Microsoft

Future-proofing healthcare:

Data integrity and AI in a regulated world



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The unrealized potential of healthcare data

In healthcare, data is a powerful tool. It helps connect patient experiences, enable health team collaboration, maximize productivity, and support strategic decision-making. And with the advent of next-generation AI, healthcare organizations have exciting new opportunities to transform care delivery.

Additionally, the rise in physician, nurse, and staff burnout has made digital interactions and gaining insights from data more critical. To streamline workflows and improve care, organizations are increasingly offering data-driven tools like patient care journey orchestration, chatbots, self-service scheduling, and payment solutions.

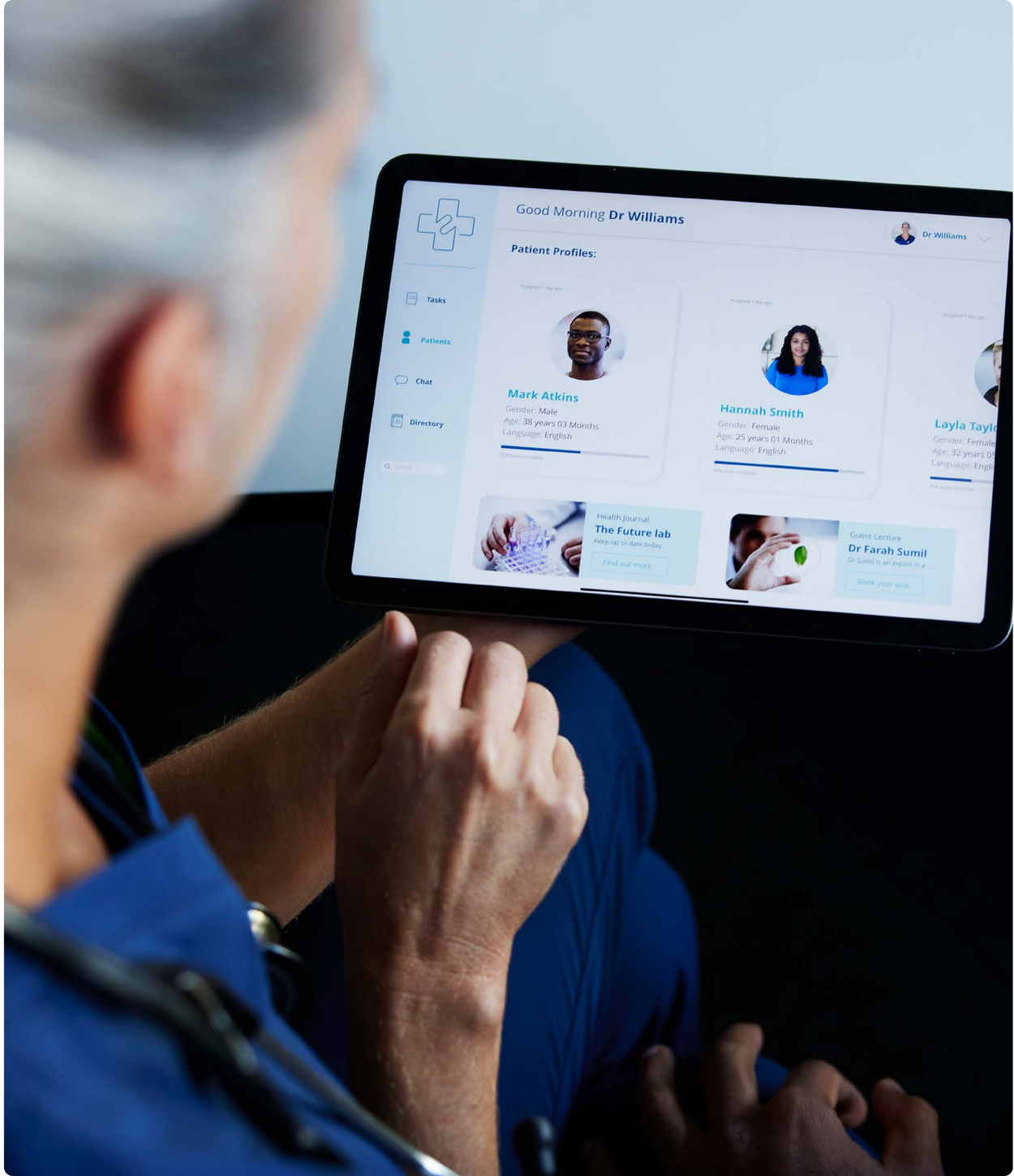


The importance of a strong data strategy

However, taking advantage of these capabilities requires a strong data strategy. Today, there's more data than ever, yet only a tiny fraction of it is used. A robust healthcare data strategy enables organizations to use accurate and timely data to transform care clinically, financially, and operationally. To tackle this challenge effectively, it is essential to keep health data safe and comply with the changing privacy and regulatory rules. As healthcare data becomes more complex and diverse, healthcare organizations need to have a consistent strategy for incorporating data analytics into their everyday activities. They need the appropriate tools and partners who can help them overcome these difficulties to realize the full benefits of a data-driven organization.

Microsoft offers healthcare organizations a highly secure cloud platform to enhance their operations. The security, compliance, and scalability of the Microsoft Cloud, along with global partnerships and AI investments, can help healthcare organizations make the most of their data.





A vision for success in a highly regulated environment

As breach costs rise and regulations become stricter, protecting patient data continues to be a top priority for healthcare organizations. Additionally, healthcare organizations often struggle with fragmented data systems and poor interoperability. By connecting different data sources and ensuring smooth information flow, organizations can make better decisions and improve patient care.

Balancing innovation with compliance is essential. Healthcare professionals need to stay current with regulations, strengthen cybersecurity, and regularly assess risks. Focusing on data security protects patients' trust and meets regulatory requirements.



Connecting data for better outcomes

