MHS 2012 HIP Abstract Submission
Title: Inpatient Transfer of the Electronic Record to support BRAC in the NCA

Introduction:

The National Capital Area (NCA) was faced with the requirement to keep Walter Reed Army Medical Center (WRAMC) fully operational while greatly expanding the capacity of the National Naval Medical Center (NNMC) until WRAMC's closure. All remaining inpatients at WRAMC were to be transferred to NNMC on its last day, and because capacity at NNMC could not be made available until a date near the time of closure, it was necessary to prepare to transfer as many at 100 patients on that one day. The challenge for the Inpatient Record Work Group (IRWG) at both facilities was to transfer as much medical record data electronically as possible in order to support the clinicians. Working with the inpatient record vendor, the teams endeavored to implement a federated version of the system that would allow direct transfer. This involved installing newer versions of the system that had not even been tested in military facilities. Given the uncertainties, our IRWG also developed a "Plan B" to transfer data. The plan made use of existing work flows and technologies, but required significant adjustments to both the technical requirements and the business rules in order to make and effective transfer of all the patient data. The IRWG worked regularly with the vendor using agile development processes to develop and implement the technical solution. The IRWG also partnered with the Patient Move Team, IT departments, Patient Administration, and Clinical Leadership to derive the necessary business rules to use the new technological solution. With a hard deadline, the teams successfully implemented the solution and successfully transferred record information for all patients who moved. The teams were even ready to support the mission one day early, made necessary by hurricane Katrina. On August 27th, all remaining inpatients at WRAMC were moved to NNMC, and for each one a comprehensive extract of his WRAMC inpatient record was waiting in his NNMC electronic record upon arrival. The work flow created has now been funded to be implemented enterprise wide, as it provides all inpatient facilities a needed ability to create and export a portable electronic extract of the inpatient stay. The availability of this information greatly reduced the burden on the incoming caregiver team and greatly improved the continuity of care for the patients, improving the overall experience of care.

Methods:

Both facilities used the MHS standard, Essentris, as their inpatient system. Both facilities were on version 210.49 at the time the planning for move day began. A federated version of Essentris was the primary goal, and plans to implement this began in November 2010. The federated solution required upgrades of all participating facilities to version 211.40, which did not gain its MHS authority to operate until June 2011. The back up plan B was derived to make use of the existing ability at WRAMC to create a complete length of stay pdf from the record. This capability had been developed in order to send the record to the VA when needed, but as of January 2011 the capability was still problematic. Working with the vendor, the IRWG developed the requirements to make use of pdf creation in order to facilitate electronic transfer in a "Plan B – pdf." These requirements included: the ability to specify a chart set to for pdf creation with a single operation per patient, the ability to transfer the created file to a sever on the destination campus, the ability to embed the created pdf file into a note at the gaining facility, and

automated tools for the process, such as being able to create the pdf for all remaining patients with a single operation. These requirements were made part of the contract for the acquisition of the federated version of the product, clearly specifying the intent to have a "Plan B". Since these were deliverables, the vendor worked very closely with the IRWG throughout the development period in an iterative manner, utilizing agile develop processes. Several bugs were encountered and resolved along the way. The result met all the basic requirements, but we did not have the automated tools to batch many patients. The IRWG also worked with Move Team, Patient Administration, and clinical leadership to clarify all the business rules. Providers had to complete all notes to be included in the pddf in time for it to be created; nursing staff at WRAMC created the pdfs at the set time, which were electronically transferred into a server at NNMC. The NNMC patient administration staff created Essentris records for each of the incoming patients and imbedded the pdf patient by patient. This operation took just a couple of minutes per patient. The completed solution allows an MTF to specify notes and flow sheets to be included in a chart set, and to create at pdf from that chart set. The pdf is created in the CHCS host serving that facility, and can be available to patient administration to further copy or transfer. The pdf itself is a text based file; file size is manageable (250 kbyte for a 40 page document) and can be word searched or text copied from.

Results:

The process was tested successfully in terms of the business rules on June 12, 2011. Required changes to the pdf file were completed by August 21st, and testing completed on August 24th. The first patients were transferred on August 26th, with successful electronic transfer of their records. All remaining patients were transferred on August 27th, with successful electronic transfer of the pdf for each. The solution is ready to be implemented MHS wide, pending an additional automated aid to the CHCS end of the solution.

Conclusion:

Successful creation of an electronic extract of the enterprise inpatient electronic record was developed and implemented to support the inpatient move of patients in the NCA. This process will soon be available enterprise wide. This success relied on clearly defined requirements in a vendor contract that allowed for agile development, demonstrating the ability to deliver a successful solution given a hard deadline. The electronic support of the documentation burden improved the experience of care for these patients and their providers.