aws

AWS FOR HEALTH

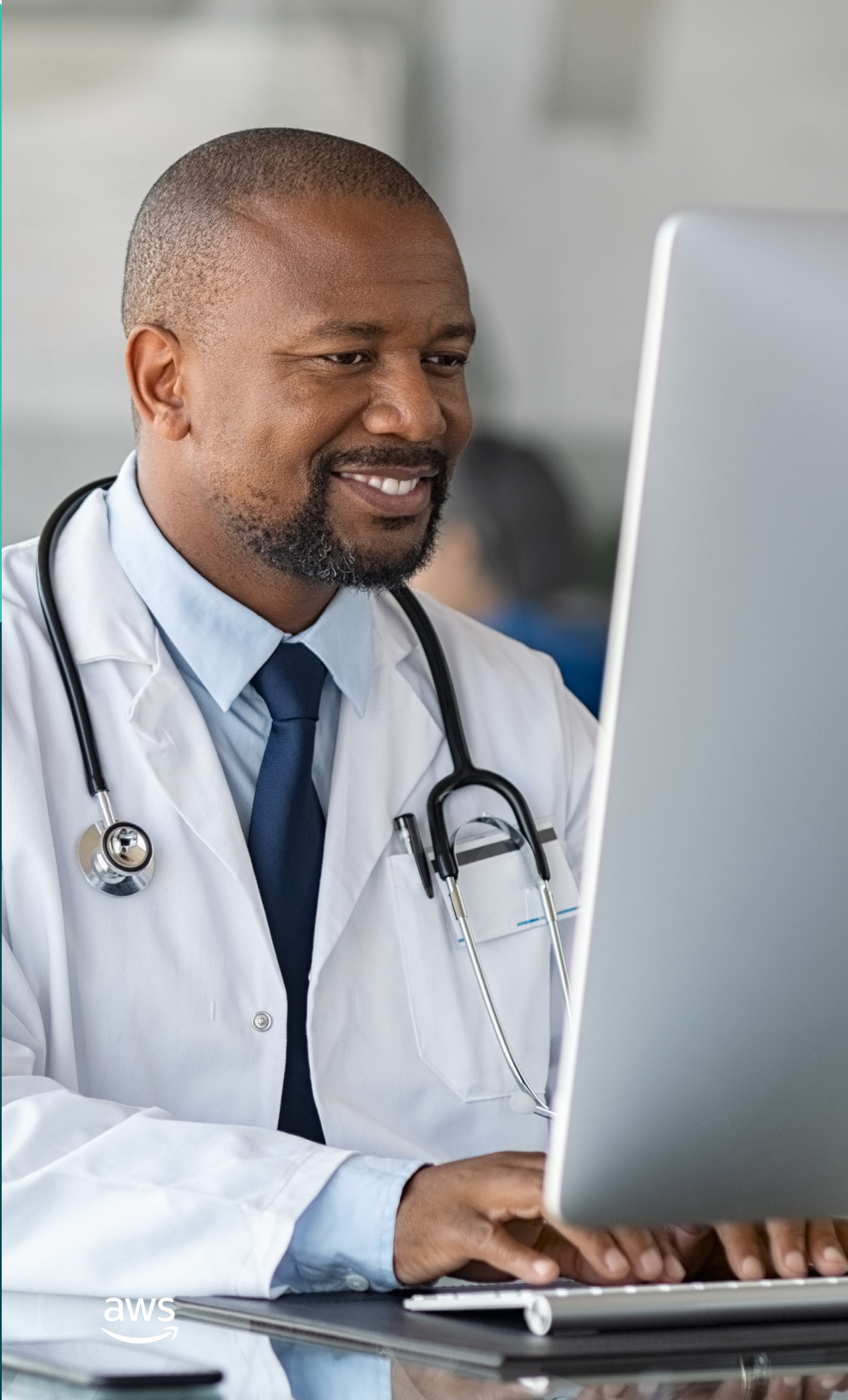# Meeting the challenges of healthcare IT

How cloud technology is making personalized healthcare possible

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Improving outcomes where healthcare meets technology

Expectations among patients, clinicians, and researchers are rapidly evolving. Patients want more personalized experiences, easier access to doctors, and, above all, better health outcomes. Clinicians want to be free of tedious administrative tasks so they can focus on patient care. And researchers need more efficient ways of collaborating and utilizing data to achieve breakthroughs faster and more cost-efficiently.

