The AI-Powered Health Cloud: Building the Future of Care Delivery

AI-Powered, Human-Centered

encora

encora

Healthcare today is under siege—from legacy tech, rising cloud costs, and an overwhelming need for better, faster, more secure care. Technology's role as an enabler is more important than ever; however, most existing systems were not built for the complexity and velocity of modern healthcare.

But, what if cloud infrastructure could think, learn, and heal itself? With AI, it can.

$200–360 billion

AI could save $200-360 billion annually across healthcare[1]

85%

85% of healthcare leaders will adopt AI by 2025[2]

15–30%

Physicians spend 15-30% of ICU time on admin tasks[3]

240-400h

AI could reclaim 240-400 hours of nurses' time yearly[3]

encora

What Changes with AI-First CloudOps?

Let’s look at how the Intelligent Health Cloud reimagines five critical dimensions of healthcare operations:

Enhanced Observability

Picture a physician starting her rounds at 8:30 AM.

Before AI

EHRs took minutes to load, delaying patient care.

Now

AI predicts demand, ensuring instant chart access and near-perfect uptime.

Impact

Uninterrupted patient care that:

- Delivers near-perfect EHR uptime.
- Proactively identifies issues and integrates systems.
- Resolves platform mismatches seamlessly.

For Clinicians: This translates to more time with patients and less with loading screens.

This enhanced observability ensures systems are ready when needed, but what happens when issues arise? AI steps in with self-healing capabilities.

Self-Healing Systems

At 2:30 AM, IT faced alert floods.

Before AI

Troubleshooting took hours.

Now

AI resolves issues before they escalate.

Impact

Continuous availability that:

- Minimizes downtime with automated fixes and failure prediction.
- Accelerates diagnostics and recovery for better patient care.
- Ensures 24/7 availability for patient apps.

For IT Leaders: Achieve near-zero downtime with AI-driven reliability.

Self-healing systems must maintain operational stability while being cost-effective. AI can ensure this through intelligent financial operations.

Optimizing Costs with FinOps

IT confronts meeting budgets with limited insights.

Before AI

Unexplained cost spikes strained budgets.

Now

AI pinpoints waste automatically, generating millions in savings.

Impact

Considerable financial gains that:

- Reduce cloud spend by eliminating waste.
- Predict surges to avoid overspend.
- Support ESG goals with lower emissions.

For Executives: Slash cloud costs significantly, freeing budgets to invest in innovation.

Cost savings are vital, but they're meaningless without security. AI ensures patient data remains protected while budgets are optimized.

Securing Patient Data

Security teams struggle to keep up with growing threats.

Before AI

Security teams once drowned in log overload, allowing threats to slip unnoticed.

Now

AI-powered monitoring detects risks in real time, safeguarding sensitive data.

Impact

Enhanced security that:

- Identifies threats with real-time scans.
- Ensures compliance with automated HIPAA and information-blocking checks.
- Manages cross-border data compliance seamlessly.

For Compliance Officers: Stay audit-ready with AI-powered security.

With data secured, the next step is ensuring systems can handle stress—AI builds resilience to keep care delivery uninterrupted.

Building Resilience

IT teams hesitated to stress-test critical systems.

Before AI

Critical testing was skipped due to system crash concerns.

Now

AI safely simulates failures without disrupting operations

Impact

Better resilience that:

- Enhances recovery and telehealth reliability through mock tests.
- Safeguards data during simulations.
- Proactively identifies vulnerabilities.

For IT Leaders: Ensure uptime even under stress.

