

dbMotion HIE Case Study

Galen Healthcare Solutions recently assisted a Southern California-based healthcare system stand up, test, and implement their dbMotion HIE application. The project not only included integrations between the HIE and two internal EHRs, but also with multiple practice management, lab, imaging, and dictation platforms. Approximately 12 months later, the HIE went live with a successfully phased rollout to 5 hospitals and 30+ clinics throughout San Diego.

Background

In early 2012, one of our Southern California-based clients selected dbMotion as their HIE vendor, whose two applications, the Clinical Viewer and EHR Agent, would satiate multiple needs within the organization. The platform would serve as their integration point with the county-wide San Diego Regional Community HIE (now brokered by San Diego Health Connect), and also satisfy a need to share data internally across two disparate EHR applications. At the time, providers in their hospitals had minimal access to patient records from the outpatient EHR, Allscripts TouchWorks™. The solution was the dbMotion EHR Agent, an application that integrated with any EHR to provide one-click HIE clinical data for any given patient in context. Having settled on a vendor and the two applications, they looked to their partnership with Galen for assistance in building, testing, and implementing the HIE across their healthcare network.

3 ROLLING 3 MONTH IMPLEMENTATION

ENTERPRISE-WIDE DEPLOYMENT OF 2 CLIENT APPLICATIONS

5 HOSPITALS

30+ CLINICS

10,000+ USERS

12,000+ WORKSTATIONS

Project Scope

- Uni-directional HL7 (ADT, SIU, ORM, ORU, MDM) data integration with multiple internal PM, Lab, Rad, and Dictation applications
- Uni-directional CCD data integration with internal ambulatory (Allscripts TouchWorks™) and inpatient (GE Centricity™ Enterprise) EHRs
- Build, configuration, and deployment of dbMotion Clinical Viewer
- Build, configuration, and deployment of dbMotion EHR Agent
- Build and implement a new IBM Initiate enterprise master patient index (EMPI)
- Patient & User data integration between HIE and EHRs through CCOW and SAML token technologies
- Upgrade from dbMotion HIE v4.4 to v5.0

Lessons Learned

Growing Pains

Although well-established in Israel, at the time dbMotion was a fairly untested player in the national HIT arena, and the overall experience was a growing process for all parties involved. Product documentation was sparsely available, and no one on the client side had built, implemented, or supported an HIE before. This compelled the team to get creative and leverage existing EHR design and rollout experience into a successful go-live. The project also overlapped dbMotion's acquisition and subsequent transformation by Allscripts™, though Galen's familiarity in working with Allscripts™, processes helped assuage certain transitional anxieties.

The Center of Attention

Though initially viewed as just another application in the sea of HIT, the information systems department soon realized that since the HIE integrated with every primary application (Practice Management, Electronic Health Record, Laboratory, Imaging), changes to any upstream system had the potential

to impact the HIE, and vice versa. This held true especially during EHR upgrades, where HIE-specific configurations had to be replaced as part of each upgrade process. Documentation was created detailing each configuration point in the respective EHRs to ensure that HIE customizations were accounted for in every EHR upgrade moving forward.

Fine Tuning

One of the more unexpected lessons revolved around the EHR, not the HIE. Overnight, the outpatient TouchWorks™ EHR was forced to evolve from a primarily downstream application into the role of a source system. TouchWorks™ was now transmitting thousands of CCDs each day which stressed its messaging server beyond initial expectations. Through calculated analysis, the addition of new message servers, and some trial and error, the team was able to optimize the CCD transmission process by tweaking the stored procedures that control the two CCD queues within TouchWorks™, Works.CED.Community_Queue and Works.CED.Transmission_Queue.

Uncharted Waters

As an early adopter, the HIE project team anticipated challenges throughout the process; as one of dbMotion's largest rollouts, they were bound to encounter new issues. During the implementation, the team soon discovered a scoping flaw in the initial hardware configuration. The dbMotion EHR Agent, which had previously never been deployed on a client level at such a high volume, was pegging the web/app server's CPU utilization at unsustainably high levels, causing intermittent application crashes. The solution, which was accommodated by the upcoming v5.0 upgrade, was to collaborate with dbMotion to re-scope the hardware requirements based on concurrent user logins, as well as to load balance the EHR Agent across multiple web/app servers.

Conclusion

Despite its unfamiliarity with dbMotion applications, Galen leveraged its HIT expertise, established implementation methodology, and project management experience to empower the HIE project team and steer them through their first dbMotion HIE implementation. The healthcare provider has since gone on to rollout additional dbMotion applications and integrate their HIE with San Diego Health Connect, a former Beacon Community, to provide connected care for their patients throughout the county.