



Practical Steps to Enterprise Data Governance

Source: [HIMSS Clinical & Business Intelligence Committee](#)

March 2016

In a HIMSS paper on data governance published in May 2015, called “[A ROADMAP TO EFFECTIVE DATA GOVERNANCE: How to Navigate Five Common Obstacles](#),” an overview of data governance and five obstacles and recommendations were provided. Some of the obstacles included the lack of an enterprise systems view and an understanding of where to start data governance effectively. In this article, we hope to build on those points in more detail, along with offering practical steps on how to get data governance started and sustained. We also touch on the importance of data stewardship and in taking a long-term view of data governance.

Not everyone has a clear understanding of what data governance entails, or why it matters. Provided below are two short vignettes about the absence of data governance and their associated impacts. Examining these may provide a view into where adequate governance of data might be useful.

Vignette #1. *An insurance company tracked how many members were under their coverage. The front office defined “member” as the primary person listed as on the account. The data warehouse team defined “member” as all family members who were covered under the primary member. The company leaders were confused about how many people they actually insured. Luckily for the company, the data warehouse team had defined “member” correctly.*

Vignette #2. *A hospital’s transplant program wanted to keep track of its rate of organ donation. To do so, any patient that died at their facility and became a donor was discharged and immediately readmitted to Dr. “Donor”. The hospital quality department kept track of readmissions within 30 days of discharge. Concerned that their readmission rate was higher than expected, the quality department was surprised to find a Dr. Donor whose 100% readmission rate was skewing the data.*

In both cases the same business terms were being applied differently by different parts of the same organization. The lack of data governance around “member” and “readmission” was allowing confusion to occur. In the example involving the insurance company’s use of the “member” information, there was not a common Business Glossary that would have explained the data and the context in which it was to be viewed and used. In its absence, each



department made decisions that skewed the results differently. Confusion about the conflicting information reigned. These situations are not uncommon. In the example involving “readmission,” decisions about the capture of data were being made in a silo, and the Quality department did not have the context around the data available. It is often the case that as new capabilities are added, decisions are often made in a silo during their implementation. These decisions seem correct and appropriate at the time, but have negative downstream impacts that will not be exposed without a habitual and enterprise view of data governance. In addition, data can be interpreted differently by different groups.

Promoting enterprise success requires including representative stakeholders from across the organization. A good governance effort should be able to accommodate and facilitate these stakeholders’ business needs, while enabling the work of the organization to be organized at a system level. It is an approach to information collection, interpretation, and use that has to be shared by everyone in the enterprise, is applied in a distributed manner consistently, does not stop people from doing their work but enables them, and breathes quality into the fabric of decision-making and workflow orchestration within an enterprise. Data governance should be seen in the same vein as Compliance: everyone is trained in it, understands it, and is able to do their work well in that environment.

Data issues may cover a broad spectrum of activity within an institution. Issues can range from differences in terminology and metrics, to how data is captured in source systems, to the quality of the data being captured at the source.

CHOOSING WHERE TO START

To begin with, Data Governance should not an IT initiative. Data Governance needs to be owned and led by the business; IT’s role is as a trusted partner that provides the technical infrastructure and expertise to store, protect, and access the data. A new data governance program needs a grace period to get started before ROI can be consistently delivered, but at about a year business leaders will be asking for a demonstration of tangible value. So, what might be useful ways do we get started?

Raise awareness and get people interested.

- What are the tangible benefits?
- How will this operationally help?
- What is the roadmap of benefits? This should drive the plan.

Begin engagement across your institution.

- Have a strategic goal, and a series of practical goals that could be achieved in short increments, perhaps quarterly.



- Seek and present value generated at institutional committees that are responsible for Operations, Patient Care, and Research.
- Make the work known in a public way, and articulate the value.
- Don't try to do too much, or you will never get started. Remember the purpose of your efforts is not to create perfection, but to make an impact in a practical way quickly and consistently. Maintain a demand list which can be prioritized with the help of Senior Leadership so that the work aligns with the priorities of the organization.

Tactical considerations

- Understand where business value could be realized quickly.
- Examples include work on standardizing definitions and metrics; if these are being interpreted differently in a few local areas, then normalize the understanding across those areas and across the enterprise.
- Propose these examples to Senior Leadership for guidance and prioritization.
- Make the priorities known in a public way.
- Make the work known in a public way.
- Don't try to do too much, or you will never get started. Remember the purpose of your efforts is not to create perfection, but to make an impact in a practical way quickly and consistently so that the business can assimilate to the changes and build lasting value.
- Be public about the value generated.

Strategic considerations

- There are core fundamentals regarding information that need to be addressed. While end-users and data-generators will understand the pain points that they feel on a periodic basis, the solutions are often more involved and difficult to articulate. There need to be one or two longer-term efforts to build lasting value.