Against these expectations, operational inefficiencies along the healthcare journey are pushing costs skyward, lowering revenue, and hindering patient care. Healthcare organizations that embrace the transformation to innovative digital solutions will be better equipped to solve these issues and meet the changing expectations of patients and healthcare professionals alike.

Healthcare IT: Technology driving patient outcomes

For healthcare IT teams, transforming to modern digital technologies is becoming a critical necessity. After all, IT stands at the center of clinical workflows, care delivery, and regulatory compliance. Fortunately, digital transformation is becoming easier and more cost-effective than ever.

In this eBook, you'll learn how AWS and AWS Partner solutions help organizations simplify healthcare IT to free clinicians from administrative burdens, automate manual processes, and enhance care delivery and research, all while ensuring security, reliability, and compliance.

Customers transforming the future of health with AWS

axial Healthcare

AWS helps axialHealthcare with the ingesting of data on prescriptions and claims into an analytics platform that uses machine learning (ML) algorithms to identify opioid misuse and addiction patterns.

Read the case study ›

Cortica™

With Amazon HealthLake, the Cortica team can spend more time analyzing and understanding data patterns rather than figuring out where data comes from, formatting it, and joining it into a usable state.

Read the case study ›

RUSH

AWS helped Rush create a solution that allows them to store, transform, query, and analyze health data in minutes, removing the heavy lifting of organizing, indexing, and structuring healthcare information.

Read the case study ›

Explore solutions for healthcare IT from AWS and AWS Partners ›

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The urgent challenges facing healthcare IT teams

The relationship between healthcare delivery and IT is more intertwined than ever. From the explosion of virtual care to the constantly evolving threats to security and the need to ensure resiliency and regulatory compliance, healthcare IT teams find themselves at the epicenter of the critical issues that impact their organizations. IT teams also play a pivotal role in helping to control costs while ensuring the best possible outcomes for patients.

And the movement toward personalized healthcare is demanding even more from IT teams, pressuring them to integrate new types of data, embrace machine learning, and deliver insights never before possible— and never more relevant to improving patient outcomes.

More data, more security and compliance

At the heart of personalized care is data. Transforming to this next-generation standard of care requires fast, secure access to data—large quantities and disparate types—from any location. At the same time, organizations must have a plan for continuous security, resiliency, and regulatory compliance. With the help of AWS and AWS Partners, IT teams can deploy innovative cloud solutions to improve clinical workflows and patient outcomes while fully meeting the demands of an increasingly complex regulatory environment.

Automating data processes: A critical first step

Patient-centric care requires a reliable, high-performance clinical system. With guidance from AWS and AWS Partners, healthcare IT staff can enable clinical teams to automate the aggregation, storage, management, and transmittal of healthcare data with confidence. Freeing clinicians from time-intensive manual burdens is a necessary step toward optimizing costs, preventing burnout, and helping healthcare organizations deliver better overall service to the patients they care for.

Customers transforming the future of health with AWS

CHOC

Discover how Children's Health Orange County (CHOC) is saving significant time and resources with AWS for Health

"Being able to provide our caregivers with the ability to roam and maintain their sessions has really added a lot of value to their workday and given them a lot of time back."

–CTO, Children's Health Orange County (CHOC)

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Explore more proven solutions from AWS and AWS Partners that IT teams can use to solve common healthcare use cases

Learn more

Cloud migration: Obstacles to moving forward

In the health industry, as in nearly every industry, cloud migration is becoming the answer to faster innovation and business sustainability. And the urgency to improve outcomes for patients, clinicians, and researchers provides a powerful incentive to modernize with cloud solutions.

However, even though the benefits of migrating data and workloads to the cloud are numerous, many organizations are reluctant to change. Lacking the technology experience and/or resources to handle the migration of on-premises infrastructures to the cloud, they perceive cloud migration as a daunting, time-consuming, and even risky undertaking.

