will help provide you with the basic foundation for a successful transition to managed cloud hosting.

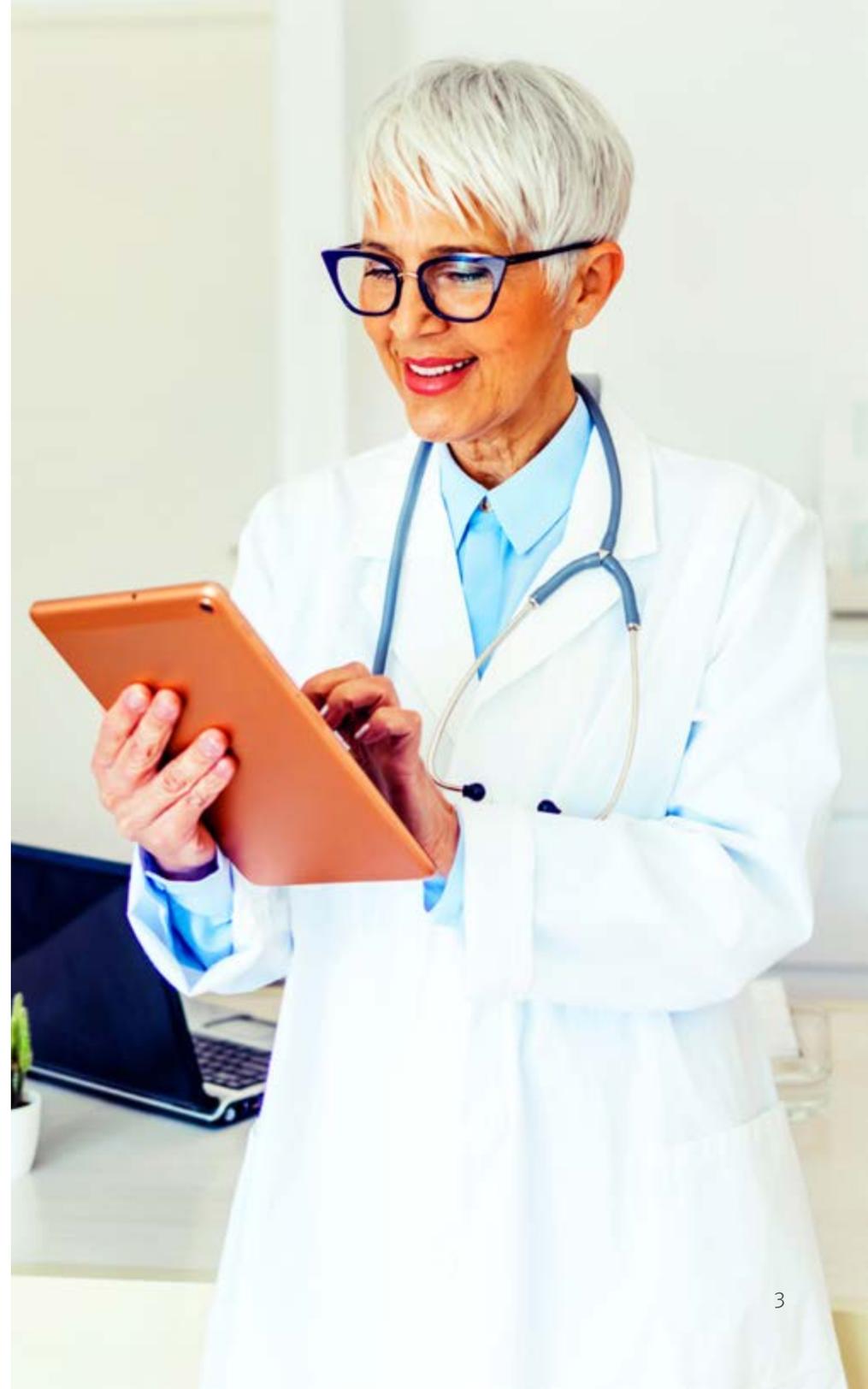
## CHAPTER 1

# KEY TRENDS IN THE HEALTHCARE CLOUD

Among the different cloud service layers, **infrastructure as a service** (IaaS) has emerged as the most popular choice in the healthcare sector. IaaS is a form of cloud computing that provides virtualized computing resources. A cloud service provider manages components of the IT infrastructure, such as storage, servers, and networking. The provider delivers services through virtual machines accessible via the internet to organizations that subscribe.

