Handling Handoffs

In 50 Words Or Less

- Medical errors can happen easily when patients are moved within hospital settings.
- Using lean Six Sigma tools, a New Mexico hospital studied its patient-transfer processes and designed new ones to simplify patient handoffs among caregivers.
- The project resulted in better communication and information sharing.

PATIENT TRANSFERS between hospital departments require a defined process that promotes good communication among caregivers. Miscommunication during patient handoffs has been associated with medical errors.[1]

In fact, poor communication during patient handoffs leads to more than 80% of medical errors in hospitals, according to one estimate.[2] At one 450-bed hospital in New Mexico, a proactive improvement team was formed to enhance the patient-transfer process.

Hospital **increases patient safety** by simplifying its transfer processes

by Clark Carboneau and Susan Sanches

A patient handoff—also known as a patient transfer—is the process of transferring patient-specific information from one caregiver to another or from one team of caregivers to another to ensure the continuity and safety of patient care.[3]

According to the Joint Commission, the nation's oldest and largest accrediting body in healthcare, the primary objective of a handoff is to provide accurate information about a patient's care, treatment and services, current condition, and any recent or anticipated changes. The information communicated during a handoff must be accurate to meet patient-safety goals.[4]

Preventing patient harm

Compare manufacturing to healthcare. In manufacturing, if poor communication occurs when an assembly moves from one build station to the next, there may be a need for rework and a delay in the schedule. In healthcare, poor handoff communication also can result in rework. The bigger concern, however, is the potential for patient harm.

The reliability and timeliness of this process can have critical implications for patient outcomes. The consequences of poor handoffs can vary from setting to setting. In all transitions, however, poor handoffs can contribute to delayed or missed treatments, near misses, adverse events, increased or duplicated use of resources, and a poor patient experience.

In an acute-care setting, a delayed or missed treatment can significantly affect the patient's recovery outcome, length of stay and prognosis. This is most likely to occur in handoffs between outpatient and inpatient units in which the workflows can be significantly different.

In the emergency department (ED), for example, an attending physician writes admissions orders for twice-daily antibiotic administration. The inpatient unit routinely sets up antibiotics on a schedule, perhaps every 12 hours. The emergency room (ER) nurse prepares to transfer the patient to the floor but does not take off the inpatient order, and the antibiotic is not administered. When the patient arrives on the floor, the inpatient orders are now taken off and the antibiotic is scheduled for the next routine time.

A more appropriate handoff between the ER nurse and the inpatient nurse would include a review of the patient's background and history, orders, responses to diagnostics, treatments and recommendations for continuing care. It also would allow for a verbal exchange between caregivers to provide time for questions and clarification. Done correctly, the antibiotic timing could be communicated and the routine administration times could be managed appropriately.

Without a complete handoff, treatment issues such as this can be easily missed or duplicated. A delay or doubling of therapy can have serious consequences for patients. Without a proper handoff, the likelihood of detection before harm occurs is extremely low. Using a customary and regular handoff process would help staff detect potential medication issues.

Another example of a handoff process is between noncaregivers—that is, when a patient is transported from the inpatient unit to a hospital-based diagnostic area such as radiology. In this scenario, a stable patient may be transferred by a clinician to nonclinical transporters who move the patient from the inpatient unit to the diagnostic area and transfer the patient to the receiving clinician. Although the patient is stable, he or she is still at risk for harm if critical information is not shared between the sender and the receiver.

The patient's recent medications and fall risk often come into play in this scenario, for example. After the handoff, the patient may be transferred from a wheelchair to a diagnostic table. If the caregiver is unaware that the patient was given a pain medication before the procedure, the caregiver may have the patient try to stand. The patient may become dizzy, slip or fall, and be injured. A failure modes and effects analysis on this process would reveal high severity and occurrence risk numbers with a low probability for detection.