The good news is that all healthcare organizations, even those with limited resources, can navigate cloud migration with the help of AWS and its extensive partner network. As the trusted technology and innovation partner to the global healthcare industry, AWS enables organizations to modernize quickly and with confidence.
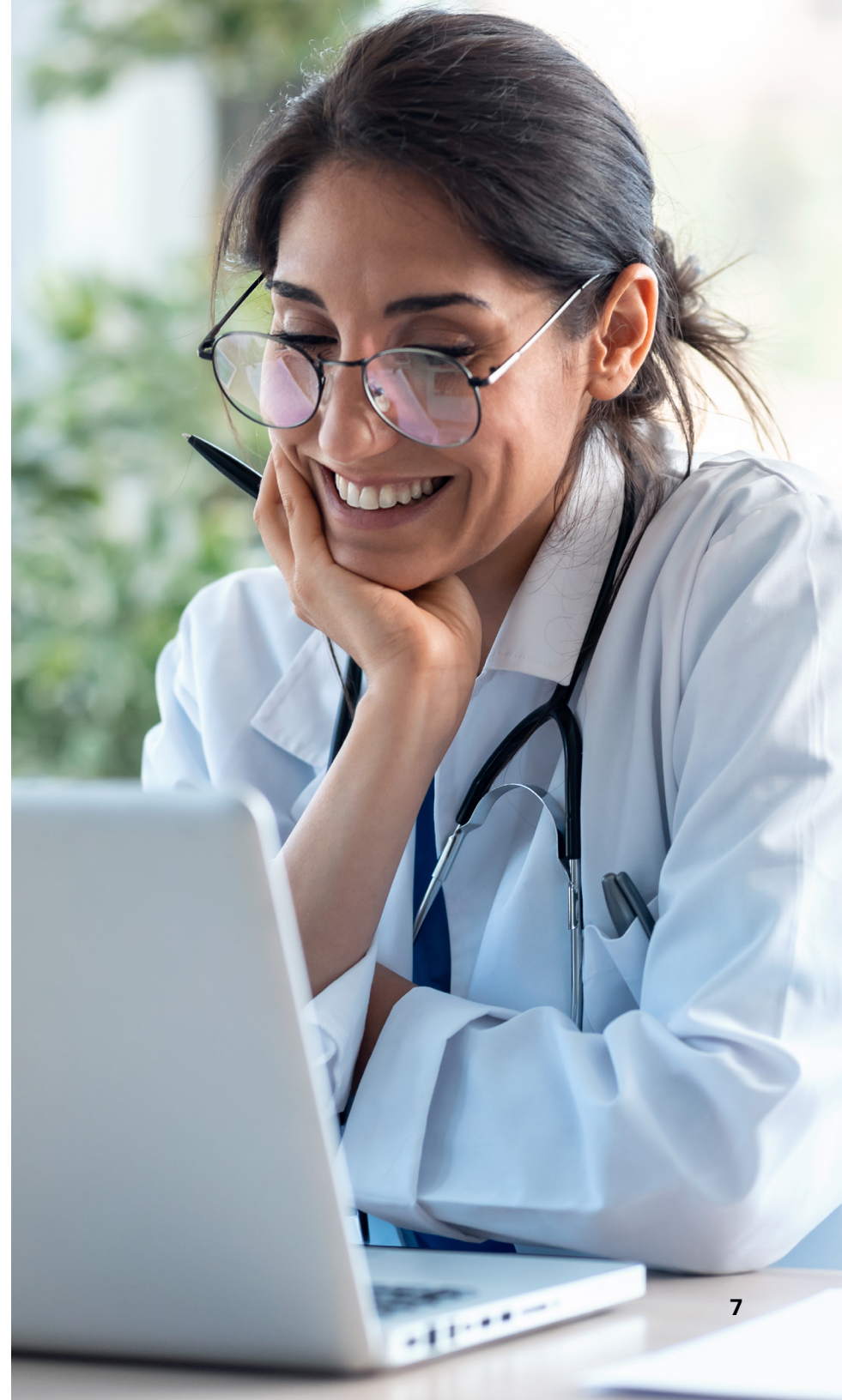
Making cloud migration quick, easy, and secure with AWS

With AWS, organizations can take advantage of trusted, reliable infrastructure and best-in-industry security features while removing the burden and cost of maintaining physical data centers. AWS has helped healthcare teams quickly and securely migrate while minimizing downtime of applications.

Many leading healthcare organizations have leveraged the AWS Database Migration Service (AWS DMS) to migrate over 230,000 databases, and the AWS End-of-Support Migration Program is helping to migrate legacy Windows Server applications to the latest supported versions of Windows Server on AWS. The AWS Migration Acceleration Program (AWS MAP) for Windows Server provides best practices, tools, and incentives to reduce the complexity and cost of migrating to the cloud, with support from AWS Partners and AWS Professional Services.

