Introduction to Data Initiative and Uses of the Information and Quality Services Center
Prepared for: Dr. Hye-Chung Kum, April 9, 2017

Mission
Inspire continuous improvement in health and healthcare delivery through collaboration, coordination, education, research and communication.

Vision
Be the trusted “go to” resource to inform collective improvement of health and healthcare outcomes.

Values
Integrity, Quality, Neutrality, Collaboration, Learning and Excellence

Foundation Structure
- Information and Quality Services Collaborative
- Community Health Collaborative
- Board of Trustees
- Texas Quality Initiative
- Research Collaborative
- Workforce Development Center

Relationship and History
- Non-profit foundation affiliated with Dallas-Fort Worth Hospital Council
- Information & Quality Services Center in existence for 17 years
- Services contracts in place with Business Associate Agreements
- More than 90 healthcare facilities participate in the IQSC
- Data submitted to the Texas Healthcare Information Collaborative

NTHIQC Organizational Structure
- Patient Safety & Quality Committee
- Research Committee
- Data Users Group
- Post-Acute Care Committee
- Nominating Committee
- Regulatory Compliance Collaborative

Role of the NTHIQC
Data Integrity is Key

Contributing Facilities and Patients

- 81 Facilities
  - 66 Acute
  - 7 Rehab/Psych
  - 8 Ambulatory Surgery
- 17 counties
- 17 SNF

* Note: Color intensity on map is normalized against the population for the Zip Code

High Level Data Flow

How much data is captured in the DFWHC Data Warehouse for Acute Care Facilities?

* Note 2012 Data - Excludes Rehab and Behavioral Health
General Description of Information Submitted

- Claims from all participating hospitals
- No “blinding” of any data elements
- All payers - including self-pay patients
- All patient encounters except
  - outpatient lab
  - hospital-based outpatient clinic

Claims Data is the data from the patients bill

- Date of Admit
- Patient Name & Demographics
- What was found to be Wrong with the patient – Diagnosis Codes
- What was done to treat the patient – Procedure Codes
- Cost involved in treatment – Revenue Codes
- Who treated the patient - Attending & Operating Physicians
- Date of Discharge

Inpatient Claims Information

- North Texas Data from 2003 to Present
- Texas State Data 2004 to Present
- Case level detail
- Diagnosis codes 1-25
- Procedure codes 1-25
- All Charge Data
  (Total Charge only in Texas State Data)
- Physician ID and Name
  (Not included in Texas State Data)

Outpatient Claims Information

- North Texas Data from 2006 to Present
  - 44 volunteer hospitals 2006 - 2009
  - All Facilities beginning Q4 2009
- Case level detail
- Diagnosis codes 1-25
- Procedure codes 1-25
- All Charge Data

Skilled Nursing MDS File

- CMS Minimum Data Set File
- Patient Assessment Data
- Diagnosis Codes
- Patient Demographics
- Clinical Information
- More than 1000 data elements
- Data Collection just begun production in 2015
- Still refining and learning dataset
Physician ID and Name
• ER Encounters with NYU Algorithm back to 2006
• Observation, GI and Cardiology Encounters
• Skilled Nursing Facility MDS File

Outpatient Claims Information
Unique to DFWHC Foundation

Regional Enterprise Master Patient Index (REMPI)
• Probabilistic electronic tool that matches patient encounters across hospitals and systems when applied to the Information and Quality Services Center Data Set
  – REMPI Number = Medical Record Number (MRN)
  – 1 REMPI Number Per Patient w/Multiple Encounters
• Benefits
  – Post Discharge Mortality Analysis (With SSA Death Master)
  – Readmission Analysis (across all Hospitals in the region)
  – ED Frequent Flyer Analysis (across all Hospitals in the region)

Regional STS Certified Clinical Data Registry
• > 90% of North Texas CABG and AVR Encounters
• REMPI Matching to Claims Warehouse Information

Texas Quality Initiative

State Data Vs. DFWHC Foundation Data

DFWHC Foundation
• Faster
  – Takes 2 months for the data be available in most cases
• More Data
  – ED Data back to 2006
  – Physician Field not blinded
• Approximately 94% of all Inpatient Claims are in the DFWHC Data Warehouse for North Central Texas