This trend and several others are identified in a recent report on cloud technologies in healthcare from KLAS Research, an organization dedicated to helping healthcare providers make informed technology decisions. Other significant trends:

- Amazon Web Services (AWS) and Microsoft Azure have solidified their positions as the leading cloud providers in the healthcare marketplace.
- Around 40% of healthcare providers interviewed said they utilize multiple cloud platforms. This suggests cloud strategies are evolving and becoming more sophisticated in the world of medical practice.
- The majority of healthcare software vendors have migrated their solutions to the cloud or are currently doing so.



“ One of the big reasons why we're seeing people move to managed cloud services is because they want to reduce capital outlay costs. ”

**Mike Smith**  
**Vice President of Research and Strategy**  
**KLAS Research**

# FACTORS DRIVING MEDICAL PRACTICES TO THE CLOUD

**Consider the factors listed below that may be relevant to your practice.**

### **Cost reduction**

Moving to the cloud may enable your practice to reduce capital outlay costs, particularly during hardware refresh cycles. Cost reductions result from shifting from upfront investments in physical infrastructure to a pay-as-you-go model.

"One of the big reasons why we're seeing people move to managed cloud services is because they want to reduce capital outlay costs," says Mike Smith, vice president of research and strategy, public cloud, at KLAS Research and co-author of the report, *Public Cloud Providers 2022*.<sup>1</sup>

### **The need for greater efficiency**

Cloud platforms enable shorter timelines for deploying new capabilities and facilitate streamlining of processes. Ultimately, these factors can help your practice improve patient care.

### **Resource constraints**

Moving to the cloud can help address resource constraints that inhibit growth. Cloud services are flexible and scalable. This enables your practice to enhance IT capabilities and system performance without running into resource limitations.

"It doesn't matter the size of your organization. AWS cloud hosting services are the same. Regardless of whether you're a small practice or a hospital, the services are the same for every size organization, which levels the playing field," explains David Slazyk, chief information security officer at NextGen Healthcare.

### **The need for agility**

According to Daniel Emig, vice president of managed cloud services at NextGen Healthcare, the primary factor driving medical practices to the cloud is the need to be agile as their business grows or shrinks while maintaining control of most of their operations.

"Either healthcare organizations are planning to grow quickly and know they can't keep up by buying equipment, or they know they're going to shrink, perhaps lose a bunch of practices, and don't want to sink money into fixed capital costs," says Emig.



## Security threats

If you're concerned about data breaches and ransomware attacks, the robust security measures provided by public cloud providers offer an important advantage.

## The drive toward innovation

If your practice wants to experiment with new ideas and develop/test new health IT solutions, the cloud offers a superior platform compared to using your own servers or a co-location facility. That's because it allows you to swiftly build or tear down health IT infrastructure as needed.

"Public cloud gives you the ability to test rather quickly and in a cost-efficient manner."

### David Slazyk

Chief Information Security Officer  
NextGen Healthcare

# TOP 10 REASONS TO GET ON THE CLOUD

Here's a breakdown of how cloud adoption can significantly benefit your practice.

### 1 Scalability and flexibility

Cloud platforms enable your practice to scale infrastructure resources up or down based on demand. This helps ensure optimal performance during peak times and cost savings during periods of lower utilization. It means you can adapt quickly to changing needs and accommodate growth without major upfront investments.

