

The *Bermuda Triangle* of Healthcare

An Illinois healthcare system closes the gaps in patient handoff communication.

By Robert S. White, M.D., and David M. Hall, M.D.

When you hear “Bermuda Triangle” what comes to mind? Fear and confusion as planes and ships seem to disappear without a trace? It’s a mysterious and unsettling image. What’s more unsettling is that an activity that takes place thousands of times each day in healthcare organizations — handing over care of a patient to a new caregiver or location — has come to be known as the Bermuda Triangle of Healthcare. Various sources identify this step as the cause of a large portion of mistakes and oversights that result in harm to patients. Whether the mistake is giving a patient a dose of a drug already given on the previous shift, or an oversight that leads to intubation of a patient with a “Do Not Resuscitate” order, it’s easy to imagine the many ways faulty handoff communication can lead to disastrous results.

In light of the well-documented problems, the Joint Commission made handoff communication the subject of its National Patient Safety Goal Requirement 2E. Now it’s up to organizations like ours — OSF HealthCare System based in Peoria, Ill. — to wrestle with how to improve this fundamental activity without making patient care more complex or cumbersome.

OSF HealthCare is owned and operated by The Sisters of the Third Order of St. Francis, Peoria, Ill., and includes seven acute care facilities, one long-term care facility, two colleges of nursing, the philanthropic OSF HealthCare Foundation and other healthcare related businesses. It also has a primary care physician network consisting of 194 physicians and 48 mid-level providers known as OSF Medical Group.

Bringing Handoffs Into Focus

In early 2006, OSF took aim at improving handoff communication as part of an enterprisewide patient safety push. As the authors of “Internal Bleeding: The Truth Behind America’s Terrifying Epidemic of Medical Mistakes” concluded in their book, faulty systems, not bad people, are responsible for medical errors. With that in mind, we focused on facilitating the underlying process for handoff communication, which we believed to be the key to improving patient safety overall.

We started by bringing together a highly collaborative, multi-

disciplinary group that included nurses, patient safety officers, physicians, IT specialists and corporate executives from our six acute care facilities. Using Six Sigma principles, our charge was to create a standard process and format for handoffs, and determine how best to support the process electronically.

OSF uses the GE Centricity Enterprise clinical information system. Having a clinical system in place gave us the advantage of having critical patient information available. However, we needed additional tools to bring the information together in a format that supported our handoff process. We looked to our GE alliance partner, The Menon Group Inc., to provide an application that would augment the capabilities of our clinical system.

According to Kathy Haig, RN, OSF corporate patient safety officer, the previous non-standardized handoff communications model meant that, enterprisewide, nurses had their own unique routines that worked for them. Additionally, a non-standardized framework left the information included in the handoff up to each person, which was based on individual assumptions about what the next caregiver needed to know.

The new caregiver also had to anticipate any questions that might arise before the departing caregiver left their shift.

Recognizing those inherent gaps, we soon settled on the SBAR communication model. SBAR — Situation, Background, Assessment and Recommendation — has been adapted from a process used to quickly brief nuclear submarine commanders during a change in command. We found this model to be a good framework for a concise yet thorough approach to patient handoffs.

One of the biggest challenges was to define content such that we didn’t regurgitate what is already contained in the online patient record. The intent was to distill the essential elements into a one-page-per-patient format that puts a rigorous structure around the SBAR model. At the same time, if a nurse needs additional information for a patient, it is readily available online.

Distilling those essential elements presented challenges as well. For example, it was fairly straightforward to pick the top



few lab values, but the last few were in a grey zone. We needed feedback from actual use.

“This group was willing to experiment with the prototypes,” says Cathy Smithson, RN, vice president and chief nursing officer for OSF St. Mary Medical Center, explaining how we enlisted a group of ICU nurses. “They tried them out and worked through the pros and cons to give us the feedback we needed to refine our form.”

As a parallel process, we had to make sure that the electronic handoff report would become an integral part of the workflow. With that in mind, our Six Sigma team studied the workflow and found it to be a 12-step process. By utilizing the new electronic report, they found that we would eliminate the need to gather information from the patient’s chart and write it down. This enabled us to condense the process down to eight steps. At the same time, it would support a standard communication between caregivers.

Throughout the process, we worked closely with The Menon Group to create the electronic handoff report. With discussion and compromise, we arrived at consensus for the specific data needed from the electronic record and the format of the SBAR handoff. The application was designed to pull the data directly from our clinical system and place it in the SBAR handoff format. The new report could be used either online or in print.

Handoff Report Rollout

We began the application rollout in March 2007 with a pilot unit. Based on that pilot, we made some additional adjustments to the application before making it available enterprisewide. Each facility planned their user education and rollout according to their environment. We found that although our staff could use the report online, most preferred to print it for each of their patients in preparation for shift report or other handoff situations.

According to Kelly Anderson, OSF team lead for clinical development and clinical decision support, use of the handoff report grew steadily over the first year. By the end of 2007, caregivers across six OSF facilities were creating an average of more than 66,000 handoff reports per month. By the end of March 2008, they were creating more than 85,000 reports per month. Word around our facilities was that the handoff report was faster, cleaner and more complete. According to Smithson, we have nearly 95 percent compliance with use of the electronic handoff at OSF St. Mary Medical Center.

Just as telling, are the results of a time study conducted at

one of our facilities. Before implementation, patient handoffs took an average of 8.7 minutes. Post implementation, similar handoffs averaged only 4.1 minutes. Conservatively, if nurses complete two handoffs per shift for each of five patients, this translates to a potential savings of about 45 minutes per nurse per shift.

Our recent Joint Commission survey validated our results further. “Our staff used the report when discussing patients with The Joint Commission surveyors,” says Smithson. “The handoff report has been a great validation of communication and the use of SBAR. Because the electronic tool was developed in that format, it keeps those communication points in everyone’s mind.”

Lessons Learned

For OSF, there were two key elements that were critical to making this project a success. First, we had active participation and support of the leadership of the corporation as well as the individual facilities. Just as important, nursing drove the format and content, as they would be the primary users. Put the two together and you have an environment where collaboration and concrete changes can occur.

As physicians responsible for implementing IT solutions within our organization, we have found that as long as we continue to seek to understand the workflow of our clinical staff — particularly the painful parts — we can continue to imagine solutions that will help.

Taking imagination to implementation takes us back to one of the conclusions of the book “Internal Bleeding,” which states that faulty processes are the central cause of errors. By and large, the people in healthcare organizations — from the clinicians who care directly for patients through the executive leadership — want what is good for the patients in their care. With that higher purpose in focus, wide-scale change that helps rather than hinders the work of caregivers across large, complex organizations is possible.



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