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Quality Conundrum

Evaluating the Data Quality Puzzle

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Data and Healthcare

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What is Data?

- Facts and statistics collected together for reference or analysis

DATA → KNOWLEDGE → ACTION

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Interesting Facts about Data

- As much as 30% of the world's stored data is generated in the Healthcare Industry

- Estimates suggest that by better integrating big data, healthcare could save as much as $300 billion a year-which is equal to reducing costs by $1000 a year for every man, woman and child

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Interesting Facts about Data

- At the moment, less than 0.5% of all data is ever analyzed and used*

- Estimates suggest that poor data can cost businesses 20%–35% of their operating revenue*

*
Across all industries that are data heavy

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Data Quality and Standards

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What is Data Quality?

- Data quality and consistency are critical to ensuring patient safety, communicating delivery of health services, coordinating care, and healthcare reporting. Assessing the quality and consistency of data requires data standards. (AHIMA)

- Data Quality Management: The business process the ensures the integrity of an organization's data during collection, application (including aggregation), warehousing and analysis. (AHIMA)

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Core Data Quality Characteristics

- Accessibility
- Consistency
- Currency
- Granularity
- Precision
- Accuracy
- Comprehensiveness
- Definition
- Relevancy
- Timeliness

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Data Standards-The Road Map

- Documented agreements on representations, formats, and definitions of common data.

- Data standards provide a method to codify in valid, meaningful, comprehensive, and actionable ways, information captured in the course of doing business.

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Evaluation and Remediation

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Where to Start

- High risk/high reward
- Key reporting fields
  – Report inventory
  – Term/metric inventory
- Known quality issues
- Connected quality issues

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Data Quality Process

- Identification of need/issue
- Data Integrity Evaluation
- Remediation of Quality Issues
  – Recommendations
  – Remediation plan approval
  – Remediation management
  – Remediation final report
- Definition of data item (term/metric definition)
  – Glossary
  – Processed
  – Onboarded
- Ongoing monitoring and data standards

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Data Integrity Evaluation (D.I.E)

- Gather source data
- Standardize source formatting, making note of inconsistencies
- Determine evaluation measures and metrics
- Determine focus points
- Automate the evaluation when possible
- Ensure repeatability
  – Document process
  – Document statistics
  – Document EVERYTHING you find
- Follow the "data leads"

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Standard Format

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Remediation Plan/Execution

- Timeline (initial and updated)
- Coordination of all remediation teams
- Standardized communication of needed changes
- Communication to Data Governance Advisory
  – Approval
  – On going updates
- Communication to key stakeholders
- Re-evaluation post updates/changes
- Remediation completion report to Data Governance and Data Governance Executives as appropriate

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Defining and Securing

- Onboarded-highest level of definition/security
  – Source data reliability
  – Source usage
  – Ownership
  – Standard term/metric
  – Standard workflow
  – Data quality standards
  – Review cycle
- Processed (meets some but not all onboarding criteria)
- Glossary (generic/project specific)-lowest level of definition/security

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Interval Monitoring

- Scheduled review: monthly to every 2 years
- Review Team: Knowledge Management, Operational Owners, Technical and Application Owners
- Communication of changes across data utilization teams

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Examples

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Department Address

- Began in December of 2017
  - 35% Evaluated (186 Addresses Evaluated/528 Total Addresses)
  - 100% updated
- Round 1 Expected Completion in July of 2018
- Style Guide created
- Team effort-Approximately 160 Hours
  - Knowledge Management (~80 Hours)
  - Epic System Admin (HITs O2-Cadence Team) (~40 Hours)
  - Marketing (~40 Hours)

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Rationale

- Patient Satisfaction
  - Difficult to find appointment location
  - Parking in the wrong garage (farther walk)
  - Unsure of which clinic to go to due to generic naming: "Internal Medicine" could be the Allergy Clinic
- Patient Wayfinding
  - GPS difficult or did not work due to faulty addresses
  - Addresses were not specific (3901 Rainbow…maybe the appointment was in Miller)
- Reporting Needs
  - Roll-up of exam rooms by physical location

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Department Address Definition

- The physical location to which mail is delivered, as distinct from the actual street address. Department address within Epic must contain 3 lines. Line 1 will refer to the descriptor for the location (Clinic Specialty such as "Internal Medicine". Line 2 will define the building, floor and suite number as available. Line 3 will be the actual street address. The combination of lines 1-3 make up the department address.