These interconnected solutions—observability, self-healing, cost optimization, security, and resilience—form the backbone of AI-powered CloudOps in healthcare. Let's see how they come together in a real-world scenario.

encora

AI in Action: Healthcare Transformation Scenario

encora

Smart Healthcare Operations: AI-Driven Infrastructure Transformation

The Challenge: Imagine a large healthcare provider serving millions of patients facing common issues:

- System downtime and performance bottlenecks
- Limited visibility into complex infrastructure
- Unpredictable cloud costs
- Slow incident response
- Security and compliance concerns

The AI Solution: This provider implements AI-powered cloud approaches:

- Smart Operations: Dynamic EHR and telehealth workload orchestration
- Enhanced Visibility: AI-powered monitoring detecting hidden bottlenecks
- Cost Optimization: Predictive analysis shifting workloads to lower-cost resources
- Self-Healing Systems: Automated incident resolution and service scaling
- Intelligent Security: Continuous monitoring of PHI access and automated compliance

Potential Outcomes:

- 30-40% faster EHR performance
- Near-perfect system uptime
- Millions saved through optimized resources
- Dramatically fewer security incidents
- 40-50% reduction in incident resolution time

This hypothetical scenario demonstrates how AI cloud technology could transform healthcare operations based on current industry capabilities.

It shows how AI-driven CloudOps combines observability, self-healing, cost management, security, and resilience to deliver tangible results. However, for AI to succeed, it must be ethical and trustworthy.

encora

Responsible AI: Ethics in Healthcare Operations

AI in healthcare demands ethical governance to balance innovation and trust. AI-powered CloudOps ensures ethical governance by prioritizing:

Clear Frameworks: Transparent AI policies.

Bias Mitigation: Detects and corrects biases (e.g., equitable triage across demographics).

Clinician Trust: Explains AI decisions clearly.

Stakeholder Inclusion: Involves diverse voices in governance.

Patient Safety: Protects privacy and prioritizes care.

Example: An AI triage system flags bias in patient prioritization, ensuring fair care for all.

By embedding ethics into every step, AI delivers human-centered results. This trust directly benefits the people who matter most: patients.

encora

Patients Win Big

Patients crave fast, easy care.

Before AI

Dropped telehealth calls and delayed results frustrated them.

Now

AI-powered CloudOps ensures smooth connections and ready data, making visits feel personal.

Impact

Seamless communication and satisfaction with

- Freeze-free telehealth appointments.
- Instant results build trust.
- Streamlined care journeys that boost satisfaction

AI-powered care delivers human-centered results—patients feel seen and cared for.