High-quality, interconnected data fuels healthcare outcomes and sets the stage for AI transformation. By integrating diverse data sources, healthcare organizations can deliver more personalized care and harness AI for advanced analytics and insights. Data connectivity supports today's best practices and prepares organizations for future advancements.

It also supports digital perseverance—the ability to use technology for enhanced resilience. By embracing digital tools and solutions, healthcare organizations can adapt to changing environments, maintain continuity of care, and improve operational efficiency. This resilience is critical in facing the challenges of clinician burnout, rising costs, and an increasing focus on population health.



Why the right partner makes all the difference

Choosing the right technology partner—one that meets or exceeds industry standards in security, compliance, and privacy—positions healthcare organizations to take advantage of these trends. This baseline ensures that healthcare organizations can trust their partner to handle sensitive data responsibly, maintain patient privacy, and adhere to regulatory requirements. Such standards are non-negotiable in the healthcare sector.

Beyond meeting basic requirements, the ideal technology partner commits to helping healthcare organizations overcome data-related challenges. This support enables them to adopt modern technology effectively and deliver unique outcomes. A dedicated partner offers more than just solutions; they provide the guidance and expertise necessary to navigate the complexities of healthcare data and technology.



Empowering data-driven care enhancement through security, compliance, and privacy

Health organizations face risks like data breaches and cyberattacks, not only from external threats but also from internal challenges such as inadequate data protection and misuse. Ensuring the security, compliance, and privacy of protected health information (PHI) is vital, especially when sharing PHI across the health ecosystem and providing access to health professionals and patients. Microsoft designs cloud services to help address these challenges, providing a highly secure and compliant solution for data management and next-generation care.



Security

Microsoft Security solutions are designed, developed, and operated to help safeguard your entire organization with integrated business security solutions built to work across platforms and cloud environments. We understand that modernizing security is a complex task in this era of ever-evolving cyberthreats and complex digital programs. Serious threats have necessitated a paradigm shift in how organizations protect their digital estates. That's why Microsoft embraces an end-to-end Zero Trust architecture: a comprehensive approach to security that helps our customers effectively mitigate business risk.