THCIC (State Data)
• Bigger Area Covered
  – 99% of all Inpatient Claims
• All of Texas represented
• The official Data record
  – All facilities are required to certify their data
• Slower
  – Takes about 1 year for the data to become available
• Can be less accurate
  – If an issue is found in the data after certification the State will not change the data
  – Only Partial ED Data

Business Intelligence
• Quality Metrics – Hospital Acquired Condition and AHRQ Measures
• Improvement of Cardiovascular Services
• Readmission Analyses
• ER “Frequent Flyer” Reports
• Market segment assessments – by service line, physician and geography
• Community Health Needs Assessments and Regional Community Health Improvement Reporting
• Grants/Research
• Compliance and Duplicates
Currently available in all-payer claims report:
- Ventilator-associated pneumonia (VAP)
- *Based on acute patient days*
- Central line associated blood stream infection (CLABSI)
- Catheter associated urinary tract infection (CAUTI)
- Pressure ulcers
- Obstetrical adverse events
- Falls
- Surgical site infection (SSI)
- Venous thromboembolism (VTE)
- Inpatient Glycemic Control
- Readmissions
- Clostridium Difficile

**Hospital Engagement Network**

**Hospital Acquired Condition Metrics**

**Examples of Data Analytics**

**Easy Access Reporting**

**Easy Customizable Graphs & Charts**

**Easy Raw Data Download**

**Any Kind of Count by**

- Hospital/System
- Zip Code/County
- **Diag- Proc Code (with POA)**
- MS or APR DRG
- Product Line
- Surgery - ED - Elective – New Born
- Charges – Cases – Length of Stay
- Readmissions
- Post Discharge Mortality
Physician Data

Enhanced Data
- Regional EMPI (REMPI)
- Social Security Death Master File
- NYU ED Utilization
- NPI Database
- NPI Physician Specialty Database
- 3M Potentially Preventable Readmissions (Coming Fall 2015)
- Outpatient APG (Coming Fall 2015)
- Case Level (HEN) Quality Algorithm Flags
- Case level AHRQ Flags (Coming Fall 2015)

NYU Algorithm— Non-Emergent Encounters
- Emergent/Primary Care Treatable - Based on information in the record, treatment was required within 12 hours, but care could have been provided effectively and safely in a primary care setting. The complaint did not require continuous observation, and no procedures were performed or resources used that are not available in a primary care setting (e.g., CT scan or certain lab tests);
- Non-emergent - The patient’s initial complaint, presenting symptoms, vital signs, medical history, and age indicated that immediate medical care was not required within 12 hours;

Algorithms to Measure Quality
- AHRQ – PSI, PDI, IQI
- Hospital Acquired Conditions
- HEN Birth and Delivery Stats
- CMS 30 Day Readmission

AHRQ Quality Data
PSI – Death among Surgical Inpatients w/Complications
IQI, PSI, PQI and PDI also available

Readmission Quality Data

Out data before it is available from the HEDIS
Where Bar is above 1 the hospital did worse than expected
State Average data also available in separate graph as it becomes available
Taking Data to the Next Level
Population Health, Research, Physician Analytics

Examples: Community and Population Health Management

- Uses Now and Contemplated
  - Diabetes
  - Congestive Heart Failure
  - Patient Migration
  - Emergency Room Analysis
  - Form 990 Analyses
  - 1115 Waiver Metrics

Community and Population Health Management
Diabetes Example

www.healthynortexas.org

Grants and Research – Partial List

- Cardiac Research - UTSW Heart Study
- VTE – Baylor and Sanofi Aventis
- Injury Prevention Center and Genesis – Domestic Abuse and Child Endangerment
- Breastfeeding Initiative in the Workplace
- Abdominal Aortic Aneurysms Registry – Baylor Research Institute
- Tarrant County United Way Aging Study
- EPA and ER Admission Study – Emory and Georgia Tech
- Readmission Studies (multiple with local partners)
- Trauma studies – Parkland/UTSW
- Cardiovascular Surgery Research (3 projects) – Baylor Research Institute
- Multiple submitted studies through UNTHSC
- Hospital Engagement Network CMS Contractor

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Dallas-Fort Worth Hospital Council
Education and Research Foundation