Objectives

- Define data governance and its role in organizational transformation
- Describe critical data governance components and processes
- Describe an effective data governance structure
- Identify the steps needed to ensure engaged executive leadership involvement
In the beginning.....

Get all the information you can, we'll think of a use for it later.
Putting Data to Work

- **Data**
  - **Raw**: Red, 192.234.235.245.678, v2.0
- **Information**
  - **Meaning**: South facing traffic light on corner of Pitt and George Streets has turned red
- **Knowledge**
  - **Context**: The traffic light I am driving towards has turned red
- **Wisdom**
  - **Applied**: I better stop the car!
Putting Data to Work

Competitive Advantage

- What is the best that can happen?
- What will happen next?
- What if these trends continue?
- Why is this happening?

Business Intelligence

- What actions are needed?
- Where exactly is the problem?
- How many, how often, where?
- What happened?

Degree of Intelligence
Business Drivers for Adoption

Fee for Service

- Value-Based Payment

2015 - 2019

Continuum of Care

- HIGH
- LOW

Quality of Care and Outcomes

- LOW
- HIGH

Today's Healthcare

- Stand-alone
- Best of Breed
- Fragmented Systems

Collaborative Healthcare

- Integrated
- Real-time alerts
- Improved data access

Value-driven Healthcare

- Tight linkage between acute and ambulatory
- Information sharing and collaboration
  - Community-based
  - Cross-specialty
- Outcomes reporting
- Patient data access

Accountable Healthcare

- Shared risk
- Personalized
- Evidence-based
- Predictive
- Continuous improvement
The International Institute for Analytics has collaborated with HIMSS Analytics to create and administer the DELTA-Powered Analytics Assessment™. This management tool is designed for healthcare organizations to measure their analytics capabilities, identify key priorities to optimize performance, and progress through the **Five Stages of Analytical Maturity**:

1. **Analytically Impaired.** “Not data-driven.” Relies on gut feel and plans to keep doing so. Enterprise isn’t asking analytics questions and/or lacks the data to answer them.

2. **Localized Analytics.** “Uses reporting.” Analytics or reporting is in silos.

3. **Analytical Aspirations.** “See the value of analytics.” Struggles mobilizing the organization and becoming more analytical.

4. **Analytical Companies.** “Good at analytics.” Highly data oriented, has analytical tools, and makes wide use of analytics. Lacks commitment to fully compete or use strategically.

5. **Analytical Competitors.** “Analytical nirvana.” Uses analytics across the enterprise as a competitive differentiator and in strategy.

Adapted from *Analytics at Work*, Davenport, Harris and Morison, 2010
Why is Governance necessary?

- Fragmented operational groups who maintain their own databases and tools make centralized leadership very difficult.
- Lack of clear, consistent communication
- Conflicting needs and priorities across various groups

To be successful, organizations should have a centralized enterprise intelligence steering group to ensure communications between all stakeholders, set priorities, and drive consistent organizational goals.
Drivers for Formal Data Governance

1. The organization gets so large that traditional management isn't able to address data-related cross-functional activities.
2. The organization's data systems get so complicated that traditional management isn't able to address data-related cross-functional activities.
3. The organization's data architects, SOA teams, or other horizontally-focused groups need the support of a cross-functional program that takes an enterprise (rather than confined) view of data concerns and choices.
4. Regulation, compliance, or contractual requirements call for formal data governance.

All 4 conditions currently exist in healthcare!
Create a governing body with participants from key parts of the organization that is accountable for the direction and operations of analytics.

- Enable better decision-making
- Reduce operational friction
- Protect the needs of data stakeholders
- Train management and staff to adopt common approaches to data issues
- Build standard, repeatable processes
- Reduce costs and increase effectiveness through coordination of efforts
- Ensure transparency of processes

Better Data leads to Better Insights
Better Insights lead to Better Decisions
Better Decisions lead to…BETTER CARE
Defining Data Governance

- A framework for accountability and decision-making
- Embracing data as an asset
- A cultural focus on the value of data
- A journey with destinations, but no end
- About communication and oversight
- A series of repeatable processes
Defining Data Governance

Data Governance is how we “decide how to decide.”
1. **Integrity** - Data Governance participants will practice integrity with their dealings with each other; they will be truthful and forthcoming when discussing drivers, constraints, options, and impacts for data-related decisions.

2. **Transparency** - Data Governance and Stewardship processes will exhibit transparency; it should be clear to all participants and auditors how and when data-related decisions and controls were introduced into the processes.

3. **Auditability** - Data-related decisions, processes, and controls subject to Data Governance will be auditable; they will be accompanied by documentation to support compliance-based and operational auditing requirements.

4. **Accountability** - Data Governance will define accountabilities for cross-functional data-related decisions, processes, and controls.

5. **Stewardship** - Data Governance will define accountabilities for stewardship activities that are the responsibilities of individual contributors, as well as accountabilities for groups of Data Stewards.