### 2 Enhanced collaboration

Cloud adoption fosters collaboration among providers, staff, and other stakeholders by providing secure access to shared data and applications. It facilitates interdisciplinary cooperation, improves care coordination, and accelerates innovation in healthcare delivery.

### 3 Improved data accessibility and availability

Cloud solutions ensure that healthcare data is securely stored, easily accessible, and available whenever needed. This enables timely access to patient information, reduces administrative burdens, and supports better-informed decision-making—all of which can improve patient outcomes.

### 4 Cost savings

By eliminating the need for extensive on-premises infrastructure, your practice can reduce hardware and maintenance costs. Cloud adoption allows your practice to pay for resources on a consumption basis, which improves cost efficiency.

"In the cloud, you don't have the capital outlay. You pay as you consume, and when you're not consuming, you're not paying," explains Slazyk.

This flexibility allows for easy scaling up or down based on business needs. In contrast, traditional capital expenditures for on-premises infrastructure involve upfront costs, regardless of usage.

### 5 Better security and compliance

Public cloud providers invest heavily in security measures and compliance certifications. They offer adherence to stringent data privacy regulations, such as the Health Insurance Portability and Accountability Act (HIPAA). They employ advanced security protocols, regular audits, and encryption techniques to safeguard sensitive healthcare data and protect against cyber threats. They also offer cost-efficient options for data redundancy and backup.

"The confidence in the public cloud providers being able to provide a more secure environment for healthcare organizations has definitely gone up," says Smith of KLAS Research. "Security concerns used to be a big inhibitor, but that is not the case anymore."

## 6 Improved focus on core competency

According to Daniel Emig of NextGen Healthcare, moving to the cloud takes away a lot of what he calls the “undifferentiated heavy lifting of technical support.”

“You're in the healthcare business. Why are you worried about servers, cabling, and storage capacity, as well as making sure you put it in the right ports, have dual electric connections, rack your equipment properly, have enough power to your system, and have enough cooling? That’s not the business you’re in. Moving to the cloud reduces the noise so you can focus your core business.”

## 7 More opportunities for innovation

Cloud adoption can provide medical providers better access to a wide range of cutting-edge technologies, such as big data analytics, artificial intelligence (AI), and machine learning. Better technology access can drive innovation in precision medicine, population health management, and predictive analytics.

The cloud facilitates the rapid deployment of innovative solutions, empowering healthcare providers to stay at the forefront of medical advancements. By leveraging cloud-based AI and machine learning platforms, healthcare providers can optimize operational efficiency, automate manual tasks, and improve patient experience through more personalized communication.

For example, consider genomics, which is becoming increasingly important in medicine. Cloud infrastructure plays a crucial role in genomics computing by supporting complex computations and analyses necessary for precision medicine.

## 8 Disaster recovery and business continuity

Cloud-based backup and disaster recovery solutions ensure that your practice can quickly restore critical systems and data in the event of a disruption or outage. This minimizes downtime, ensures continuity of patient care, and safeguards against data loss.

## 9 Improved patient engagement

Many practices leverage the cloud to deploy patient-centric solutions. These solutions include patient portals, mobile applications, and remote monitoring systems.

## 10 Analytics and research

Cloud platforms have proven instrumental in supporting data analytics, clinical research, and product development. Ambulatory practices can leverage the scalability and processing power of the cloud to derive actionable insights from vast amounts of practice data.

# OVERCOME CHALLENGES OF TRANSITIONING TO THE CLOUD

Expect challenges as your practice transitions its health IT infrastructure to a cloud-hosted environment. Below are some insights on how to manage these challenges.

## Perform a comprehensive risk assessment

This will help you identify potential security and compliance risks associated with cloud adoption. The assessment should inform the selection of appropriate cloud providers, data encryption strategies, and compliance measures.