The potential for harm and frequency due to patient handoffs in hospitals is so high that the Joint Commission made safe patient handoffs a national patient safety goal for domestic hospitals in 2006.[5] The goal was to advance safe communication strate-

Daily patient transfers by hour / FIGURE 1
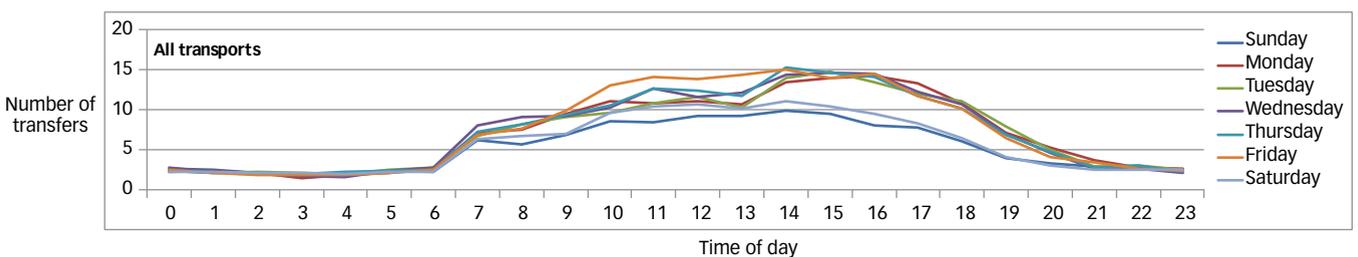
gies when a patient is transferred from one caregiver to another.

Patient handoff project

One of this article's coauthors was tasked to design a regular and customary patient transfer process for the 450-bed New Mexico hospital before a new system-wide electronic health record (EHR) arrangement was implemented. The data showed there were 175 patient transfers in the hospital every day (see Figure 1).

Each transfer involved at least one handoff, and the variation in handoffs from one setting to another was quickly evident. It was determined the project scope needed to exclude other types of handoffs—such as physician-to-physician and shift-to-shift. Therefore, the focus of this project involved only location-to-location patient transfers.

Sampling the high-volume patient transfer areas in the hospital resulted in the development of 16 separate flowcharts. After analysis of these current-state flowcharts, it was discovered the future state could be defined by using only five distinct process flows.

Requirements for safe handoffs

The design process began by soliciting voice of the customer (VOC) information from key stakeholders. Ninety individual comments were grouped into similar categories using an affinity diagram. Four customer requirements—that is, critical-to-quality (CTQ) parameters—were developed to guide the design process:

1. The hospital uses the EHRs' situation, background, assessment and recommendation (SBAR) communication tool. This tool simplifies the communication process between caregivers: The nursing staff sending the patient must document its portion of the care provided in the EHR. The documentation must be as current as possible. The nurse receiving the patient