An example includes the cleaning up of data in source systems. It is often the case that when systems are implemented for use, the people/systems entering the information are not aware of the inconsistencies in the data or in how this impacts work downstream. If, for example, temperature readings are consistently coming across as outliers (1000 degrees instead of 100 degrees), then it might indicate an issue with the capture or generation of that data. There is effort involved in understanding the flow of data, the source of the problems, working with the Business to set a path forward for the remediation, and working with IT to implement the system changes necessary. These are *Business issues*, and not *IT issues*.



- Value generation from these efforts should be portioned out in quarterly increments. This ensures that any course corrections that need to be made can be achieved quickly, but also serves to keep the work going to make the lasting change necessary.

HOW TO MAKE DATA GOVERNANCE PRACTICAL AND USEFUL

Organization

In order for governance to function as a living, breathing entity and contribute in meaningful ways to the enterprise, an organization that includes everyone is critical. A key component of this is the concept of stewardship of data.

In this vein, there could be three (3) levels of stewards. This could vary based on your particular institution and its needs.

1. **Everyone:** Everyone is a data steward. They would form a “Community of Stewards.” These folks work with the data all the time in some capacity, either generating it or using it. Members from this community would escalate data issues to “named data stewards” for perspective, guidance, and rising up to leadership. Often, these data users have suffered in silence with data quality issues and developed their own work-arounds. They see and understand the issues that the data in their particular domains contain, and are incited personally and professionally to troubleshoot and remediate these issues.
2. **Named stewards:** While everyone is a steward, there are those who by virtue of their position make good representatives for the data community at large. Every hospital or health care system has employees whose daily work involves touching data, analyzing reports, and making recommendations or decisions based on those reports. Examples include employees working in quality, finance, marketing, strategy, and human resources, just to name a few. There is often a manager of those departments who is high enough in the organizational structure to see the bigger picture, but close enough to the work to understand the details of any data issues. Such mid-level data workers make ideal recruits to be “Named Stewards” and form a data stewards group.

Note: Engaged stewardship roles that focus on partnering your business users and the data teams is necessary to develop and confirm common definitions and bridge the gap to ensure your organization is populating data correctly. These are not easy roles, and require an understanding of the people, process and strategy involved to achieve stewardship. Data stewards need to be knowledgeable of the business, as well as subject matter experts in how a data warehouse is structured. This is required to be able to provide value in discussions in how all data is joined and able to interpret any new and changing business requirements to determine their impact on the structure. The data stewards are, in some respect, a relationship manager in helping reach



agreement to resolve business department issues that may cross each other. Stewardship can be more culturally challenging than technically challenging, so the individual(s) must be good at navigating the organization. Because of the complexity of data and all that it serves, it can take years before a data steward may be productive in an organization. To this end, organizations need to have a long-term view of data stewardship.

- 3. A core decision-making group** that can authorize the recommendations that the named Data Stewards put forward will be required. This group could be called a Data Governance Group or something similar and should be chaired and chartered as the binding authority for data governance within the institution. This group could be made up of all the Named Data Stewards, or include a few Named Data Stewards and additional representation from the stewardship community as is appropriate for the institution. In either case, the group should hold routine meetings to enable the work to happen, ensure that Stewards are focused on the right work, allow for issues to be surfaced, reviewed, worked on, and resolved. In addition, the group could be responsible for communicating the outcomes of governance activity and its benefits to the organization to the institution.

Resources

In addition to the three levels of stewards, the following resources would be beneficial.

- **A senior leadership group** that can authorize and empower the role of the core decision-making group for data governance within the institution.
- **An Administrator** to make all of the above activities function. This person should also be able to understand data issues, work with various parties to shepherd items and bring them to conclusion. For example, if a particular tactical outcome needs coordination between various parties, collection and/or creation of work products, develop a plan and manage to the plan, this individual would need to do so. This person would also work with the chairs to set agendas and make the governance process work. In a mature organization, this function will evolve into a Data Governance office (DGO), led by the data governance (DG) administrator who is assisted by additional DGO support staff as needed.
- **A note-taker** for meeting notes.
- **Tools.** Invest in tools to help with data governance. These tools should facilitate the creation of a Business Glossary, track the lineage of data, manage definitions from various systems, and provide a collaborative work platform for the decision-making data stewards.



