

**Evolving**  
**Data Quality Management Capabilities**  
**in Complex Organizations:**  
**The Health Care Case**

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# The Context

## *Cedars-Sinai Medical Center*

- *Academic Medical Center/Health System*
- *Largest Non-Profit Hospital in the Western US*
- *950 Beds, 10,000 employees, 2000 MDs*
- *Basic Annual Statistics*
  - *55,000 inpatients*
  - *280,000 outpatients*
  - *55,000 ER visits*
  - *7,000 deliveries*



# Data Management Implications

- *Complex, information-intensive organization*
- *Distributed oversight responsibilities*
- *Transactional data systems populated as byproduct of patient care*
- *Information managed as departmental resource rather than as enterprise resource*

# Evolving from this view...

## MISSION

- *Patient care*
- *Teaching*
- *Research*
- *Community Service*

## RESOURCES

- *People*
- *Money*
- *Equipment*

# ...to this view, over the last 10 years

## MISSION

- *Patient care*
- *Teaching*
- *Research*
- *Community Service*

## RESOURCES

- *People*
- *Money*
- *Equipment*
- *Information*

# The “long and winding road” (1)

- **1997**
  - *DPG convened to address data crises*
- **1998**
  - *TDQM Summer Course*
  - *DQMWG Spun Off of DPG*
  - *IQ Survey, round 1*
- **1999**
  - *DQ Concept Kick-Off*
  - *IQ Survey, round 2*
  - *DQM Objectives first appear in Annual Plan*
- **2000**
  - *Big DQ Improvement Project*
  - *DQM Objectives appear again in Annual Plan*
  - *ROM Dept reorganization to capitalize on DQ framework*
- **2001**
  - *DPG & DQMWG Charters renewed*
  - *DQM Objectives again in Annual Plan*
  - *IQ Survey, round 3*

# The “long and winding road” (2)

- **2002**
  - *DPG thinks about pro-active DQM infrastructure*
  - *ROM designated as data “clearinghouse” for approval of all clinical statistics reported out*
  - *JCAHO accreditation standards for MOI linked to DQM initiative*
- **2003**
  - *Data crisis: No P&Ls for 8 months*
  - *Initiate Data Warehouse Improvement Project*
- **2004**
  - *Propose DQMU (x2)*
  - *Implement Data Warehouse Improvement Project*
  - *DQMU funded as part of ROM*
  - *IQ Survey, round 4*
  - *Data crisis: No Management Reports for 5 months following new PM system implementation*
- **2005**
  - *DWIP Objectives appear in Annual Plan*
  - *DQMU staffed and DQM Program initiated*
  - *DWIP Project Plan institutionalized as primary focus for DPG*

# The “long and winding road” (3)

- **2006**
  - *DQ Objectives appear in Annual Plan*
  - *DQ Objectives linked to executive management incentive compensation*
  - *Development of Data Certification Program for “High Priority” data elements*
  - *Pilot estimation of DQ ROI*
  - *Development of explicit criteria for resolving “High Priority” Data Quality Incidents*
- **2007**
  - *IQ Survey, round 5*
  - *117 Data Quality Incidents logged since initiation in February 2005, of which 82 have been resolved and closed*
  - *Collaboration with Internal Audit department relative to minimizing risk due to defective data*
  - *Continuing challenge to frame strategic issues in context of “managing information as an enterprise resource”*



# What We Hope For

- *Quick results*
- *Unflagging support*
- *Universal cooperation*

# What We Get

- *Often painfully slow progress with regular periods of stagnation, if not reversal*
- *Occasional bursts of support with frequent periods of inattention, or forgetfulness*
- *Gradually enhanced, but intermittent, cooperation*

# What Does It Mean?

- *Evolutionary process*
- *Limitations of hierarchical control*
- *Development of “shared mental models” = work*