## Implement robust data governance

It's essential to establish clear policies regarding data access, storage, sharing, and retention. Audit and monitor data handling processes on a regular schedule. Implementing strong data governance ensures data integrity, privacy, and compliance.

## Plan ahead for interoperability

Prioritize interoperability when selecting cloud services and applications to ensure seamless integration with other health IT systems. Standardized protocols and APIs are crucial in enabling interoperability and data exchange between different platforms and healthcare systems.



## Invest in training and education

Invest in training programs to upskill IT staff. Make sure they have the necessary expertise in cloud technologies, security practices, and data governance. This helps mitigate potential skill gaps and empowers your IT staff to effectively manage cloud environments.

Cultural barriers within IT teams can become a significant challenge, particularly if your practice is staffed by professionals who have spent their careers working with physical servers. Retooling and training are essential to overcoming cultural barriers as well as bringing the IT team up to speed with cloud technologies. AWS and Microsoft offer assistance and resources for organizations transitioning to the cloud.

Consider hiring more experienced staff or consultants to lead the transition and provide guidance. Build strong relationships with the cloud providers, as they can offer insights, best practices, and ongoing support for your cloud infrastructure. While consultants may initially be involved to accelerate the setup and provide expertise, focus on developing the knowledge and capabilities of your internal staff over time.

## Consider the true cost of ownership

While cloud services offer financial advantages, it's essential to have a clear understanding of the costs associated with migration, ongoing management, and optimizing the cloud environment. Continuous monitoring and adjustments will help you optimize the system and ensure cost-effectiveness in the long run.

## Respond to objections related to sunk costs

Within a healthcare organization, objections to moving to the cloud may be raised if a significant amount of capital has already been invested in computer hardware.

### **How can advocates for cloud storage overcome these objections?**

There are a couple of ways to respond. One is to determine if servers purchased to host EHR software can be used for other purposes, especially for data storage. In the world of health IT, the need for storage never ends.

In addition, cloud storage vendors may offer a hardware buyback program for devices you cannot reuse. A company will take your hardware and either resell it or use it for parts. Be aware that you will probably get only a modest percentage of your expenditures refunded. Still, buyback programs can help soothe objections to moving to cloud hosting at the executive level.

## Proactively advocate for industry standards that can affect your practice

Consider participating in professional associations and regulatory bodies to establish best practices, standards, and guidelines for cloud adoption in healthcare. Becoming an active participant in the technology infrastructure of your professional community can help foster a supportive technology ecosystem for your medical practice.

