Data Governance Strategy Ensures Success of an Enterprise Data Warehouse

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Conflict of Interest

Mrunal Shah, MD

Has no real or apparent conflicts of interest to report.
Learning Objectives

• **Objective 1:** Illustrate specific steps to build consensus for data governance

• **Objective 2:** Demonstrate how best to establish a data governance committee

• **Objective 3:** Analyze which data definitions to focus on in the initial stages of data governance process
Objective 1:
*Illustrate specific steps to build consensus for data governance*

- Form an Executive steering committee and evaluate current state of data governance and analytics
- Highlight the value of consistent data and Enterprise Data Warehouse (EDW)
- Build consensus on the future state of data governance and analytics and create a data governance and analytics strategy
- Determine buy vs build for the EDW
- Take a phased approach to implement and demonstrate value
Jane is responsible for creating the Physician Scorecard as well as providing numerous reports for Physicians and Management.
Evaluate Data Reporting Process

Hundreds of hours in data manipulation
No data consistency
Highlight Value of Enterprise Data Warehouse (EDW)

An EDW offers:

• A trusted repository that allows an organization to take advantage of the full potential of its data.

• The ability to utilize Clinical, PeopleSoft, Billing, Claims, etc. data at the same time for multiple applications.

• The flexibility to use prebuilt dashboards, create ad-hoc dashboards, and export data to vendor applications for business intelligence and analytics.
## Health IT Value: Benefits Realized

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Build Consensus, Create Data Governance Strategy

- Scorecards
  - Value based purchasing
  - Patient experience
  - Quality core measures
- Population Management
- Readmissions
- Utilization Patterns
- Other areas
  - HR/Benefits
  - Clinical Guidance Council needs
  - Health⁴
Niche vs. Enterprise Solutions

- Without an organizational strategy for data governance, departments seek out niche/silo solutions
- That creates short term solutions and more islands of data
- Ultimately one need enterprise view of data for consistent reporting
Phased Approach: Begin With The End In Mind: Analytical Organization

Source: Analytics at Work: Davenport, Harvard Business Press, 2010
Future Vision

Move from this to this

One Source for Integrated & Consistent Information

- Total cost for knee replacement
- Chronic disease management
  - Bundled Payments
  - Contribution Margins
  - Market analysis
  - Risk Scores
  - Online dashboards
  - OR Utilization
  - Product lines
  - Readmissions

OhioHealth BI and Analytics Portal

Enterprise Data Warehouse

- Diabetes
- Heart
- NCQA
- Pay for Performance

OHA
- PQRS
- NCQA
- STS Registry
- CHF Registry

Re-link

De-identified
Future Vision:

An Enterprise Data Warehouse Architecture with data governance
Objective 2: 
_Demonstrate how best to establish a data governance committee_

- Decide on a governance model and committee structures
- Assess success and risk factors
- Determine membership and assign to subcommittees
- Appoint/hire a strong and influential leader to direct and guide project direction
Project Prioritization Subcommittee deciding on governance policies and structures

*Currently the function is being carried out by the data governance committee*
Executive Steering Committee Charter: Charge Highlights

- Provide strategic direction and a shared vision for data and analytics
- Champion and communicate EDW initiatives with respective constituents
- Review staffing models to support the program
- Assess business benefit of new project ideas and requests
- Advocate adoption, integration and sharing of data in the EDW
  - Emphasize “data” as an asset, “information” as evolutionary
- Establish/oversee the EDW Data Governance committee to ensure:
  - Data quality standards
  - Effective and efficient use of data
  - Appropriate data access policies and security
Data Governance Committee Charter: Charge

Highlights

DGC will facilitate decisions on the accountability of data and policies and processes related to data:

- Establish and document business rules
- Validate data, create policies on data access and security
- Identify data stewards and SMEs for the data
- Establish data quality expectations and strategies
- Identify KPI owners and define business rules for those KPIs
- Assist in the formation of a data dictionary
- Provide a centralized vehicle for effective communication of data-related initiatives
Charter: Success Factors

• Recognizing data as a shared asset
• Establishing an EDW Data Governance Committee and data quality plan
• Evangelizing EDW project awareness and visibility across the organization
• Building consensus on EDW projects and initiatives
• Allocating resources to investigate, analyze and fix the issues
• Instituting data standards and document business rules governing the data
• Slide 23 tie to 4th bullet explain and tell why
Charter: Risks Highlights

- Lack of trust and reluctance to share or provide data to the EDW
- Balancing resource capacity with demand
- Fear of change and losing control
- Conflicting priorities
- Lack of time commitment or engagement in the program
- Project implementation and development while "keeping the lights on".
- Lack of cross-functional cooperation
- Lack of business involvement and sponsorship
- Lack of release time from data stewards and subject matter experts
Executive Steering Committee Membership