Zero Trust has become the industry standard for securing complex, highly distributed digital estates. Microsoft is in a unique position to help customers with their security needs, as Microsoft delivers end-to-end cross-cloud, cross-platform security solutions, which integrate more than 50 different categories across security, compliance, identity, device management, and privacy, informed by more than 65 trillion threat signals we see each day. Microsoft is actively engaged with the National Institute of Standards and Technology (NIST), most recently providing public commentary for the NIST National Cybersecurity Center of Excellence (NCCoE) and participating in The Open Group where we co-chaired the Zero Trust Architecture (ZTE) forum. As we look to the future, Microsoft recognizes that customers are entering the era of AI. And by combining the principles of Zero Trust with the capabilities of AI, organizations will have the potential to create a formidable defense against modern cyberthreats.



Privacy

When healthcare organizations choose Microsoft's cloud services, they place their most valuable asset—their data—into a trusted environment. This commitment extends to helping clients protect patient information, manage it securely, and comply with regulations. Microsoft's approach to privacy stems from its Privacy Standard and Security Development Lifecycle, reinforced by third-party audits and certifications.

Microsoft was the first major cloud provider to incorporate the first international code of practice for cloud privacy, ISO/IEC 27018, and offers robust contractual commitments.

The company's policy is clear: it uses customer data solely for agreed services, not for marketing or selling to others. Customers understand where and how their data is stored in global data centers, who can access it, and the protocols for its protection, transfer, and deletion. In shared storage environments, Microsoft employs logical isolation to keep each customer's data separate and secure.



Compliance

From personal and financial information to data protection and cybersecurity, compliance officers have more to manage each year. For example, multinational organizations can be accountable for meeting dozens of regulations to be compliant. Failure to do so can result in hefty fines and a damaged reputation.

Microsoft Compliance Score helps you assess your data protection controls on an ongoing basis and gives you recommended actions and solutions to help you progress toward compliance. Compliance Score supports more than ten global, regional, and industrial assessments, including GDPR, CCPA, ISO 27701, ISO 27001, HIPAA, FFIEC, and more.

As you move more data to the cloud, it's important to feel confident that you're not opening yourself up to security or compliance risks. You need a partner that can meet you where you are today and provide what's required as both your environment and business change. To help ensure we're meeting all security and compliance advancements and requirements, Microsoft is regularly audited and submits self-assessments to third-party auditors which can be viewed here.



The Health Information Trust Alliance (HITRUST), governed by healthcare industry representatives, maintains the Common Security Framework (CSF). This framework, built on HIPAA and HITECH, integrates security and regulatory requirements from various frameworks, offering a standardized compliance benchmark. Microsoft is one of the first major cloud service providers certified for the HITRUST CSF.

We're transparent about the specific policies, operational practices, and technologies that help ensure the security, compliance, and privacy of your data across Microsoft services.

1. **You control your data.**
2. **We're transparent about where data is located and how it's used.**
3. **We secure data at rest and in transit.**
4. **We defend your data.**



A robust platform for healthcare data value

Microsoft Cloud for Healthcare simplifies healthcare data management with leading security, privacy, and compliance practices specific to the industry and built on the Microsoft commitments described above.