Emergency to procedural area patient transfer / FIGURE 2
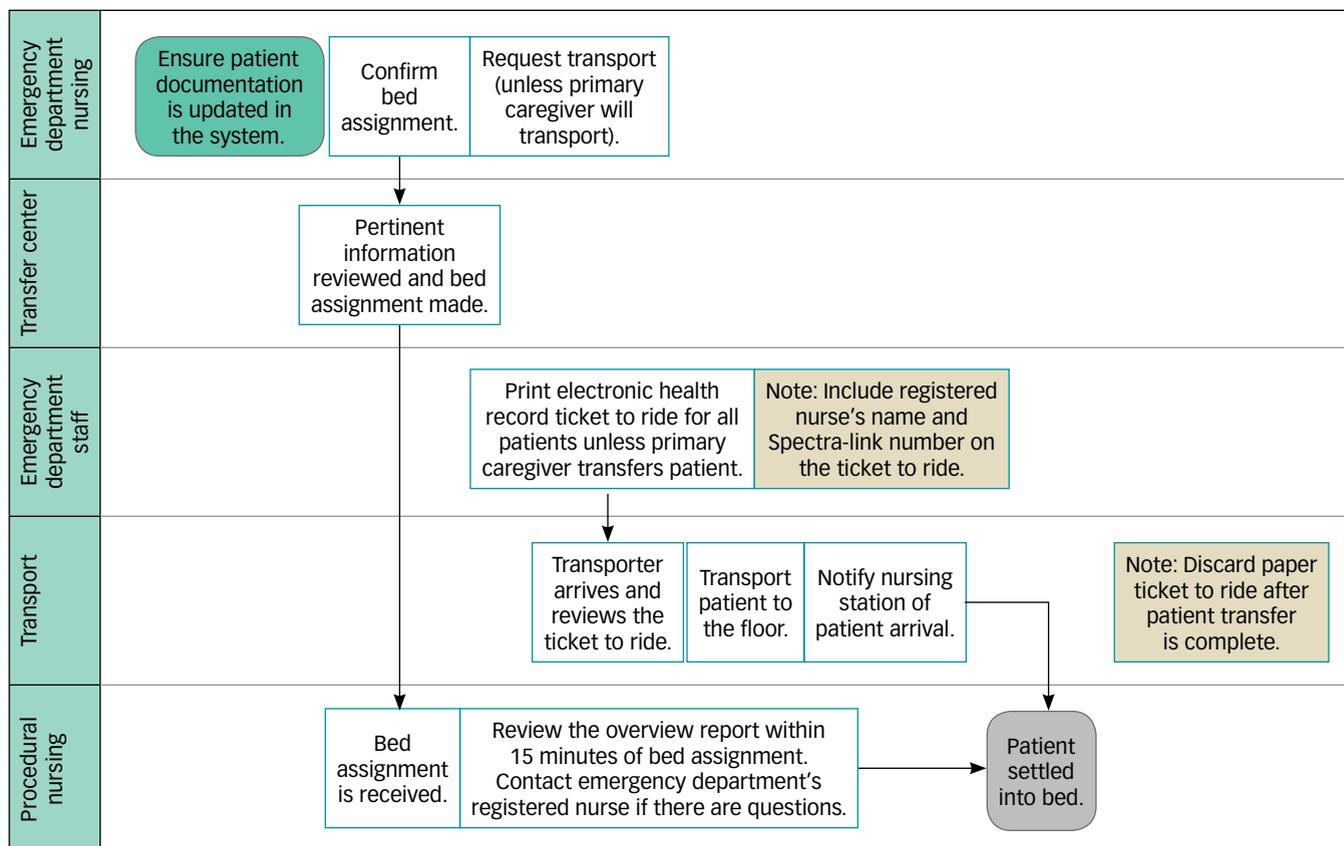
will review the electronic patient information before the patient arrives.

Pertinent background information, often obtained by reviewing the patient's history, is a critical piece of information that must be documented and conveyed when the patient moves from one setting to another.

A high-profile example of critical information not being shared occurred Sept. 25, 2014, in Dallas. Information that an ED patient had been in Africa before his arrival to the United States was missed by the appropriate clinicians. The information was entered into the EHR system by a nurse, but apparently not viewed by the ED physician.

Subsequently, the patient was not properly assessed for risks and was discharged from the ED without appropriate instructions. When he returned three days later, the delay in his Ebola diagnosis affected his prognosis and placed the people who had contact with him in danger.[6]

2. The hospital uses an efficient handoff communication process between caregivers. The hospital defined "efficient" as completed within 15 minutes, providing the opportunity for discussion between caregivers and providing read-back for confirmation.

3. The hospital's patient-transfer process includes a confirmed unit notification with an estimated time of arrival. In addition, a "warm" patient handoff is expected for all critically ill patients. The hospital defines a warm handoff as either face-to-face communication between caregivers or a phone conversation about critically ill patients' conditions.

In operational terms, this means the primary caregiver—such as an ED nurse—must discuss the patient's condition with the receiving clinical staff. This provides an opportunity for the receiving clinician to ask questions or seek clarification and for the providing clinician to ensure information has been received.

