Introduction to Epic Bridges

Empowering Extraordinary Patient Care
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Introduction

Michael Botieri
– Technical Consultant

• 6+ years working in Healthcare IT, Epic Bridges Certified
• Support and implementation of new and existing interfaces as well as conversions.
• Have integrated with a large number of vendors including, Meditech, Epic, and Siemens.

August Borie
– Technical Consultant

• 3+ years working in Healthcare IT, Epic Bridges Certified
• Experienced in conversions, implementation, and configuration
• Exposure to a variety of EMR systems for conversion
Overview

• Introduction to Epic Bridges
• Epic Bridges Functionality
• Bridges and Conversions
• Lessons Learned
• An opportunity to ask your questions
Introduction to Bridges

Functionality
HL7 Overview

• HL7 is a standard for exchanging healthcare data between two systems.
• Message structure
  – Segments
  – Fields
  – Sub-Component

Example:

MSH|^~\&|Allscripts||EPICARE||201406101733||ADT^A08||P|2.3
Message Flow Into Epic

- **TCP/IP** – Configure Connection
- **Comm. Daemon** – Listens for Messages
- **Data Queue** – Contains full text of HL7
- **Control Queue** – To do list
- **Filer Daemon** – Process message
- **Chronicles** – Patient Data and Errors
  - Holding Queue – If a record is locked
Message Flow Out of Epic

- **Trigger** – Creates an Event
- **Event Queue** – Holds Events
- **Event Daemon** – Creates HL7 Message
  - **Chronicles** – Contains Patient Info
- **Data Queue** – Contains full text of HL7
- **Control Queue** – To do list
- **Comm. Daemon** – Listens for Messages
- **TCP\IP** – Configure Connection
Data Queue

Message Viewer:

- This is a tool inside Epic that enables you to look at the HL7 messages.

Message Editor:

- This tool allows you to make changes to your HL7 messages as well re-submit the edited version.
Working Errors

Error Log Report:
- Contains all errors in an easy to view report
- Quickly can identify or search errors
- Edit or correct error for re-submission

Error Work queues:
- Custom Error reports
- Built once and can be run many times
- Can be specific or very broad
Interface Specification/Configuration

Specifications:
• List of rules and general overview of how an interface will behave

Configuration:
• Interfaces are made up of Profile Variables
• Creates customization and enables you to mold the interface
• Default values & Recommended values
• Alerts
• HL7 Message header Validation
Hyperspace

- Allows an interface administrator to view interfaces that are located on an interface monitor
- Can create and customize interface monitors to your needs

Text

- Cache background application where you can build your interface monitors
- Set up purge parameters either globally or interface level
Identity

Identity:

- Refers to the unique combination of an ID and an ID Type to confidently locate a record in Epic.

- ex. BFX123 LAB

  BFX123 = ID
  LAB = ID Type
Mapping using Translation Tables

Translation Table:

• Creates a way to map data between another system.

Many to One:

• Table with more than one value mapped to only one destination Value.
Patient Validation

Patient Look Up In Epic

Lookup By Patient ID

No Match

Does Interface Create Patients?

Yes

No Match Prevention

No

Fatal Error

Match

Patient Validation

Yes

Does Interface Create Patient?

No Match on ID

No

Identity Duplicate Checking

Low Thresh Matches

1 High Thresh Match

Multi High Thresh Matches

Fatal Error

Create Patient - File Message

File Message to Existing Patient
Epic Conversions
Bridges and Conversions

- **GalenETL**
  - Extract and stage data
  - Plugin methodology
  - Export HL7 messages
- **Interface specification and configuration**
  - Build necessary records
    - Providers
    - Departments
    - Orders (EAP) and Result (LRR) Components
  - Populate translation tables
Bridges and Conversions (cont.)

- **Import Process**
  - Flat file via Text
  - Using an integration engine
- **Troubleshoot errors**
  - Patient validation errors
  - Data integrity errors
  - Provider errors
  - Mapping/Matching errors
  - Error Workqueues and Error Log Reports
Bridges Conversion Interfaces

- **Incoming Transcription**
  - Notes/Documents
  - Scanned Images
- **Incoming Results**
  - Lab Results
  - Imaging Results
- **Incoming Vaccination**
  - Immunizations
- **Incoming Documentation Flowsheet Data**
  - Vitals
- **Incoming Registration**
  - Encounters
Sample HL7 Message

MSH|^~\&|Allscripts||EPICARE||201406101733||ADT^A08||P|2.3
EVN|A08|201406101733||Allscripts
PID|||102150^^^MRN||Test^Allscripts||194708050000|F|||123456789
PV1|^^|LO_H|||1234567891^^^^^^^^^^^^NPI|||1234567891
^^^^^^^^^^^^NPI|||200904300950|200904300950
CCD vs. Discrete Conversions

- CCD – Continuity of Care Document
  - Active problems, medications, and allergies
  - Semi-discrete
    - Epic will attempt to match items on import
    - Users will need to manually reconcile the remaining items
  - Imported via separate utility (Document Assimilator)
  - Other data can be viewed via a report

- Discrete Data
  - Data is imported via Bridges conversion interfaces
  - Will need to be mapped
  - Data is filed directly to the patient’s chart
Conversion Lessons Learned

• **Immunizations**
  – Require a date/time in Epic to import, not always going to be one in legacy data
  – Can use an arbitrary date (ex. 1/1/1900) and then place any free text descriptors in another field.

• **Character limitations**
  – 2 million character limit on OBX-5 for Result ORU and Transcription MDM messages
  – Split into multiple OBX segments
Lessons Learned (cont.)

• **Vitals**
  – How to handle out of bound values
    • Ex. 72 ft. instead of inches
  – Vital sign readings taken at the same time could overwrite each other when imported
    • Ex. A blood pressure sitting and blood pressure standing measurement are recorded at the same time in the legacy system

• **Rolling Conversions**
  – Important to define updated vs. new data
  – What if data gets deleted in the legacy system?
Lessons Learned (cont.)

• **Results**
  - No verification task sent to provider
  - Need to decide whether to allow conversion results to be released to the patient portal automatically
    • Performance concerns
Services We Offer

- **Galen can assist with all aspects of a conversion to Epic**
  - Extracting data from legacy systems
  - Staging and mapping the clinical data
  - Formatting and providing HL7 messages for import
  - Importing HL7 messages into Epic via Bridges
  - CCD Conversion
  - Troubleshooting errors

- **Contact us today!**
Questions?

Success stories: http://blog.galenhealthcare.com
Wiki: http://wiki.galenhealthcare.com
Thank you for joining us today, for additional assistance....

You can contact us through our website at www.galenhealthcare.com