



CASE STUDY:

The Bolivar Family Care Center Data Conversion Project For Citizens Memorial Hospital

By Galen Healthcare Solutions

A hospital chooses MEDITECH and ends up (happily) paperless

Citizens Memorial Hospital, a state of the art acute care hospital with 1,800 employees in nine counties, is located in Bolivar, Missouri, about 140 miles southwest of Kansas City. Operating since 1982 CMH, with 30 clinics throughout the region, is one of Missouri's most successful and respected hospitals. In 2003, the Hospital selected MEDITECH to provide an integrated information system for health care that would enable the physicians and other caregivers at CMH to track medical records and monitor ongoing treatment, no matter where the patient happened to be. With fifteen clinics, Citizens Memorial was determined to make each clinic completely paperless.

"Before we made the decision to go with MEDITECH, we were using dated, stand-alone pharmacy, laboratory, and financial packages," says Denni McColm, Chief Information Officer at Citizens Memorial. "Our old system was very redundant, and I knew that the best way to support all our employees and extensive patient population was to implement a more robust, integrated system." That required the export of all existing data to MEDITECH's integrated Health Care Information System. "We had four distinct goals in mind," she says: "To better serve our patient population by offering a truly integrated care approach across diverse enterprises; to improve clinical efficiency by providing clinicians with access to patient information from anywhere across the continuum; to improve the efficiency and quality of care documentation; and to prevent medical errors with a computerized physical order entry system containing clinical decision support."

Galen helped CMH to safely process information about **39,000 patients**, including:

- 1,500,000 documents
- 500,000 scanned documents
- 3,500,000 test results

An acquisition and an EMR compatibility challenge

Since then, Citizens Memorial Hospital has continued to expand and upgrade its services and McColm has remained committed to an integrated approach to Electronic Medical Records. In October 2013, CMH acquired another clinic, the Bolivar Family Care Center, located on the CMH campus. The clinic has 13 providers (eight physicians and five mid-levels), receiving as many as 3,000 visits per month. Both the clinic and the hospital shared many patients, but not an EMR. The clinic's EMR was provided by Allscripts. Now, a new challenge emerged: how to wean Bolivar Family Care Center and its patients from the old system, teach them



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the new system, lose no vital data, be able to easily read imported data, and ensure the conversion that would capture the data needed and set aside what was either unnecessary or redundant. And it all had to be done in 90 days.

According to Denni McColm, "It's a little amusing to look back on it now, but we actually thought we could handle this ourselves. After all, we had access to the data, surely we could figure out how to make it useable in a different system. Well, we couldn't. It didn't take us long to realize that it would require years to do. But it took long enough to shorten our timeline to completion and long enough to understand that we would have to map data, and that was more complicated than doing an interface. There were so many versions of so many tasks that had to be mapped to the hospital system and then map the care center's version to our own."

The hospital chooses Galen Healthcare Solutions – and is amazed

She adds, “We chose Galen Healthcare Solutions – and even now that the work has been done so successfully I’m still amazed at what Galen was able to do. They did fabulous work.”

The task was daunting. The information in the clinic database that had to be transferred included meds, allergies, problems and immunizations, office notes, scanned documents, lab results and vital signs. Not only was it necessary to capture all of this data, it had to be done as quickly as possible so there would be no disruptions in care, and it had to occur while other unrelated IT projects were cropping up and requiring attention.

Says McColm, “Only a data conversion/extraction expert would do. And this data conversion/extraction expert really came through for us!”

The scope of the challenge

At the outset, Galen produced a demographics file containing information on each of the 39,000 patients in the family center’s system. Because the Bolivar Family Care Center and the hospital shared patients all but 3,785 new accounts had to be reconciled. Leveraging GalenETL, an industry leading conversion platform, Galen generated automated suggestions of mapping from source to target nomenclature and codification. This, in turn, allowed CMH to safely match information about individual patients including almost 2,500 allergies, 64 different types of documents totaling more than 1,500,000 distinct documents, 119 different types of scanned documents, containing more than 500,000 distinct scanned documents and 4,000 different tests with 3,500,000 results.

“There was so much information, so much data,” says McColm, “it couldn’t be consumed. There were so many forms – it was hard to see which systems were active and which were not. Somehow, Galen eliminated most of the data that wouldn’t be needed.”

Galen’s solution

Galen’s team of two technical architects and one project manager used the GalenETL platform to generate HL7 messages for import of lab results. This tool produced almost seven million initial results. Fortunately some of these could be filtered because they duplicated information captured from the hospital. But there were 6,730,000 results still unmapped. Of these, nearly 8,000 were individual result types. All of this information was imported into MEDITECH via an interface engine.

Help was also needed to make sense of the many documents that came from CMH and were already in MEDITECH. Galen filtered out as many documents as possible and CMH assigned a dedicated team to review documents in order to prevent duplication. Then, with a second tool, an APR (Apache Portable Runtime) Batch Import Interface, they were able to do a batch import, but that required a special file-naming convention and index. In the meantime the Galen team mapped office visits and scanned documents.

A third tool was applied: CCD (Continuity of Care Documents) Consume, which could retrieve information about the particular problems, allergies and medications of each patient. This was a particularly difficult challenge because the CCDs generated from the legacy Allscripts system contained so much unwanted data, and were so large that some could not be imported at all. But Galen managed to extract the files and manipulate the CCDs in order to render them consumable.

OUTCOME

Denni McColm considers what was done and that it was finished in a reasonable timeframe and says, **“We are still shell-shocked by how quickly they were able to do it all.** I’ll let others describe what makes Galen special,” says McColm, “all I can say is everything of value was converted to MEDITECH. That was the job, and somehow, they did it.”