This requirement ensures all essential information

Emergency to inpatient area patient transfer / FIGURE 3
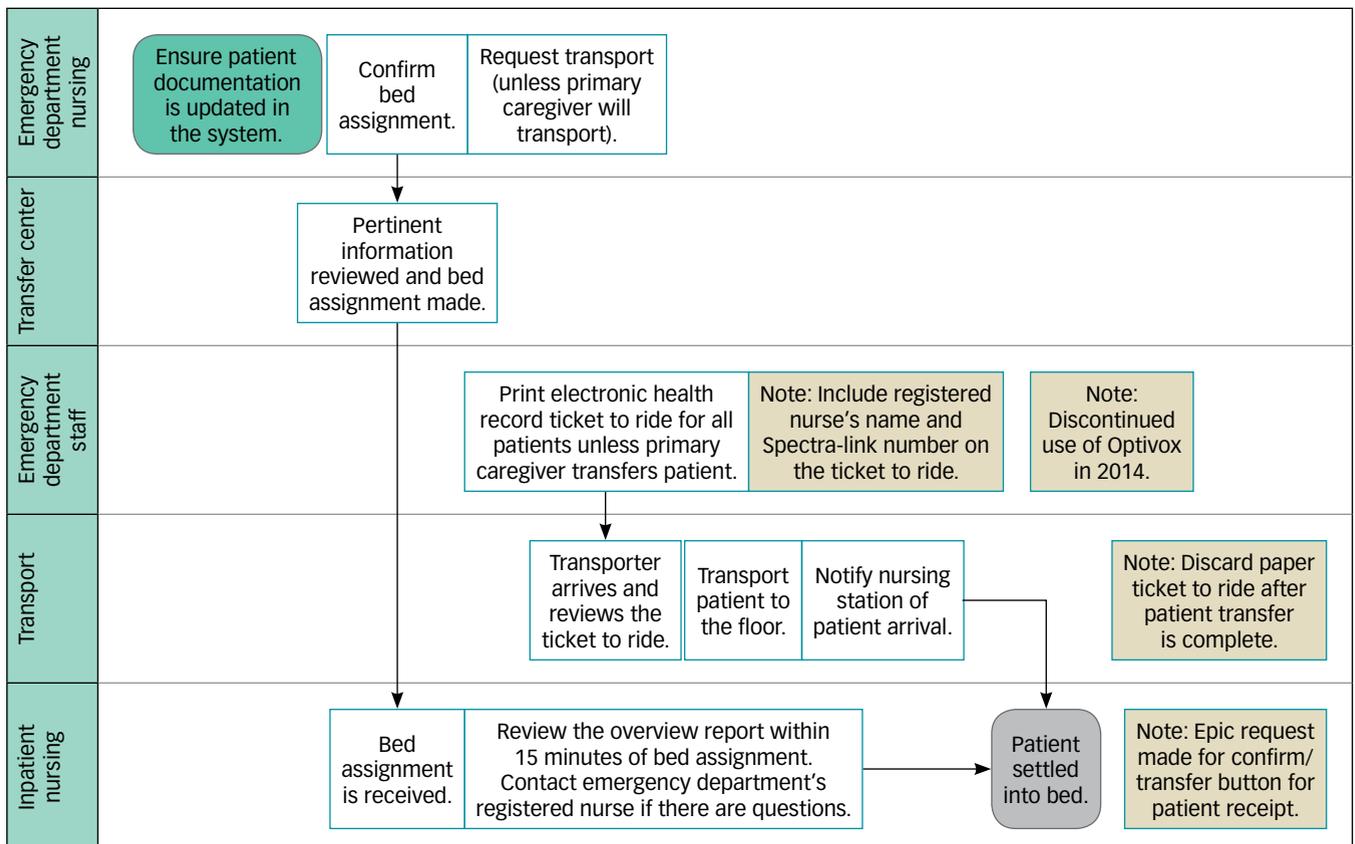
Inpatient area to inpatient area patient transfer / FIGURE 4