- Ownership: Marketing

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Standardized Format

- Line 1: Clinic/Location Specialty
- Line 2: Building, Floor, Suite
- Line 3: Physical Address
- Example:
  - Original Address:
    - 4TH FLOOR POD B
    - 3901 RAINBOW BLVD MED OFFICE BLD
  - New Address
    - General Medicine
    - Orthopedics and Medical Pavilion Level 4B
    - 2000 Olathe Blvd

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MGMA Specialty

- Scope: Physicians (MD/DO)
- Began in August of 2017
  - 32,640 Initial data points (multiple tables)
    - 12% quality issues (3,916 data points)
  - 48,040 data points (new combined table)
    - 11% quality issues (5,064 data points)
- Completed in March of 2018
  - 0% data with quality issues (0 data points)
- 11 Total Data Integrity Evaluations

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Team Effort

- Estimated 270 Hours in research and remediation
  - Knowledge Management (~150 hours)
    - 120 Hours for Data Integrity Evaluation
  - Database Administration(~25 hours)
  - Database Management (~35 hours)
  - Epic System Admin (HITs O2-Cadence Team) (~10 hours)
  - Administrator/Administrative Support (~50 Hours)

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MGMA Specialty Definition

- The associated provider's specialty included within the Medical Group Management Association (MGMA) survey related to the provider's trained specialty, assigned by the Hiring Manager, allowing for benchmarking purposes.

- Ownership: Financial Operations

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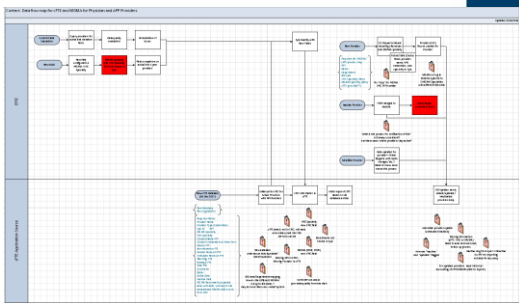## THE UNIVERSITY OF KANSAS HEALTH SYSTEM

Rationale for Evaluation

- Physician Benchmarking
  - Work relative value units per clinical full time equivalent by specialty (Compensation)
  - Tied to financial gain/loss and physician contracts
- Inaccurate in source system
- Used in multiple reports with workarounds to achieve correct numbers

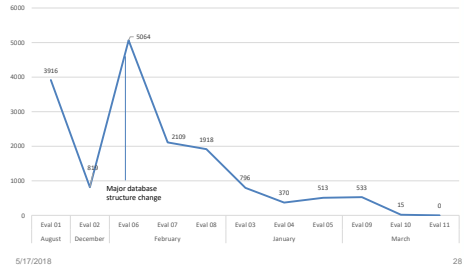5/17/2018   26

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Workflow-Current/Future State

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Journey to Quality

Remediation
cFTE Database: MGMA Specialty
8/17-3/18

Major database structure change

	Eval 01	Eval 02	Eval 06	Eval 07	Eval 08	Eval 03	Eval 04	Eval 05	Eval 09	Eval 10	Eval 11
	August	December		February			January			March	