## CHAPTER 5

# SUMMARY

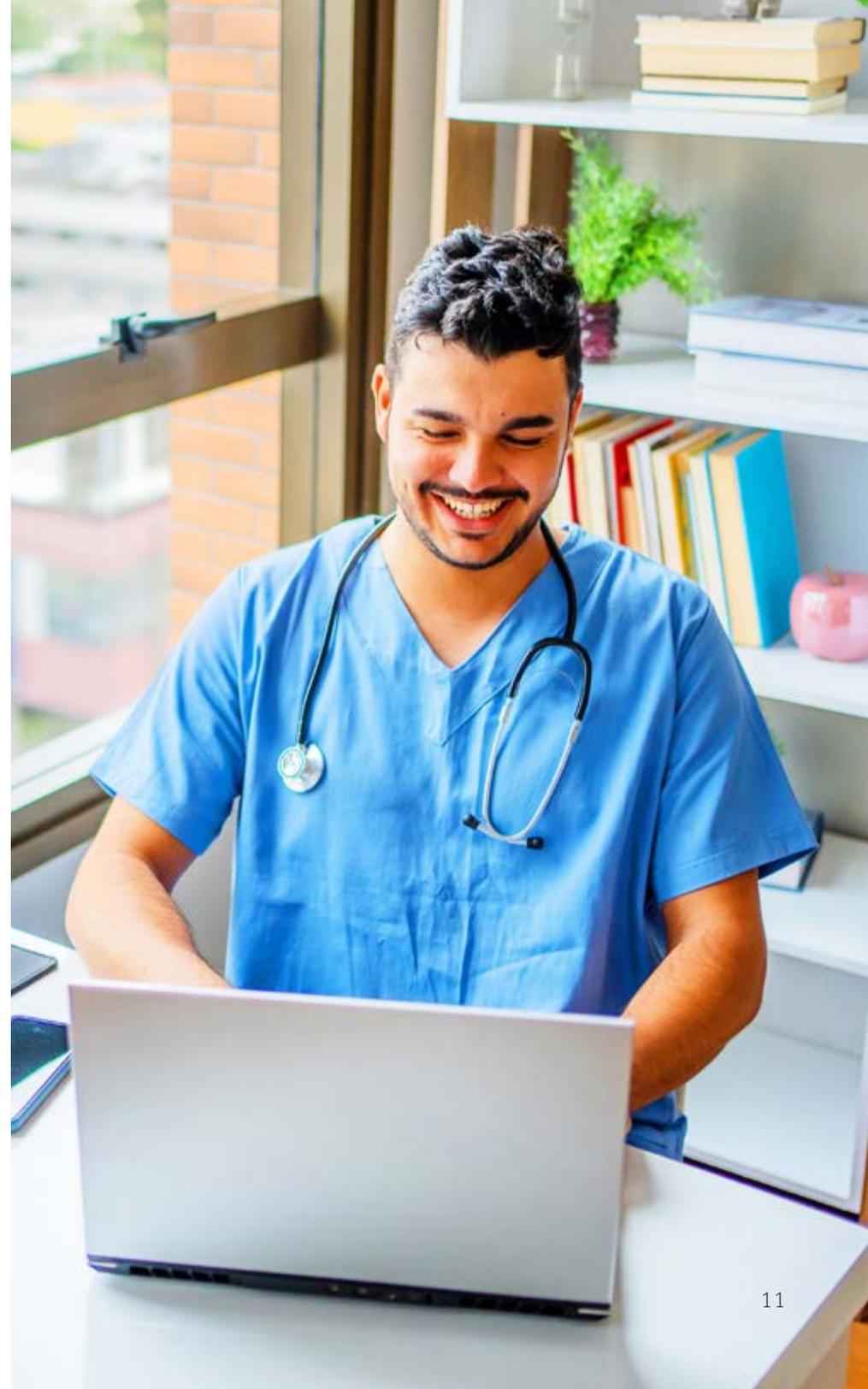
Cloud hosting offers significant value for medical practices, improving operations and security and creating better opportunities for innovation and collaboration while reducing costs. Careful planning and management of transitioning to the cloud can help overcome challenges.

NextGen Healthcare is dedicated to supporting the IT needs of ambulatory medical practices like yours. We offer managed cloud services so your practice can get all the advantages of cloud hosting as conveniently and cost-effectively as possible. By utilizing our resources, your practice can focus on providing quality care and thrive in the dynamic healthcare economy. We're here to reduce your frustration, anxiety, and aggravation.

Provided in collaboration with Amazon Web Services (AWS), NextGen® Managed Cloud Services:

- Reduces data security risks
- Supports business agility by easily adjusting according to your organization's needs
- Allows your IT staff to control your practice's data and systems

**For more information, check out this informative whitepaper.**



# NEXT STEPS

If you are new to NextGen Healthcare, contact us at 855-510-6398 or email [results@nextgen.com](mailto:results@nextgen.com)

If you use NextGen<sup>®</sup> solutions, reach out to your account manager.

## BELIEVE IN BETTER.<sup>®</sup>

1 Sam Equinto and Mike Smith, Public Cloud Providers 2022: Delivering Cloud Technology to HIT Vendors, KLAS Research, December 2022. <https://klasresearch.com/report/public-cloud-providers-2022-delivering-cloud-technology-to-hit-vendors/2799>.

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