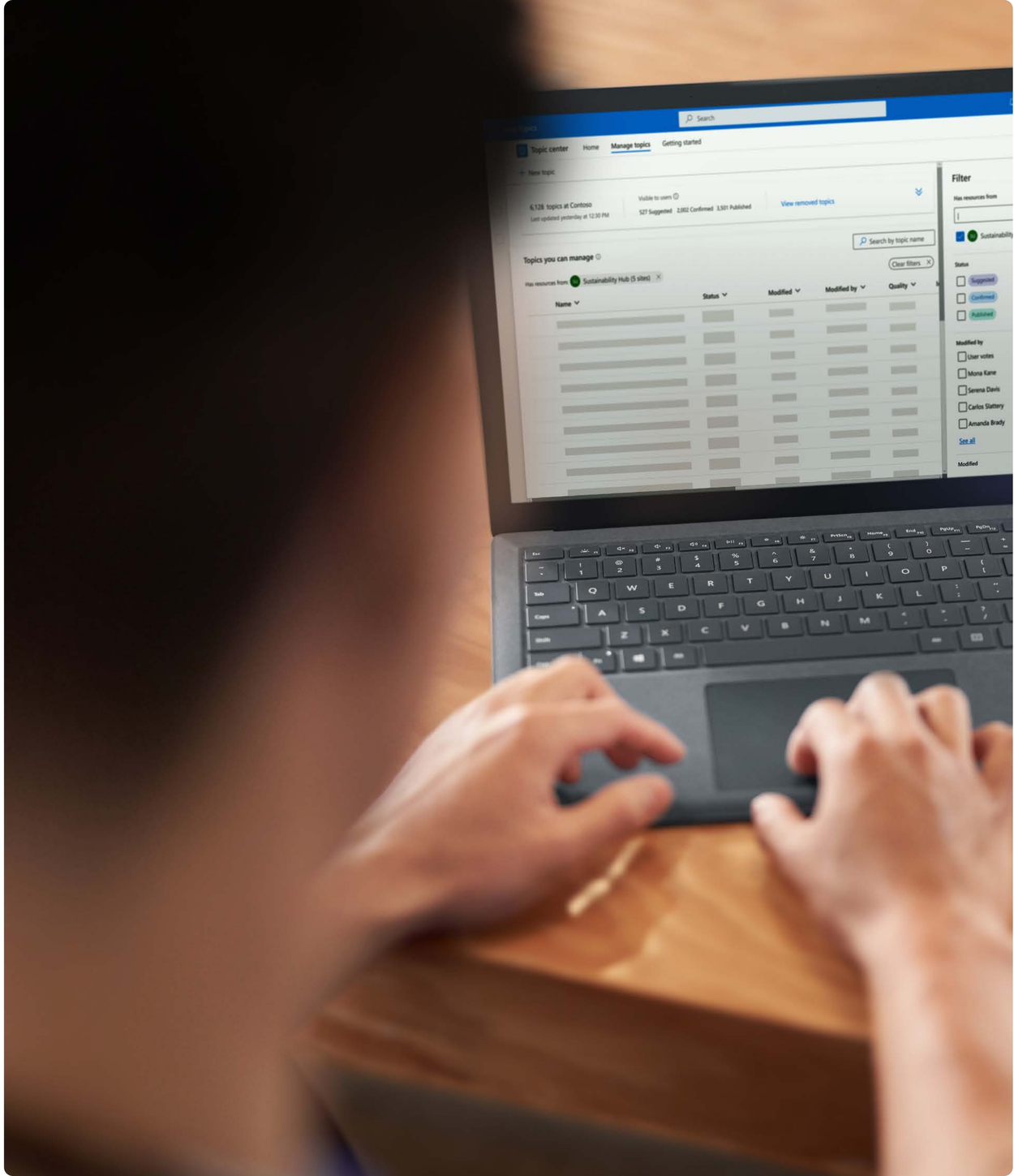
Centralizing data in the cloud provides a comprehensive view of both first- and third-party data, making it easier to integrate machine learning and AI services. This approach allows healthcare organizations to respond to patient needs quickly and efficiently, boosting operational efficiency while enhancing security and data interoperability.

The platform accelerates data and AI integration in healthcare by offering industry-specific data solutions, application templates, and AI services, customizable through a global ecosystem of partners. It unites trusted capabilities for enhanced patient engagement, health team collaboration, and better clinical and operational insights, aiding in decision-making and efficiency.