Customers transforming the future of health with AWS

Canadian Institute for Health Information
Better data. Better decisions. Healthier Canadians.

"Being in the cloud has given CIHI the functionality to respond to business needs at a rate that no one saw coming. It would not have been possible on our previous on-premises infrastructure."

–CIO, Canadian Institute for Health Information (CIHI)

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More power to legacy applications

Turning the page on the limitations of slow, siloed workloads is becoming a priority for a growing number of healthcare organizations. For providers, payors, and other stakeholders, extending the power of their existing on-premises applications is becoming more of a necessity than simply a choice.

Heightened performance and compliance issues are putting pressure on organizations to maximize the resiliency of business- and mission-critical applications while ensuring stable and predictable uptime. AWS and AWS Partners offer next generation virtualization solutions that deliver on these performance requirements while managing costs and increasing governance.

Leading healthcare organizations are reaping significant value by leveraging their existing investments using AWS and AWS Partner solutions. These solutions help them respond to changing needs, accelerate innovation, and align costs to usage requirements.

Customers transforming the future of health with AWS

Cerner

Cerner looks to VMware Cloud™ on AWS to transform service delivery and ensure that Cerner employees have secure, immediate access to the data they need—from anywhere. VMware, an AWS Partner Network (APN) Advanced Technology Partner, enables businesses to flex and harness new technology quickly, with zero disruption—important capabilities in the event of a disaster.

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Scalable solutions on AWS

Discover how VMware Cloud™ on AWS scales to help providers migrate and extend on-premises environments to the public cloud

Learn more ›

Security and compliance challenges in a data-rich world

Security is a growing concern for every healthcare organization, and it demands a robust and proven approach. This is especially relevant today, as a growing number of nations and their regulatory bodies increase the pressure on public and private organizations to safeguard customer and patient information. Not surprisingly, those responsible for storing, processing, and/or transmitting sensitive and protected healthcare data face some of the most stringent compliance standards of all.

By leveraging the scalability and elasticity of cloud solutions, health organizations can ensure a robust security and compliance posture through custom configuration settings, alerts, and monitoring.
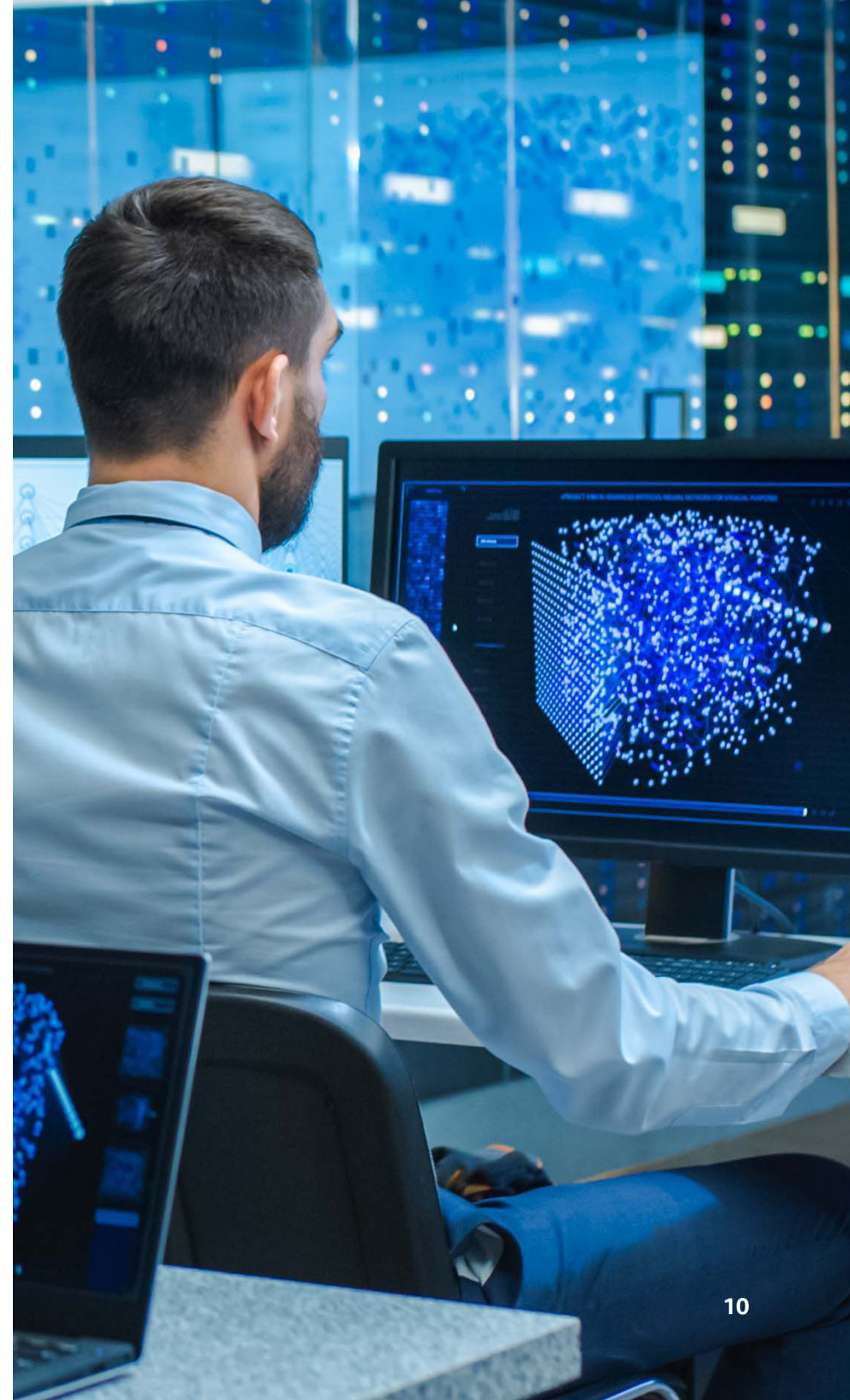
AWS: A partner in security and compliance