THE WORK OF DATA GOVERNANCE

- **Work directly with various business groups.** The work of understanding the information involves working closely with the business areas involved. If a particular data element has consistently been found wanting, a steward would need to work with the Business to understand the business context, and perhaps with IT to understand the technical profile/context. The work of data governance starts with the business.
- **Engage directly with various prioritization or existing governance groups** that drive work within the Medical Center. For example, there might be committees that determine the priorities for Clinical Operations versus Administrative functions, or Quality. These groups are key to making process changes at the point of use. Be prepared to present the value proposition for the requested changes. It could also be the case that additional funding may be needed to implement certain changes, and these will need to be secured.
- **Understand and be able to articulate the cost of poor data governance and provide a plan for mitigation.** The cost of poor data governance could range from incorrect and unsafe decision-making, to noise creation that turns people away from using the data. For example, poor data used in a real-time alerting system could produce a high incidence of false alerts which would need to be ignored, or result in workflow orchestration being executed poorly. Understanding where the data might be poor is a key area of focus for any data governance activity. Using existing initiatives to help address poor data quality issues will provide tangible value and outcomes quickly. The “Community of Stewards” would be self-incented to solving common problems that benefit them and the institution.

A great place to begin is to ask each new “steward” what their three or four most critical business terms are, and if there is an enterprise standard definition for the data that they are dealing with. Usually the group can identify 10-15 key terms that are in need of an enterprise definition. This becomes the foundation for the creation of an enterprise business glossary, where business terms are defined, data stewards and business owners are identified, and the relation to the technical side of the data is mapped.

Other early action items for the group may include developing a data issues list and process for tracking data issue resolution, and the sponsoring of a “community of practice” or user group for data users across the business.



At first, it is sufficient to perform this work in basic tool sets such as Excel. At some point, unless the business is small, a more sophisticated tool will be required. Today, there are a number of solutions designed explicitly for data governance.

COMMUNICATION AND PRESENCE

The activities of data governance need to be transparent, and the resources for data governance need to be broadly available to the community. In this vein, a presence on an internal web site would be useful. The site could contain information on what data governance is, who is actively involved, governance structure and responsibilities, how the governance process works, and how the community could engage. This online presence should also serve as a home for the “community of data stewards,” where members can propose and provide feedback on proposed actions, discuss items of common interest, share resources, and engage in discussion on topics of common interest.

CONCLUSION

Data governance is a business activity. Several efforts to-date have started from within IT. However, the data belongs to the business, not IT. IT can advise, help manage repositories, offer critical background information regarding the systems, and help connect the dots. But, what the data is, what it means, whether it is used in the correct manner in the correct place, how it is being collected, and whether it is healthy, are all business prerogatives. If the business does not care about the state of its data, then data governance initiatives will mimic the siloed state of its existing environment and fail.

As the concept of data governance has become more accepted, so has the understanding of the need for data stewardship. Everyone needs to embrace the role of a data steward. If you collect, update, modify, delete, move, store, or utilize data, you are accountable for the best data possible. Collective accountability, in making sure the data is entered right the first time, is an important tactic to ensure that the data that is being produced promotes quality and consistency. In addition, data stewardship by all helps in avoiding any rework that may be necessary down the road.



Here are a couple of additional examples:

Example #1. A leadership team requests to see how many transplant referrals the program has had over the last quarter and sees a significant decrease, based on the previous 2 quarters reported: 1st quarter: 102, 2nd quarter – 100, 3rd quarter – 66. Obviously, the leadership team questions the validity of the number for the 3rd quarter. After spending time investigating the discrepancies, it was discovered that the staff responsible for entering Referring MD information was not being consistent in populating the field. The field is what the report qualified on. Thus, additional training had to occur to ensure the value of the field for consistency purposes, as well as time it took to ensure the data was populated for all Referring MDs going forward, in addition to documentation and communication. As part of this process improvement, it was also important to help staff understand how their responsibilities had a direct impact on data that is used to drive decisions for the organization and how their role contributes to that. In addition, the IT team could provide appropriate controls on the data entry associated with that field, so that the data fall within appropriate thresholds and thereby increase data integrity. An appropriate level of intervention on the people, process, and technology areas could ensure good quality data in the system.

Example #2. How would a project team know that there are a certain number of instances in a system where a particular type of data occurs? They depend on experts – in this case, domain data stewards working with governance teams that include physicians. The data has context – why here, what does it mean, is it for pediatric or adult, which instruments were used, etc. Can data extracts be run so that the physicians can examine and opine on the nature of the data being captured? Is it worth using? Is it being sourced from the right place?

Finally, data governance is not an ivory tower exercise. Institutions need to provide a basic structure and organization around which individuals who are responsible for data and who care about it can align to and govern the data in a cohesive manner. Additionally, data governance has to be embedded in existing initiatives and not as an afterthought. This will lead to some creative tension between project teams driven by timelines and stewards and physicians as they seek to ensure that the right data is used for the particular initiative. This tension is healthy and necessary for progress to occur.

We hope that the information presented here will help with data governance efforts in tactical ways. Gaining senior leadership support for data governance programs is vital to the success, and ensures consensus from all throughout the organization. It is also critical to understand that data governance efforts need a period of time to form and norm, before real return on investment can be documented. Obviously, your own organization's vision will drive the strategy, but the integrity of your data will be much more successful with support in place.



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