A robust partner ecosystem helps tackle the latest industry challenges and extends the platform's value. With Microsoft Cloud for Healthcare, organizations can more easily achieve digital transformation goals to foster a healthier future for patients.

By working together with Microsoft Azure, Microsoft Dynamics 365, Microsoft 365, Microsoft Power Platform, and Nuance AI healthcare solutions, you can build complete and connected solutions that include productivity and collaboration, enhanced clinician and patient experiences, and the ability to access the value across your clinical and operational data.



Supporting ethical AI in healthcare and everywhere

Microsoft healthcare offerings are built on a foundation of trust and the company's Responsible AI principles. Through these innovations, Microsoft is making it easier for healthcare organizations to create connected experiences at every point of care, provide tools that foster collaboration, empower the healthcare workforce, and unlock the value from clinical and operational data using data standards that are important to the healthcare industry.

Your data remains solely yours to own and control, allowing you to leverage and monetize it as you see fit. Your data is not used to train or enrich foundation models in Azure OpenAI without your permission, ensuring that only your organization benefits from AI trained on your data.



Microsoft AI Responsible AI principles and approach

We're committed to making sure AI systems are developed responsibly and in ways that warrant people's trust.

Accountability
Microsoft AI systems are assessed using Impact Assessments

Transparency
Microsoft AI systems that inform decision making by or about people are designed to support stakeholder needs for intelligibility of system behavior.

Fairness
Microsoft AI systems are designed to provide a similar quality of service for identified demographic groups, including marginalized groups.

Reliability & Safety
Microsoft evaluates the operational factors and ranges within which AI systems are expected to perform reliably and safely, remediates issues, and provides related information to customers.

Privacy & Security
Microsoft AI systems are designed to protect privacy in accordance with the Microsoft Privacy Standard. Microsoft AI systems are designed to be secure in accordance with the Microsoft Security Policy.

Inclusiveness
Microsoft AI systems are designed to be inclusive in accordance with the Microsoft Accessibility Standards.

For more information on Microsoft AI Responsible AI principles, click here.



Transforming patient care with AI



With responsible AI in place, healthcare organizations can adopt transformative solutions that ease the administrative burden on clinicians and enhance personalized experiences.

- Dragon Ambient eXperience (DAX™) Copilot enables clinicians to automatically and securely create draft clinical summaries in seconds from exam room or telehealth conversations. This technology significantly reduces the time spent on documentation, allowing healthcare professionals to focus more on patient interaction and care, thereby improving the overall healthcare experience.
- Azure AI Health Insights offers prebuilt models that assist clinicians and researchers in making informed decisions. New models include a patient timeline, which organizes critical events from a patient's medical history, clinical report simplification that converts medical jargon into more straightforward language, and radiology insights for quality checks and follow-up recommendations.
- Azure AI Health Bot now includes generative AI for healthcare chatbots and virtual assistants, providing tailored responses from credible sources.
- Text Analytics uses machine learning to extract and label medical information from unstructured texts, aiding in areas like population health and clinical trials.

These are just a few of the advancements in Azure AI designed to empower healthcare professionals with actionable insights and streamline patient care processes.

Driving data innovation forward with Microsoft Fabric

Healthcare data solutions in Microsoft Fabric, now in preview, streamline data management for healthcare and life sciences organizations. It offers a unified architecture, simplifying the integration of diverse health data, including text and images. It merges essential analytics tools into one system, enhancing AI insights.

These solutions enable seamless data integration, handle various data types, and support healthcare data standards. They accelerate decision-making, clinical research, and patient engagement, ensuring efficient data governance. This innovation marks a significant step in healthcare data analytics and management.





The power of healthcare data is now within reach

Microsoft Cloud for Healthcare enables customers to leverage the power of data-driven insights to deliver value fast, build for the future, and innovate with responsible AI across every layer of the Microsoft Cloud. With the Microsoft Cloud, healthcare organizations can optimize data usage, improve patient care, and manage the challenges of a highly regulated environment with confidence.

Learn more

Microsoft

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