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Knowledge Management Definition Evaluation			
Term Definition:	MGMA Specialty		
Definition Status:	DGA Final Approval	Definition Type:	Glossary
Finalization Date:		Next Review Date:	5/1/18
Reviews			
Last Review Date:		Review Schedule:	Annually
Review Date:		Review Status:	
Review Updates/Notes:			
Operational Ownership			
Executive Owner Department:	Financial Operation/CFO	Operational Owner Department:	Financial Analysis
Executive Owner:	Bill Marting	Operational Owner:	Susan Brisch
Subject Matter Experts:	Mark Rea, Clinical Administrators		
Term/Metric Operational Definition and Terminology			
Term:	MGMA Specialty		
Synonyms:	Medical Group Management Association Specialty		
Item Name:	MGMA Specialty		
Purpose:	MGMA specialty is assigned to providers by clinical administrators according to their specialty area. This data is then used to compare actual productivity for physicians to the MGMA benchmarks. Compensation per work relative value unit (wRVU) helps to set the PSA rates that are used for clinical division payment and evaluation of payments above the thresholds for some PSAs.		
Display Name:	MGMA Specialty		
Operational Definition:	The associated provider's specialty included within the Medical Group Management Association (MGMA) survey related to the provider's trained specialty, assigned by the Physician Manpower Planning Committee, allowing for benchmarking purposes.		
Target Terminology:	N/A		
Terminology Code:	N/A		
Terminology Name:	N/A		
Approvals			
DDWG Status:	N/A	DDWG Date:	
DGA Status:	Approved-Glossary	DGA Date:	4/13/2018
DGE Status:		DGE Date:	
Other Status:		Other Date:	
Initial Research and Findings			
Current State Workflow (Link):	Complete: Link (pending standard repository location)		
Future State Workflow (if applicable) (Link):	Complete: Link (pending standard repository location)		
Workflow Owner (documentation):	Financial Operations		
Industry Data Source:	User Name and Password available through Mark Rea/Jessica Turgon https://www.mgma.com/data		
Data Release Date Schedule:	Yearly: November		

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Source System(s)	
	Epic: SER 2908 (Primary)
	Epic: SER 2909 (Secondary)
	Clarity: CLARITY_SER.RPT_GRP_NINE (report grouper 9-SER 2908)
	Clarity (Category List Table): ZC_SER_RPT_GRP_9 (report grouper 9-SER 2908)
	Clarity: CLARITY_SER.RPT_GRP_TEN (report grouper 10-SER 2909)
	Clarity (Category List Table): ZC_SER_RPT_GRP_10 (report grouper 10-SER 2909)
	Supporting Source Systems
Source System(s)-Technical Source Information:	Visual Cactus: Credentialed Medical Staff including Department, Start/Term Dates, NPI JPC Medical Staff List: Credentialed Jay Hawk Primary Care Medical staff danville.kudoc.org\kupiprod.RevenueCycle: cFTE Database-storage point for providers, cFTE values, MGMA specialty
Technical Owners:	EPIC: SER 2908/2909-Cadence O2 Team (Vidhu Khullar) cFTE Database: Brandon Haight Visual CACTUS: Medical Staff Affairs (Judi Smedra) JPC Medical Staff List: JPC Administration (Carrie Jordan)
Evaluation Method:	SQL, Excel: Source to source system compare
Evaluation Resources and Artifacts (Link):	Complete: Link (pending standard repository location)
Remediation	
Recommended Remediation:	3/18: Recommend incorporating JPC providers into Cactus to be primary source of truth for accurate and up to date provider information 8/17: Initial remediation needs: Clean cFTE database (original source of truth) to match credentialed medical staff with updates to MGMA specialties for all providers from 2016 to present. Epic 2908 and 2908 will become the source of truth for MGMA Primary and Secondary Specialties with an automated feed from Epic into the cFTE database. Additionally there will be integration with Cactus for provider information (NPI, Department, Start/Term dates). To be added to the O2 Onboarding Request Form. Automation to email providers on a weekly basis if a provider is missing the MGMA specialty value.
Remediation Notes:	3/18-Remediation for accuracy completed. Epic providers (MD/DO Only) loaded and verified. Cactus Integration is on going.
Remediation Hours:	Knowledge Management (~150 hours) Database Administration(~25 hours) Database Management (~35 hours) Epic System Admin (HITs O2-Cadence Team) (~10 hours) Administrator/Administrative Support (~50 Hours)

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Questions to Ponder

- Do you have the framework in place to begin progress toward cleaner data and better outcomes?

- What are the costs for poor data quality in your organization?

- What measures can be put into place today to slow/stop the progression of bad data practices that lead to data quality issues?

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