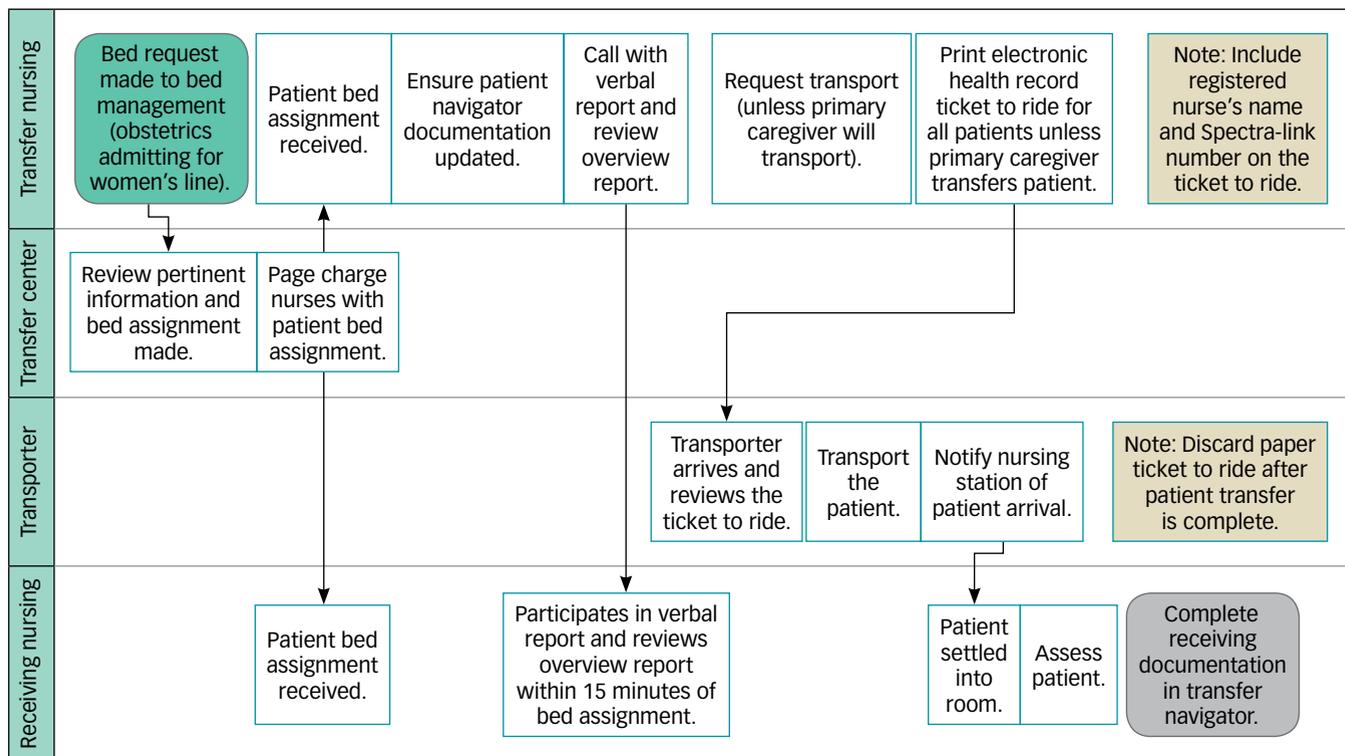|						
Transfer nursing	Bed request made to bed management (obstetrics admitting for women's line).	Patient bed assignment received.	Ensure patient navigator documentation updated.	Call with verbal report and review overview report.	Request transport (unless primary caregiver will transport).	Print electronic health record ticket to ride for all patients unless primary caregiver transfers patient.	Note: Include registered nurse's name and Spectra-link number on the ticket to ride.
Transfer center	Review pertinent information and bed assignment made.	Page charge nurses with patient bed assignment.				
Transporter				Transporter arrives and reviews the ticket to ride.	Transport the patient.	Notify nursing station of patient arrival.	Note: Discard paper ticket to ride after patient transfer is complete.
Receiving nursing		Patient bed assignment received.	Participates in verbal report and reviews overview report within 15 minutes of bed assignment.		Patient settled into room.	Assess patient.	Complete receiving documentation in transfer navigator.

will be received. It is never adequate to drop off a critically ill patient at his or her assigned unit or room without speaking with the receiving nurse about the patient's condition. Another example of this is when a critically ill patient is transferred without a warm handoff and his or her condition declines.

The EHR system is a great tool and assists healthcare communication in many ways. At present, however, this system does not and cannot replace the vital face-to-face communication needed during a critical situation.

In an emergency situation, the receiving caregiver will not likely go to a computer to search for missing information. Instead, the caregiver will assess the patient at the bedside, potentially missing pertinent facts that could affect the patient.

4. The hospital uses the EHR ticket to ride process between certain areas, such as a transfer from radiology to an inpatient unit. "Ticket to ride"—a phrase borrowed from the song of the same name that appears in the Beatles' 1965 "Help!" album—is used by some organizations to document the key information needed for transferring patients by the

transport staff and managing a patient during a procedure by ancillary staff.