Chief Information Officer (Co-Chair)
Chief Medical Officer (Co-Chair)
Chief Finance Officer
Chief Strategy Officer
Chief Nursing Officer
Chief Quality & Safety Officer
Chief Strategy Officer
Chief Marketing officer
Sr VP, Managed Care
Sr VP, Clinical Support Services
Sr VP, Human Resources
President, Physician Group
System VP Health Informatics

CMO became the spokesperson for the project

Executive level representation from strategic areas
Data Governance Committee membership

- System VP, BI & Analytics (Co-Chair)
- System VP, Clinical Effectiveness (Co-chair)
- Director, Clinical Integration
- System Director, Clinical Excellence, Care Sites
- System VP, Service Excellence
- System Director, Finance
- Director, Clinical Excellence, MSF
- VP, Business Development
- System VP, Revenue Cycle
- Director, Medical Staff Services
- Director, BI & Analytics

Representation from strategic areas
Objective 3: Analyze which data definitions to focus on in the initial stages of data governance process

• Start with current definitions of commonly referenced performance indicators
• Assess variations in definitions
• Prioritize and decide focus areas
• Assess impact of the difference on reporting
Standardizing definitions

• Readmission definitions
  – Quality: Readmissions within the same hospital (not the health system)
  – Impact of using CMS definition moving forward (readmission in any facility)
  – CMS definitions moving forward

• LOS: Standard definition
  – Finance: Excludes newborn, NICU, Hospice* (uses Admit/Discharge date to count days for LOS)
    *Kobacker patients admitted as inpatients are not excluded from LOS calculation
  – Quality: Excludes newborn, NICU, Hospice & in-house hospice; (uses Admit/Discharge date + time for LOS)

• Mortality: Standard definition
  – Quality: no exclusions for hospice
  – Finance: excludes hospice
Data Governance: What Worked

- Consensus on all levels for the need of data governance and an EDW
- Executive understanding of the current state of data governance and analytics and the underlying expense to the organization
- Buy vs Build: Decision to buy/partner with Health Care DataWorks
  - Defined priorities and phased implementation approach
- Shared ownership: Committees Co-chaired by both IT and Business leadership
  - Membership representation from all strategic areas of the organization
- Release time from data stewards for data validation
Data Governance: What Was Challenging

- Time commitment in the beginning
- Trickling down the message (not just another meeting)
- Understanding the difference between EDW and niche solutions
- Reluctance to lose control of data
- Understanding of the complexity of the data and business rules

Challenges specific to data governance committee

- Fear of losing jobs
- Resistance to change
- Project is good – but do not touch my data
Data Governance: Streamlined Data Access

Supported by formal Data Access Policy

Role based access

eSource/eService

Data Request Form

EDW Information Asset Steward

Sensitive Information?

Yes

Information Asset Steward for ‘Sensitive’ Information

No

Approved?

Yes

Inform Requestor

No

EDW System Administrators

EDW

Midas 
EPsi
ORB
Lab
Athena 
GE
Centricity
Peoplesoft
McKesson 
STAR
Care 
Manager
Med 
Manager
Valence

Supported by formal Data Access Policy

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Approved?

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Med 
Manager
Valence
Data dissemination/Access from Intranet Portal

- Revenue Cycle
- Risk Management
- Clinical Excellence
- Managed Care
- Finance
- Clinical Effectiveness

Enterprise Data Warehouse

BI and Analytics Portal
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Health IT Value (Satisfaction)

Patient Satisfaction Dashboard

Survey Response Breakdown - October, 2013

Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?

Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?
Health IT Value (Electronic Information/Data)

Observation Patients Dashboard

Need: to be more proactive on managing Observation patients

Solution: Dashboard view with drill down to monitor Observation patients
  • How long are the patients staying as Observation patients
  • How many above 72 hours?
  • Should they have been admitted?
  • Impact on the new 2 midnight stay ruling?
Need: Prevent/reduce readmissions and be more proactive in mitigating the impact of reimbursement changes for readmissions

Solution: Daily reporting with the individual risk scores for each of the LACE attributes, along with the composite LACE index displayed in Executive Steering Committee ending order

* Readmission Reduction: Automating LACE Risk Scoring in an EDW
Jyoti Kamal, PhD; Rick Snow, DO; Mary Jane Fellers, RN, MBA; Mrunal Shah, MD OhioHealth, Columbus, Ohio 43215
AMIA Annual Symposium Proceedings, Washington DC, 2013
Health IT Value (Savings)

Hundreds of redundant reports consolidated into dashboard, with online drill down leading to:

- Time savings
- Consistent data and reporting
- Better staff satisfaction
- Improved productivity and efficiency
- Insights into problems areas

Medicare outpatients admitted from clinics (38 reports)

Admissions through ED (19 reports)

LOS Dashboard (34 reports were going to printers)

* Small Data, Big Impact: EDW Story from OhioHealth
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Questions?

Thank You!

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References:
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