ENABLING INFORMATION GOVERNANCE IN HEALTHCARE

Best Practices & Practical Solutions

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Data-driven organizations empower everyone to:

- Find the data they need
- Understand what it means
- Trust that it is right
Modern data-driven organizations use Collibra
Healthcare Customers
Industry leaders rely on Collibra for their data governance
We Serve the Data Steward

Collibra is the go-to application that supports all responsibilities of the governance and stewardship team.

We Support the Knowledge Worker

Every single employee in an organization should want to use Collibra.
Information governance maximizes the value of data

- **Understand**: Data Management (IT) Documentation – lineage, glossary, dictionary etc.
- **Trust**: Data Governance (IT, Business) Working groups agree standards, definitions etc.
- **Find**: Information Governance (IT, Business, Executives) Share easy to find, trustable information to make decisions
What data exists across the organization?

- **Reports**
- **Metrics & Definitions**
- **Data Sets & Queries & Models & Views**
  - **Refined Data (Data marts & Refined Zones)**
  - **Atomic Data (Warehouses & Raw Zones)**
- **Data Sources & Systems**
- **Business Users**
- **Business Analysts**
- **Report Developers/ Analysts**
- **Data Scientist**
- **ETL Developers & Integration Specialists**

Data Citizens
Jump start your IG Program with a report catalog

Unified User Experience (Collibra Report Catalog)
- Custom Dashboards
- Radar and Reporting Workbench
- Discern Explorer
- Legacy reports
- Vendor Reports

Find

View for displaying all Reports

Referrals by Provider
Referrals by organization and individual provider both "in" and "out" of the Wellness Hospitals network.

Referral Summary
All referrals where the services specified in the referral have been delivered by a Wellness Hospital facility or Wellness Hospitals Network Provider.

Stroke Measure
Measures the proportion of acute stroke patients who were treated within 2 hours of "time zero" at a hospital.
One Customer’s Approach

Unified User Experience

Qlik Dashboards
Epic Radar and Workbench
Custom SQL Based Reports

Google-Like Quick Answers
PeopleSoft Reports

Data Persistence
Epic Star
Epic Clarity
PeopleSoft
Chronicles
API, Costflex, etc.

Find

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In the past 12 months, there were 217,294 arrivals to the ED. The average length of the ED Encounter for 2016 to date was 127 minutes. This is up slightly from 116 minutes in 2015.
The ED Throughput Dashboard displays key throughput metrics for caregivers and operational staff in the Emergency Department. It is broken up into several different tabs that show the data in various ways. At any time, you can filter the result set to certain dates using the calendar button on the left. You can also use our quick filters that are pre-built for you, or you can create your own combinations of filters using the filter button. Explore these options. You can always get back using the forward or back buttons, or you can clear all filters to start fresh. At any time, if you look at the bottom of the page, your current selections will show you the filters that are being applied.

**Overview Section**

The top keynote section contains an infographic showing the average minutes for key throughput times such as:

1. Arrival to room
2. Room to provider
3. Provider to disposition
4. Disposition to IP/DB/Discharge
5. Total length of stay in ED

Below the main infographic, is a breakdown of several of these same key throughput metrics, along with volumes of ED visits broken down by Observation, Inpatient, and Discharged from ED.

**Providers Section**

[View Report]  [Request Access]
Enabling Analytics Requires Understanding

1. Identify and certify trusted sources
2. Formalize responsibilities
3. Establish data quality metrics
4. “Watermark” outputs
5. Make lineage visible at point of consumption (context via metadata)
Data Context is needed for Analytics & BI

- **Report & Data Catalog**
  - One stop, searchable access to find reports across existing BI and reporting silos
  - Track and automatically maintain lineage from source to target, transformation logic etc.

- **Metric Definitions**
  - Identify critical data elements for a given metric
  - Report metadata including: calculations, inclusion and exclusion requirements, reference data lists

- **Data Lineage and Metadata**
  - Document business and technical lineage, metadata, enterprise systems and data flows
  - Track and automatically maintain lineage from source to target, transformation logic etc.

- **Data Quality**
  - Data quality results—link data quality scores with reports and business views of data
  - Business rules – track quality scoring and on boarding of business rules

- **Reference Data Management**
  - Manage, govern and deploy enterprise reference data and clinical terminologies, lists and cross maps
  - Issue management, tracking and remediation plan workflows
STK-4
Type: Measure  Status: Accepted  Actions →

Overview
Add characteristic

Tags
2 Comments
Tranparency
Responsibilities
History
Files

Definition
Thrombolytic Therapy

Description
Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV t-PA was initiated at this hospital within 3 hours of time last known well.