The transferring nurse's name and phone number are provided on the ticket to ride document, for example. This information is shared between the transporter and the receiving nurse—and back again—when patients are temporarily removed from the unit.

Critical information might include infectious status, recent medications, fall risks, and the presence of lines or drains. For critically ill or unstable patients, the ticket to ride process is not used because a licensed clinician remains with the patient until the patient and his or her information is appropriately handed off.

Location-to-location patient transfers

After documenting the 16 current-state transfers at the 450-bed hospital, five process flows were developed to represent patient transfers:

1. ED to procedural area—The patient arrives at the ED with a medical condition that requires surgery. The stable patient is admitted to the hospital and transferred to the appropriate surgical area for treatment (see Figure 2, p. 25).

Inpatient and emergency to radiology and return patient transfer / FIGURE 5

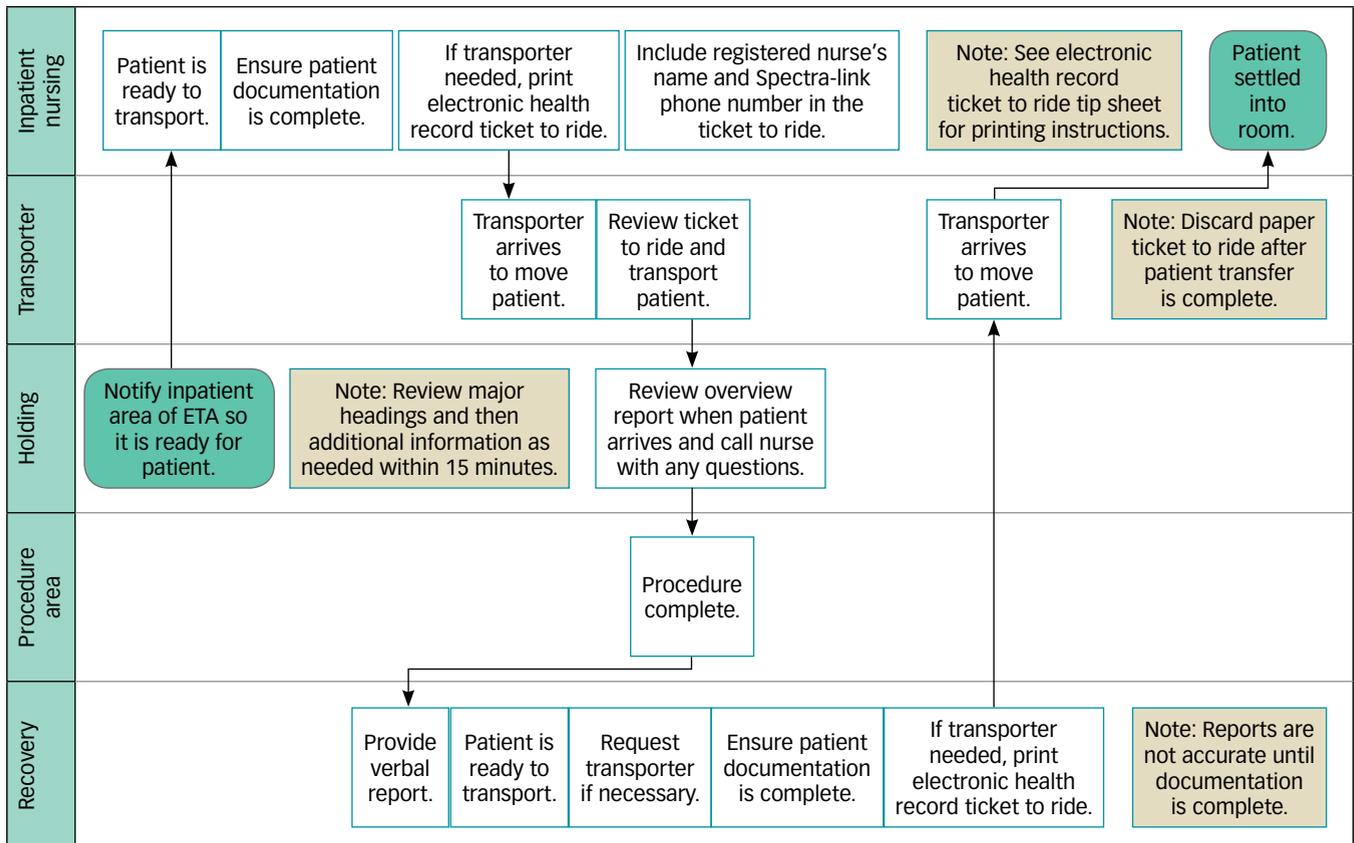| Inpatient/ emergency department nursing	Exam order received.	Call radiology transport request.	Print ticket to ride.	Note: Include registered nurse's name and Spectra-link number on the ticket to ride.		Patient settled into room.	
Transporter			Transporter arrives and reviews the ticket to ride.	Transport the patient to radiology.	Transporter arrives and reviews the ticket to ride.	Transport the patient to inpatient unit.	Note: Discard paper ticket to ride after patient transfer is complete.
Radiology				Exam complete.	Handwrite any additional pertinent information on ticket to ride.	Request transport.	Note: If interventional radiology sedated patient, there will be a nurse to nurse verbal report.