encora

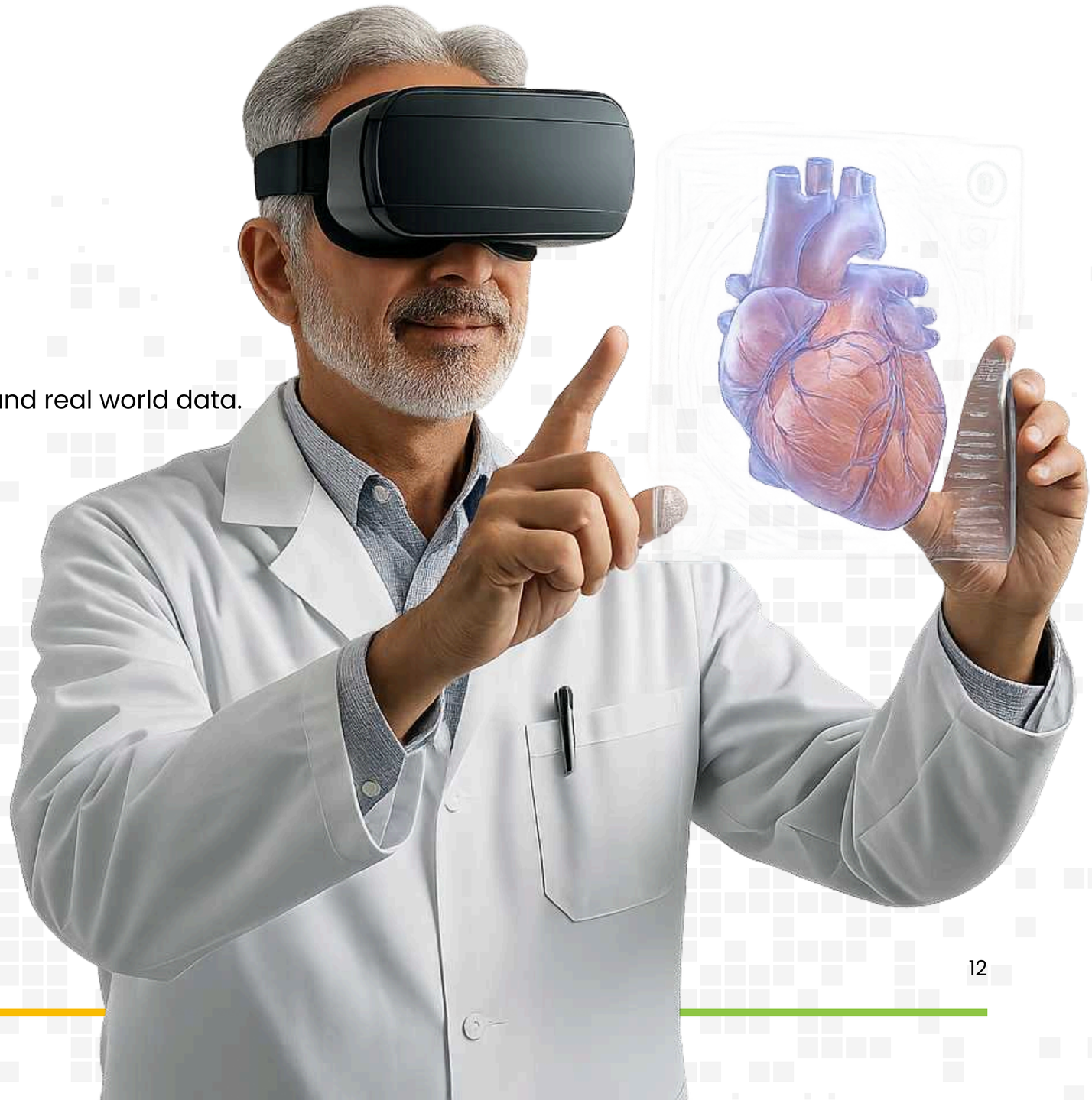
What's Next: Healthcare's Future

AI-powered CloudOps sets the stage for healthcare by 2030, where care becomes:

- **Predictive Wearables:** Monitor health proactively.
- **Personalized Medicine:** Tailor treatments via multi-omics and real world data.
- **Self-Healing Systems:** Ensure uninterrupted care.

Tomorrow's Healthcare:

- **Predictive,** not reactive.
- **Personalized,** not standardized.
- **Accessible,** not restricted.



encora

Get Started

Want a smarter cloud? Try this:

Audit
Assess your cloud performance and costs

Focus
Prioritize EHRs or telehealth for AI

Pilot
Test AI solutions on a small scale

Scale
Build a complete transformation plan

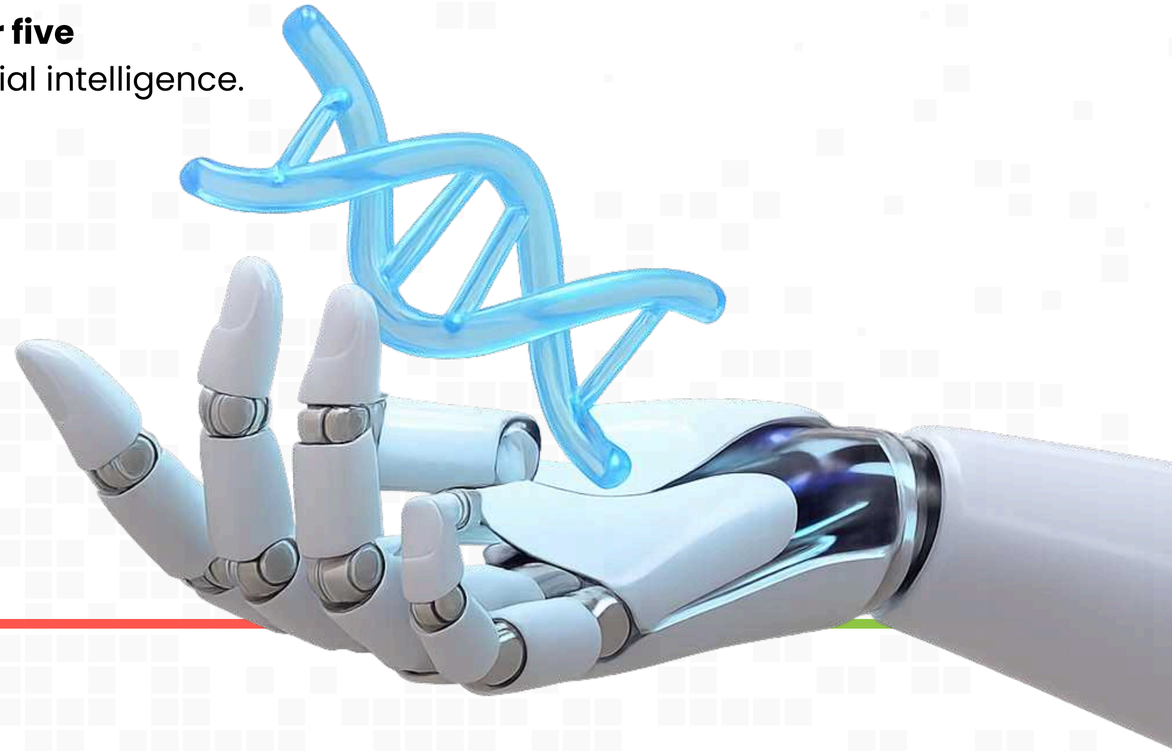
AI-powered CloudOps isn't just a tool—it's the **future of healthcare.**

CONTACT US →

encora

Transform Your Cloud Operations with AI

Download our comprehensive eBook on **AI-powered CloudOps and discover five transformative strategies** that revolutionize cloud operations through artificial intelligence.



Key Benefits:

- Reduce cloud costs with AI-powered optimization
- Build self-healing infrastructure with predictive maintenance
- Deploy specialized AI agents for autonomous operations
- Master AI-powered observability and monitoring
- Implement intelligent FinOps and security frameworks

Accelerating Business Value with AI-Enabled CloudOps

Download Options:

To access the eBook: Visit [Accelerate Business Value via AI-Enabled Cloud Operations | Encora] or scan the QR code.

encora

About Encora

Headquartered in Santa Clara, CA, and backed by renowned private equity firms Advent International and Warburg Pincus, Encora is the preferred technology modernization and innovation partner to some of the world's leading enterprise companies. It provides award-winning digital engineering services, including Product Engineering & Development, Cloud Services, Quality Engineering, DevSecOps, Data & Analytics, Digital Experience, Cybersecurity, and AI & LLM Engineering. Encora's deep cluster vertical capabilities extend across diverse industries, including HiTech, Healthcare & Life Sciences, Retail & CPG, Energy & Utilities, Banking, Financial Services & Insurance, Travel, Hospitality & Logistics, Telecom & Media, Automotive, and other specialized industries. With 9,500 associates in 40 offices and delivery centers across the U.S., Canada, Latin America, Europe, India, and Southeast Asia, Encora delivers nearshore agility to clients anywhere in the world, coupled with expertise at scale from India. Encora's Cloud-first, Data-first, AI-first approach enables clients to create differentiated enterprise value through technology.

For more information, please visit

www.encora.com

encora

References

1. McKinsey & Company. (2024, December). Generative AI in healthcare: Current trends and future outlook.
https://www.mckinsey.com/industries/healthcare/our-insights/generative-ai-in-healthcare-current-trends-and-future-outlook

2. McKinsey & Company. (2024, June). Digital transformation: Health systems' investment priorities.
https://www.mckinsey.com/industries/healthcare/our-insights/digital-transformation-health-systems-investment-priorities

3. Deloitte Center for Health Solutions. (2025). 2025 global health care outlook. Deloitte Insights.
https://www2.deloitte.com/us/en/insights/industry/health-care/life-sciences-and-health-care-industry-outlooks/2025-global-health-care-executive-outlook.html