

## TriHealth CPSI to Epic Conversion Case Study

### Overview

Client: TriHealth (Cincinnati, OH)

Conversion Project: CPSI Inpatient EHR → Epic EHR

Timeline: December 2014 to July 2015

### The Partners

TriHealth, a healthcare system offering a wide range of clinical, educational, preventative, and social programs throughout the greater Cincinnati area, is consistently recognized as one of the top 100 integrated health systems in the country. In December of 2014, TriHealth and McCullough-Hyde Memorial Hospital (MHMH) announced their newly formalized affiliation. The need to convert valuable patient data from MHMH's legacy CPSI system to TriHealth's Epic system was a top priority, and TriHealth turned to Galen Healthcare Solutions, with whom they had completed a successful outpatient conversion, for assistance. The GalenETL (Extract, Transform, Load) tool, proven conversion methodologies applied to what are often complex legacy environments, and a history of seamless collaboration for both the technical and clinical aspects of conversion projects made Galen a trusted partner for this inpatient conversion project.

### Project Scope

 **MCCULLOUGH-HYDE IS A 45-BED HOSPITAL WITH MULTIPLE AFFILIATED HOSPITAL OUTPATIENT DEPARTMENTS (HODS)**

 **183,000 PATIENTS**

 **UP TO 5 YEARS OF CLINICAL DATA FROM CPSI**

 **5-10 YEARS OF LAB DATA FROM SOFTLAB**

### Clinical Data Types Converted

All Recorded Vital Sign Instances: Height, Weight, Blood Pressure	All Imaging Results
All Encounters/Visits with Clinical Content	Specific Scanned Image Types
All Transcriptions (E-Sign and Digital Documents)	Active Allergies (via CCD)
Last Recorded Smoking Status	5 Years of General Lab, Micro, and Blood Bank Results (From SoftLab)
All Immunization History	10 Years of Pathology Results (From SoftLab)

The Galen team was tasked with converting and validating five years of inpatient clinical data from CPSI to Epic to meet an aggressive July 1, 2015 go-live date. This included identifying specific data types associated with various systems that integrated with CPSI, and leveraging the GalenETL platform to generate HL7 and CCD messages to file into Epic. The conversion team also worked with specialized groups to fully understand MHMH's unique workflows to maintain high levels of patient care, while at the same time facilitating end user adoption of the Epic EHR. A late addition to the scope of the project was a request that Galen convert pathology result data from SoftLab to the Sunquest Copath system.

### Data Transformation

At a high level, the technical aspects of the conversion project focused on extracting the clinical data from CPSI and storing it in Galen's conversion platform, GalenETL. The GalenETL platform is a highly scalable, vendor agnostic data repository that can work with data ranging from a large regional health system to a single laboratory information system. Once the CPSI data was staged, translations were applied and the data was transformed into fully formatted HL7 messages that were filed into Epic. Similarly, once the pathology data had been converted to Epic in HL7 format, the GalenETL tool was able to reformat the Softlab pathology data to the fixed-width file specification that Sunquest requires.

The ways in which CPSI stores its data presented a challenging aspect to the project, as the information was stored within the database as well as in compressed physical data files. This complexity made extracting all of the data into GalenETL multifaceted. In many instances, it was necessary to connect a specific item from the database with its corresponding data element stored in a physical file. Leveraging Galen's extensive technical expertise and multiple plugins capabilities, GalenETL was able to transform the data stored in these fundamentally different technologies into one cohesive patient clinical element, which was subsequently transformed back into HL7 messages.

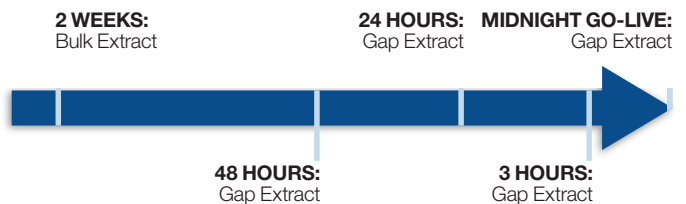
Due to the proprietary file format that CPSI uses, scanned images were compressed and stored in archive folders. This made opening even a single image unconventional. To solve this problem, Galen created a dedicated environment focused solely on peeling back the layers of compression and storage to gain access to the individual image files. Once again, through Galen's collective knowledge, GalenETL was able to convert each image from its proprietary format into a standard format compatible with Epic.

### Inpatient Considerations: Integration and Cutover

Managing an inpatient conversion carries its own unique set of challenges not found in an outpatient conversion project. Inpatient EHRs are often much more integrated with other systems than ambulatory EHRs. MHMH and TriHealth worked tirelessly to ensure all systems were accounted for in their cutover planning, and collaborated with Galen to make sure the conversion cutover was as seamless as possible.

Since there is no "downtime" in the inpatient setting, it is imperative to minimize risk during the time when users switch from one system to the other. The Galen team formulated a complete cutover plan that allowed for a smooth transition and ensured users were working with the most recent patient data once in Epic. The plan allowed enough time to extract and import the clinical data, while keeping the converted data in Epic as "real time" as possible.

The first extract and import was scheduled two weeks prior to the end user go-live. This import contained most of the historical clinical data being converted and gave the team enough time to load the data into Epic. The subsequent "gap" loads were scheduled 48 hours, 24 hours, and 3 hours prior to go-live. At midnight during the cutover, a final extract and import was performed. Post go-live gap loads were scheduled as needed.



Although this was a historical data conversion, it was vitally important to have as much information as possible converted on the currently admitted patients. Some of this information was manually abstracted by staff, while Galen converted the rest of the data via HL7 messages. Coordination between the Galen team and the registration staff to include the CPSI visit identification numbers for new patient admissions resulted in the converted data being correctly attached to the appropriate encounters. Although this added element is typically not done during a conversion, the coordination helped maintain a continuity of care for the admitted patients. The cutover coordination and gap load schedule required a large work effort from both the Galen resources and MHMH-TriHealth staff, but ultimately worked for the CPSI to Epic conversion.

### Collaboration Yields Successful Results

Due to the excellent work and collaborative effort put forth between TriHealth, MHMH resources, and the Galen team, MHMH successfully went live on schedule with the converted CPSI data in Epic on July 1, 2015.