As more patients and clinicians embrace telehealth and virtual care delivery, and as personalized healthcare becomes more dependent on data, more organizations are adopting a cloud-based approach to better ensure the security and availability of that data.

AWS and AWS Partners offer a robust set of solutions to keep healthcare data protected and readily available. AWS provides access to more than 130 HIPAA-eligible services as well as numerous certifications for industry-relevant global IT and compliance standards, including support for GDPR, HITRUST, ENS High, HDS, and C5. And, with twice as many Availability Zones as any other cloud provider, health organizations can benefit from the scale, security, and reliability of AWS.

Customers transforming the future of health with AWS

SYNZI

"ClearDATA brings a lot of value to us because its products, based on AWS, help us ensure security and compliance through configuration settings, alerts, and monitoring. This helps our organization be certain we're doing what it takes to stay compliant."

–CTO, Synzi

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The high stakes of disaster recovery

It's not a matter of if, but when, a disaster—either human-made or natural—will occur. Data center failures, server corruptions, and ransomware attacks can all negatively impact data, revenue, and compliance, as well as the trust of patients and customers. And in healthcare, the consequences of losing access to systems and data are especially serious, as patients' lives are at stake.

Healthcare providers need to have absolute confidence that their IT is reliable and secure. That means having immediate, 24/7 access to data from any location. It means being able to deploy a disaster recovery plan quickly, maintain data security and compliance, and ensure that clinical workflows are reliable and efficient—all in the service of patient outcomes.

Successful disaster recovery and business continuity planning can help ensure stable and predictable uptime and performance for your patient and business operations in the cloud and help mitigate and respond to cyberattacks, including ransomware and other malicious attacks.

Ensuring business continuity without stifling innovation

Leading organizations, including 3M, Centers for Medicare & Medicaid Services (CMS), and Children's Health Orange County (CHOC), have modernized their IT by migrating mission-critical operations to AWS. The result: improved business continuity, cost-efficiency, and performance across the healthcare workflow.

AWS and AWS Partners offer scalable, cost-effective solutions to optimize—and maximize—business operations and customer experiences without hindering innovation. With AWS, IT teams can minimize downtime and data loss and ensure fast, reliable recovery of physical, virtual, and cloud-based servers.

Customers transforming the future of health with AWS

CHOC

Learn how Children's Health Orange County automated constant backups for 300 virtual machines and improved restore times from 2–3 hours to under 10 minutes.

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How interoperability can drive personalized health delivery

Data silos have long been the enemy of productive team collaboration, and for healthcare and research-focused organizations, the stakes are high. A seamless, fully interoperable exchange of up-to-the-minute data and insights can significantly accelerate discovery and decision-making, resulting in improved patient outcomes.

