The Key to Digital Transformation in Healthcare — Data Integrity

Modern

Data integrity remains a critical concern for healthcare providers as they grapple with digital transformation. Consumers want their digital records available to those who care for them, without compromising security. Big data is a significant component of those records today, and healthcare providers must ensure that data integrity remains a top priority to ensure patient safety.

Data integrity is different from data security

Healthcare has focused a great deal of its resources on security, but that doesn't mean the same thing as data integrity. Data security prevents unauthorized access to those records but ensures that healthcare providers and administrators with the right permissions can easily connect to a patient's data.

On the other hand, data integrity means that data remains consistent, reliable, and accurate over the lifecycle of the data. The lifecycle of any given piece of data depends on its usage, but overall, it ensures that those who rely on the data to make decisions receive quality data.

Integrity and security are interrelated. Breaches in security can impact data integrity. An unauthorized intruder could change relevant information or corrupt records, making them unreliable and dangerous for decision making.

What does data integrity mean for the health industry?

If healthcare providers can't count on the accuracy and

reliability of patient data, everything is lost. They could miss opportunities for diagnosis, risk-averse reactions, or make bad decisions based on faulty data. These mistakes not only threaten patients but also strain operational resources and add unnecessary costs.

Healthcare facilities must ensure the integrity of their data for regular use. Security is the first step, but the continued practice of ensuring the trustworthiness of the data in their care is an ongoing effort. This starts from the first encounter, whether at admission or the first visit, to the end of the patient's care.

Data integrity includes several types of standards.

- **General standards**: Ensures confidentiality, integrity, and availability of records and protects from reasonably anticipated threats.
- **Administrative standards**: Implement security management policies and procedures with regular assessments of the data to ensure that it is fit for the uses for which it is intended.
- **Technical standards**: Implements technical safeguards for electronic records and for data tools and solutions while ensuring that the data is in the correct format and structure for use.

- **Organizational standards**: Ensures standards across the entire organization are in place to validate that the data required is available and fit for the purposes of each user group.

These standards also encourage healthcare organizations to take a proactive approach to both integrity and security rather than relying solely on reactive procedures.

Characteristics of a healthy data system in healthcare

Healthcare facilities must follow a handful of best practices for ensuring quality data.

Attribution/documentation
With the advent of electronic records, it's more important than ever to demonstrate who observed and recorded the patient's data. Records must also show when interactions happened, from the first to the latest. This creates a trail of responsibility for patient care.

Transparency
Preserving patient records includes making them transparent. Simply having access to data isn't enough; instead, healthcare facilities must maintain complete records with easy-to-understand attribution and documentation of what each data element represents and how it should (and should not) be used.

Legality
All records must be in compliance to regulations such as HIPAA and maintain updated cybersecurity. Security breaches can devastate healthcare facilities financially. Implementing governance that specifically targets healthcare-specific data regulations prevents massive consequences such as fines and lost patient trust. The data must also meet any legal standards of accuracy and completeness.

Availability
The whole point of having digital transformation within healthcare is to have patient records available when needed. This means putting data in motion so that healthcare providers and patients have access to the latest data at a moment's notice.

Accuracy
This final piece ensures the accuracy of data while it's in motion. All data tools should support data accuracy regardless of the process or pipeline. Managing multiple data sources across both legacy and new systems will require a modernized data system and updated policies.

Maintaining data integrity through targeted goals and the right technology

Studies show (see "The Future of Care is Telehealth" or Kapersky's Healthcare Report 2021) that a majority of patients believe that data integrity and data security are essential parts of digital transformation in healthcare — this is an obvious conclusion. While it's not at all surprising, it does remind healthcare providers that surviving in a new age of digital care and changing technology will require updated systems and data management approaches.

A data operating system offers healthcare facilities and providers a unique opportunity. Healthcare providers must reduce complexity in their data systems and ensure availability while maintaining strict governance—a tall order at scale. The Modern Data Company's DataOS offers an end-to-end solution for managing data complexity. It future-proofs data solutions to ensure that healthcare companies can build and deploy needed services at scale.

It's time to discover what true digital transformation can look like, specifically in healthcare. DataOS can help healthcare companies construct a data fabric or manage governance at the granular level.

Learn more about the benefits of using a data operating system to adopt data fabric for healthcare organizations with our infographic "How Data Fabrics Breathe Life Into Healthcare."

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