Data Governance and Data Stewardship: Critical Issues in the Move toward EHRs and HIE

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More than ever, organizations require a coherent plan for what data they will use and how they will ensure their data are fit for use.

Talk of data governance and data stewardship is cropping up more frequently with the acceleration toward electronic health records (EHRs) and health information exchange (HIE). The terms and their application probably create as much confusion as they do nodding of heads, since many people mistakenly assume the conversation is simply about data quality and legal requirements.

Before exploring the critical issues, let's first define these key concepts, focusing on their action components:

- **Data governance** is the high-level, corporate, or enterprise policies or strategies that define the purpose for collecting data, ownership of data, and intended use of data. Thus accountability and responsibility flow from data governance. The data governance plan is the framework for the overall organizational approach to data governance.
- **Data stewardship** focuses on the people, policies, processes, and tools that manage the quality of data. It is the operational component that complements the data governance plan and ensures that data are fit for its intended purposes.

Many healthcare organizations have embraced data quality for years, if not decades, but the planning component of data governance is a relatively new concept. Formal data governance requirements are being driven by the explosion of electronic data, the consolidation in the healthcare provider arena, and the increased focus on data sharing within and across local, regional, and state levels.

In a real-world example, this translates into the need to integrate and share ambulatory records with acute care records; they each had discrete purposes historically, but now they must serve a mutual purpose. Doug Angove is manager of enterprise identity management for Sutter Health. He notes that the "impact of a strong data governance and data stewardship program is not just theory, it can have a direct impact on meeting pay-for-performance programs, so there is a quantifiable financial payback."

The rapid changes in technology and information-sharing practices and the proposed infusion of dollars from the recent economic stimulus package require that healthcare providers have an organizational framework for what data are necessary to meet strategic objectives.

Data governance plans should not be set in stone; instead, organizations should clearly articulate their current data needs while remaining flexible to adapt to the changing environment without requiring a significant dollar infusion. The plan must be agile and responsive to the needs of the organization while at the same time prescriptive and encompassing. In fact, as AHIMA's statement on data stewardship articulates, in this rapidly changing landscape, there is a strong need for a national approach to data governance and data stewardship (see page 40). Organizations must ensure a uniform approach to electronic data and the sharing of that data in order to reap the investment rewards.

Real-World Data Challenges

Conversations with colleagues in the US and Canada identify seven common issues that arise around data governance and data stewardship as related to patient identity, which is a foundational element of EHR and HIE initiatives.

Data Stewardship before Governance

The most significant issue identified was that data governance and data stewardship often happen in reverse. Data stewardship activities, or the lack thereof, can limit organizational data sharing and data quality, resulting in organizational leaders not having the information necessary to make decisions that drive their clinical, operational, and financial strategies.

It is not unusual for organizational strategies to be tied to how data are captured and handled. It is also not uncommon to require the use of multiple sources and one-off applications to simply provide decision makers with the information they need about the business. This can be time-consuming and often error-prone. Taking a fragmented data governance approach is likely to lead to fragmented results.

Few Corporate Data Standards

Organizations may not have established standards for data capture or data accuracy or for the accountability of individuals who create data.

As Julie Prough, enterprise master patient index (EMPI) manager for UPMC, shares, "You must have a strong data quality model with executive support. And you need to make sure that all decisions are quality-based." The expanding use of data requires this structure. Everyone on the team should understand data needs and uses and organizational expectations for quality.

Users Don't See the Big Picture

It is common for data users or data creators to think that a duplicate medical record number or another data error is a minor issue; they may not understand the bigger picture of why these types of errors can have a profound impact on associated patient care. In today's world, notes Kristine Seippel, RHIA, EMPI manager at Trinity Health, "within minutes an error can impact clinical and financial data throughout the healthcare system."

Historically, in many organizations, each system owner acted independently, managing data for a specific purpose or function. Systems were amenable to sharing, but only in the context of how the "owner" perceived the usefulness. To truly be successful and keep initiatives on track, organizations must create a shared understanding of data's use.

Lack of Tools for Data Analysis

Organizations have found it difficult to establish an enterprise view of a patient or their associated clinical data. Some would say there was insufficient focus on recognizing the patient as a customer, creating a customer view of data and managing the data appropriately to meet corporate objectives.

Today healthcare organizations must have tools to create and manage good data and make data meaningful for today's electronic world. These tools must also enable deeper analysis, so that better data can be created for future business and clinical initiatives.

Thin Data Cripples Corporate Objectives

The days of doing a quick registration to facilitate quick patient care should end. When clinical data created from a quick registration can not be associated with an electronic record, chronic care can not be managed and medications can not be reconciled. This practice of quick registrations has outlived its purpose. Furthermore, messages associated with thin data create erroneous system expectations and pollute countless systems downstream.

Siloed Data Adjudication

Data are no longer created and used in silos, which means that data resolution must also evolve to span across systems. When it does not, what is corrected in one system may create secondary problems in other systems. Terms such as *data*

adjudication and *data disambiguation* have been heard for years in other industries and are new to healthcare, particularly from those organizations that have been actively addressing data stewardship.

Data Stewardship Is an Afterthought

Understanding the relationships between data is often difficult, and the rewards of adequately resourcing data stewardship are not always self-evident. For these reasons, organizations may not prioritize data stewardship. It is not sexy or glamorous, and it is often shuffled aside when its impact is not understood.

However, a solid data stewardship infrastructure is vital to the well-being of an EHR. As Kristine Seippel notes, "Even a small percentage of error can be significant in a very large integrated electronic world, because data flows so fast and it's difficult to take it back."