Patient-centered care depends on the fast aggregation of data from multiple sources. It also depends on access to that data at any time and from any location so that clinicians can act quickly and make decisions that could impact diagnoses.

Unfortunately, many healthcare organizations are still hampered by siloed data, preventing clinicians from accessing and sharing critical information when they need it. But new cloud-based technologies, including machine learning and advanced analytics, can help.

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Seamless collaboration with AWS

The new era of patient-focused care demands a replacement of data silos with secure information-sharing solutions that provide a more holistic view of the patient. With these solutions, healthcare organizations are reinventing how they collaborate, make data-driven decisions, provide access to care, and control costs. AWS and AWS Partners help stakeholders eliminate data silos and achieve secure, scalable, compliant communication and true interoperability.

Customers transforming the future of health with AWS

"AWS has enabled Health Gorilla to offer scalable interoperability solutions in underserved markets across the United States, Puerto Rico, and Mexico, enabling provider organizations to securely store, enrich, and share data throughout the clinical ecosystem."
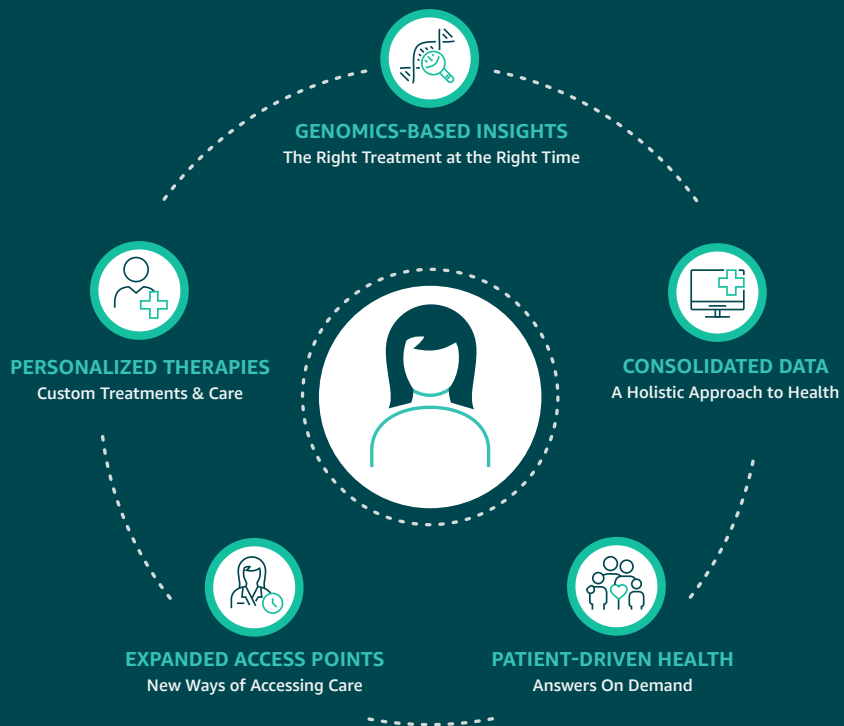
–CEO & Co-Founder, Health Gorilla

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The Right Treatment at the Right Time

PERSONALIZED THERAPIES
Custom Treatments & Care

CONSOLIDATED DATA
A Holistic Approach to Health

EXPANDED ACCESS POINTS
New Ways of Accessing Care

PATIENT-DRIVEN HEALTH
Answers On Demand

Innovation: At the center of healthcare transformation

The era of personalized healthcare is here. At the intersection of clinical discoveries and cutting-edge technologies, healthcare organizations around the globe are enlisting new, innovative tools to improve the care experience for both the patients and the clinicians. These innovations are powering a personalized health movement, from customized, genome-informed medicines to technologies that bring medical insights to clinicians no matter where they are.

Empowering patients with targeted care improves health outcomes and has already begun to revolutionize the next generation of healthcare delivery. Industry leaders are leveraging the breadth and depth of AWS solutions to deliver personalized care while enhancing security and recovery efforts to protect against the destructive effects of cyberattacks and natural disasters.

Discover for yourself how healthcare innovators rely on AWS for Health to equip their teams with the tools and information they need for precision medicine and personalized therapeutic development while ensuring a secure and flexible infrastructure designed for today's ever-changing business needs.

Learn more about AWS for Health ›