Collection/Submission
Required

Collection/Submission Method
Required Chart abstraction or eCQM

HVBP
No

Measure Set
Stroke

Rationale
The administration of thrombolytic agents to carefully screened, eligible patients with acute ischemic stroke has been shown to be beneficial in several clinical trials. These included two positive randomized controlled trials in the United States: The National Institute of Neurological Disorders and Stroke (NINDS) Studies, Part I and Part II. Based on the results of these studies, the Food and Drug Administration (FDA) approved the use of intravenous recombinant tissue plasminogen activator (IV r-tPA) or t-PA for the treatment of acute ischemic stroke when given within 3 hours of stroke symptom onset. A large meta-analysis controlling for factors associated with stroke outcome confirmed the benefit of IV t-PA in patients treated within 3 hours of symptom onset. While controversy still exists among some specialists, the major society practice guidelines developed in the United States all recommend the use of IV-PA for eligible patients. Physicians with experience in stroke management and the interpretation of CT scans should supervise treatment.

The European Cooperative Acute Stroke Study (ECASS) II trial indicated that intravenous rPA can be given safely, and can improve outcomes for, carefully selected patients treated 3 to 4.5 hours after stroke, however, as the NINDS investigators concluded, the earlier that IV thrombolytic therapy is initiated, the better the patient outcome. Therefore, the target for IV t-PA initiation remains within 3 hours of time last known well. The administration of IV thrombolytic therapy beyond 3 hours of stroke symptom onset has not been FDA approved.

Data Elements Used to Identify Population Business Term

<table>
<thead>
<tr>
<th>Name</th>
<th>Domain</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission Date</td>
<td>Clinical Quality CDs</td>
<td>The month, day, and year of admission.</td>
</tr>
<tr>
<td>Birthdate</td>
<td>Clinical Quality CDs</td>
<td>The month, day, and year the patient was born.</td>
</tr>
<tr>
<td>Discharge Date</td>
<td>Clinical Quality CDs</td>
<td>The month, day, and year the patient was discharged.</td>
</tr>
</tbody>
</table>

Population Statement
The STK measure set is unique in that there are two distinct initial patient populations (or sub-sets) defined within the measure set: those identified by a specific group of diagnostic codes, or lack thereof. The patients in this sub-set have been admitted for initial care of stroke. The STK measure set is helpful in understanding the relationship of patients who are transferred or discharged from the hospital or emergency department, to those who are admitted directly into a hospital setting.
Help you to address the following topics:

- Right to be forgotten
- Right to portability
- Right to be informed
- Right to oppose

End-to-end lineage

Connect systems, data movement and business metadata

Understand
Data Quality Dashboards

Establish communication plan around data quality issues

Data quality rules and associated measures are consolidated at a relevant level (at the master data level in this example) in Data Quality Dashboards.

This provides an overview of data quality over data quality dimension for data quality rules executed in several systems.
Terminologies and Vocabularies drive analytics

Reference Data Governance

Myocardial infarction
58258-5 (LOINC)

K75 (ICPC-2) 410 (ICD-9)

I50.9 (ICD-10 CM)
I229 (SNOMED-CT)

heart attack

Reference Data Management

Hierarchy and Relationships
Cross mapping
Versioning

Code Standardization
Dimensions
Aggregates and Counts
Required reference data management capabilities

Yet, Excel is the most common tool in use today

- Support diverse reference data sets
  - Public
  - Private
  - Semi-private
- Connectivity & integration
- Versioning
- Security
- Scale and performance as an enterprise system
Technical Debt
• The situation in a project when developers accept compromises in one dimension of a system in order to meet urgent demands in other dimensions (Clear, 2003)
• Includes code-related and non-code related elements

Documentation Debt
• A component of technical debt (Tom, 2013)
• The situation in which software products lack the necessary internal documentation.
Collibra: the system of record for data change agents

- **Find** Know where the data comes from
- **Understand** Know what the data means
- **Trust** Know that the data is right

- **Catalog**
- **Data Dictionary**
- **Business Glossary**
- **Reference Data**
- **Policy Manager**
- **Data Helpdesk**
- **Stewardship**

**Process** | **Metadata** | **Organization**
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data sources / applications / external data | data movement & data cleaning | data consolidation & archival

- ODS
- MDM
- DWH
- Data Mart

Virtualization & analytics

Big Data Discovery

Big Data Archival
High-level Collibra Integration Architecture
# Capabilities to Enable HC Information Governance

<table>
<thead>
<tr>
<th>Enterprise Data Portal</th>
<th>Data Governance</th>
<th>Integration / Collibra Connect</th>
<th>Data Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog</td>
<td>Search</td>
<td>Data governance/quality scorecards</td>
<td>Data dictionary</td>
</tr>
<tr>
<td>Certification and attestation</td>
<td>Data helpdesk</td>
<td>Data sharing agreements/SLAs</td>
<td>Data lineage &amp; traceability</td>
</tr>
<tr>
<td>Access &amp; resource requests/approval</td>
<td>Provisioning</td>
<td>Metrics/calculations governance</td>
<td>Master Data (Provider/Person/Location/etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reference data</td>
</tr>
</tbody>
</table>