6. **Checks-and-Balances** - Data Governance will define accountabilities in a manner that introduces checks-and-balances between business and technology teams as well as between those who create/collect information, those who manage it, those who use it, and those who introduce standards and compliance requirements.

7. **Standardization** - Data Governance will introduce and support standardization of enterprise data.

8. **Change Management** - Data Governance will support proactive and reactive Change Management activities for reference data values and the structure/use of master data and metadata.
Analytics are an important part of an organization's strategy to achieve goals.

In order to be effective, we need:

- Unified communication amongst stakeholders from operations, IT, and analytics
- Clear definition of priorities
- Oversight of processes in reporting
## Organizational Awareness

### Quality Grid

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<tr>
<th>Clinical Owner</th>
<th>Cardiovascular</th>
<th>CMIO</th>
<th>Diabetes</th>
<th>ED</th>
<th>IT</th>
<th>Nursing</th>
<th>OB</th>
<th>Orthopedics</th>
<th>Pediatrics</th>
<th>Pneumonia</th>
<th>Primary Care</th>
<th>Psych</th>
<th>Pt Engagement</th>
<th>Quality/Safety</th>
<th>Sepsis</th>
<th>Stroke</th>
<th>Surgical</th>
<th>Tobacco</th>
<th>Transfusion</th>
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### Unique Count

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| 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12      | 13      | 14      | 15      | 16      | 17      | 18      | 19      | 20      | 21      | 22      | 23      | 24      | 25      | 26      | 27      | 28      | 29      | 30      | 31      | 32      |

**Cardiovascular**
- Congestive Heart Failure
- Complications
- Catheter-associated Urinary Tract Infection
- Central Line
- Cardiac Arrhythmia

**Clinical Information**
- CPT/ICD-10 for each OP or IP encounter specified in tables 1.1 and 1.2.
- Data for discharge is required.
- Final diagnosis for each encounter included in ICD-10 specified in tables 1.1 and 1.2.
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Organizational Awareness

- Are we on the same page?
  - Information sharing
  - Course correction
  - Decision-making
  - Source of Truth
  - Common Definitions
Stewardship

- Are we being consistent?
  - Standard inputs
  - Standard outputs
  - Standard formats
  - Standard definitions
  - Standard processes
Data Quality

He who knows nothing is closer to the truth than he whose mind is filled with falsehoods and errors.

– Thomas Jefferson
Data Quality

- Would you drink dirty water?
- Would you use dirty data?

How do you know?
Data quality results from adherence to the definition of data quality criteria from both a business process and data design perspective.
Two Drivers for Bad Data Quality

- **Technology-driven**: Caused by not applying technology constraints
- **Business-driven**: Caused by end users inaccurately creating or defining data
## Technology-Driven Examples

<table>
<thead>
<tr>
<th>Lack of database or data integration constraints</th>
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</thead>
<tbody>
<tr>
<td><strong>Invalid Data</strong></td>
</tr>
<tr>
<td><strong>Missing Data</strong></td>
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</tbody>
</table>
## Business-Driven Examples

<table>
<thead>
<tr>
<th>End user creation or definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inaccurate Data</strong></td>
</tr>
<tr>
<td><strong>Inconsistent Definitions</strong></td>
</tr>
</tbody>
</table>
Creating a Data Governance Team

- Increased Communication
- Clear Processes Defined
- Consistent Goals
- Operational Engagement and Education
- Well-Defined Responsibilities
- Well-Defined Priorities
Data Governance Model Options

**Federated**
- Centralized executive leadership
- Operations Group – by service line/function
- SMEs represent service line/function

**Centralized**
- Centralized executive leadership
- Centralized Operations Group - representing organization
- SMEs represent service line/function AND organization

**Hybrid**
- Centralized executive leadership
- Temporary project-based operations group
- Temporary project-based working groups (SMEs)
- Excludes departments that are not common across all entities
Governance Structure

- Decision makers for the organization
  - IT & Operations – Clinical and Financial
  - Core Reporting
  - Research
  - Performance/Process Improvement
  - Quality
- Create subgroups to address projects, goals, or issues
Data Governance is not IT

IT is like the pipes and pumps and storage tanks in a plumbing system. Data is like the water flowing through those pipes.
Steering Committee Responsibilities

- Overseeing report processes
- Prioritization
- Data/tool access
- Communication
- Standardization
- Long-term strategy
- Ensures consistent measurement of key metrics (i.e. defining admission counts)

The steering committee determines how to best leverage analytics across the whole enterprise to meet organizational goals.
Conclusion

- Recognize data is an asset
- Realize that data quality is paramount to organizational success
- Establish a framework for decision-making
- Talk the same language – drive standards
- Improve efficiency in data management
  - Recognize errors earlier
  - Stop propagation of errors
  - Decrease redundancy
Next Steps

- Identify executive champion
- Engage senior executives in determining the need, structure and process
- Establish focus and value propositions
- Implement and follow Data Governance Life Cycle