Procedural area to inpatient area and return patient transfer / FIGURE 6

Inpatient nursing	Patient is ready to transport.	Ensure patient documentation is complete.	If transporter needed, print electronic health record ticket to ride.	Include registered nurse's name and Spectra-link phone number in the ticket to ride.	Note: See electronic health record ticket to ride tip sheet for printing instructions.	Patient settled into room.	
Transporter			Transporter arrives to move patient.	Review ticket to ride and transport patient.		Transporter arrives to move patient.	Note: Discard paper ticket to ride after patient transfer is complete.
Holding	Notify inpatient area of ETA so it is ready for patient.	Note: Review major headings and then additional information as needed within 15 minutes.	Review overview report when patient arrives and call nurse with any questions.				
Procedure area			Procedure complete.				
Recovery		Provide verbal report.	Patient is ready to transport.	Request transporter if necessary.	Ensure patient documentation is complete.	If transporter needed, print electronic health record ticket to ride.	Note: Reports are not accurate until documentation is complete.

It is **never adequate** to drop off a critically ill patient at his or her assigned unit or room **without speaking with the receiving nurse** about the patient's condition.

2. ED to inpatient unit—The patient arrives at the ED with a medical condition. The patient's condition is stabilized and ongoing inpatient treatment is necessary. The patient is admitted to the hospital and transferred to an inpatient unit (see Figure 3, p. 26).

3. Inpatient unit to inpatient unit—A patient must be transferred from one inpatient setting to another when there is a change in the patient's condition. If the patient's condition worsens, for example, the patient could be transferred from the general medical unit to the intensive care unit. If the patient's condition improves, he or she could be transferred from the cardiac critical care unit to the step-down cardiac progressive care unit (see Figure 4, p. 27).

4. Inpatient and ED to radiology and return—Diagnostic testing and imaging require patients to be transferred to the radiology department, and returned to their inpatient unit after testing and imaging (see Figure 5).

5. Procedural area to inpatient and inpatient to procedural area—Patients scheduled for non-emergency surgeries are transferred from their inpatient units to the procedural areas, and returned to their inpatient units after surgery (see Figure 6).

Larger hospitals may have more transfer locations that will require more process flows.

Huddles to learn handoffs

Implementing and improving patient handoffs during transfers does not require extensive use of lean Six Sigma tools. In this review of the operations within this hospital, the five future-state process flows were developed and deployed by:

- Gathering VOC data and information.
- Defining customer requirements through CTQ.
- Documenting 16 location-specific and current-state process flows.
- Synthesizing the 16 current-state flows into five future-state flows.
- Developing a patient handoff staff training packet and computer-based training module.
- Developing a computer quick-start guide for nurses.
- Rolling out implementation with the help of clinical educators and information system super-users.

Process effectiveness was monitored regularly after go-live during daily staff huddles on the nursing units. There were no significant issues identified with the new handoff design.

Understandably, a number of staff members had a learning curve while acclimating to the new information system. These issues were overcome by discussion and learning from one another at the daily staff huddles. **QP**

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