A well thought out data governance model that addresses many of the issues above and clearly articulates organizations, systems, inputs, updates, appends, ownership, access, and reporting capabilities is the first step in an effective data governance program. This is a short list, but it makes a point. Data governance acts as a framework for data that will be used to drive clinical and operational information and decisions; it is the blueprint for building a solid data structure. This blueprint should also include details about which systems generate which data, where data flow and how, and how data will be used.

With an understanding of the challenges and requirements of a solid data governance model, organizations can then fine tune the process. Remember, data stewardship is not simply a technology solution; it is the term used to define the people, policies, procedures, and technologies necessary to complement the data governance model.

This combination results in a compilation of useful information that organizations can leverage for their business and clinical strategic initiatives. In short, data governance should be the leader for all data stewardship activities, even though both are vital to a successful program.

No Single Model for a Data Stewardship Team

An organization's structure and maturity will determine the model of its data stewardship team. Centralized structures tend to work best for enterprises that are aggressively working toward a true EHR that encompasses all aspects of the healthcare system. As organizations change, so do their models.

Organization Description	Approach	No. Full-time Employees	Years of Data Stewardship
Large Academic IDN	Centralized	8	2 corp, 10+ local
Large IDN	Hybrid	3 corp, 20+ local	6 corp, 10+ local
Large IDN	Centralized	11	11
Large IDN	Hybrid	2 corp, 10+ local	3 corp, 10+ local
Large IDN	Decentralized	6	2
Academic	Centralized	3	9

Small IDN	Centralized	1.5	4
Academic	Decentralized	4	6
Medium IDN	Decentralized	4	4
Medium IDN	Decentralized	4	5
Medium IDN	Decentralized	5	2
Medium IDN	Centralized	4	6
Medium IDN	Hybrid	2 corp, 12 local	2 corp, 8+ local

IDN = integrated delivery network; Centralized = corporate staff; Decentralized= local staff, no corporate function

Best Data Practices for Accurate Patient Identification

To address the rapidly evolving landscape of EHRs organizations require strategic guiding principles. These principles are illustrated below within the context of patient identification, which is essential to an accurate EHR and core to many health information issues.

Get out the Tools

Organizations require tools to view data at macro and micro levels. Healthcare has leveraged master data management or EMPI software to help create an enterprise view of the patient to provide better service and help facilitate broader corporate initiatives around data quality and data sharing in a secure environment.

These tools should both identify data issues and facilitate patient identification resolution, whether issues concern a patient, provider, or data element. In addition, since data are often not meaningful in and of themselves, the tools should create an understanding of the relationship of data between patient, provider, organization, facility, and even third-party data sources.

Communicate

Data governance teams benefit by creating communication plans that are solid, formal, structured, and rooted in a multidisciplinary approach to data stewardship. The most effective communication plans go a long way toward resolving the political and territorial issues that arise when organizations execute data stewardship.

Nance Shatzkin, a technical consultant to the Bronx RHIO in New York, comments, "With a multistakeholder board and community, we must clearly articulate what data we will use and by what processes we will manage the data. We are serving the community, and communication is vital to the trust we build."

Keep Training

Training is a job that never ends. It is important that training and education are continuous and competency based. For example, one organization interviewed recertifies all registration staff on an annual basis to ensure that they can accurately conduct a patient search. This small step, which takes two hours per employee, undoubtedly saves thousands of hours per year in retrospective corrective action.

Commit from the Top Down

Multidisciplinary executive teams should spearhead data governance projects and give high-level guidance to data stewardship activities. Strong, multidisciplinary executive commitment is usually essential for success. Representation on the team should include revenue cycle, patient registration, health information, clinical, data quality, and information technology.

Organizations without a strong data governance policy may be paralyzed in the coming years as data sharing becomes the norm and EHRs the rule. In best practice organizations, data governance steering committees may be tied to the overall organizational "Information Management" recommendations issued by the Joint Commission.

What Size Data Stewardship Team?

Although in theory one might expect there to be a best practice for structuring a data stewardship team around a governance issue like patient identity, the reality is that the structure and maturity of a corporate organization is likely to dictate the best data stewardship model and this model is likely to evolve over time.

The table "No Single Model for a Data Stewardship Team," opposite, illustrates that centralized structures tend to work best for corporate enterprises that are aggressively working toward a true EHR that encompasses all aspects of the healthcare system. "I think the standardization from our centralized EMPI unit has really helped us in terms of furthering our EHR initiatives," says Prough. The larger organizations interviewed tended to feel the most pain when political and legal barriers were broken down during the process of creating an EHR and decision making was shifted from local to corporate levels.

HIEs or regional health information organizations (RHIOs), by nature of their multistakeholder model, face even more challenges around data governance and data stewardship. These entities must clearly define data governance policies and how consent will be managed before they begin to exchange clinical data or even create the record locator service.

No matter the model, HIM professionals should seek roles on the data stewardship and governance teams. With experience in data classification and data capture, they can play a key role in helping create clear and concise data governance plans and spearheading solid data stewardship models. HIM touches every department in an organization. HIM professionals can offer knowledge in data capture, sharing, and planning, sharing their expertise to help identify and deal with appropriate data uses and potentially compromised data use methods.

Liesa Jenkins is executive director of CareSpark, a RHIO serving 17 counties in the Tri-Cities area of Tennessee and Virginia. She notes, "The support of the HIM community in the TriCities [area] and HIM professionals from our vendor partners has been critical to our success."

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