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Creating a No-Lift, No-Transfer Environment in the OR

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For the past two years, OR staff members at the Bascom Palmer Eye Institute in Miami, Florida, have been using a new patient transport chair to successfully address three high-profile operational and safety issues:

- patient fall hazards,
- risk of injury to staff members, and
- efficient overall patient flow.

Bascom Palmer Eye Institute is an inpatient facility with 10 ORs; 98% of its surgical volume consists of ambulatory patients. The surgical procedure mix is 80% ophthalmology, 10% otolaryngology, and 10% orthopedic.

There are only two standard OR beds in the department for the orthopedic surgical procedures. For ophthalmology and otolarngology patients (ie, 90% of the surgical procedures at Bascom Palmer) the old system used a pedestal that had been installed in the center of the OR. These patients would be transported to the OR on a trolley, consisting of a wheel base and table top. The trolley would be wheeled over the pedestal in the center of the OR, then the circulating nurse would use controls on the wall to raise the pedestal, which would lift the table top off of the wheel base, converting the trolley into a surgical bed in a fixed position. In 2005, the existing patient transport system was more than 30 years old and needed replacement. There was a need for a system that would provide good patient flow in and out of the ORs in this fast-paced ambulatory setting.

The old transport system had a couple of patient safety flaws. First, it had a fixed height, making it necessary for the patient to use a step stool to successfully transfer to the stretcher. With an extremely short patient, often the stool was not enough, and two individuals would have to lift the patient from the stool to the stretcher. The other flaw was that the stretcher was flat all the time, allowing the patient to be placed in the supine position only. The patient could never be placed in the Fowler position because there was no way to break the bed, which is not optimal when working with geriatric patients who may have breathing problems.

The institution's director of surgical services began investigating a patient transport system that would be more effective than the existing system, which had limitations in terms of patient comfort, positioning, safety, and employee use.

ESTABLISHED OR PATIENT FLOW

When the investigation began, the established eye surgery transport procedure at Bascom Palmer required three patient transfers, three pieces of equipment, and as many as four staff

ABSTRACT

Staff members at Bascom Palmer Eye Institute, Miami, FL, identified a need to update the existing 30-year-old transport system/surgical table. This update would maintain efficiency while improving patient and employee safety.

After an investigation of many different stretchers and chairs, the nurse managers selected a chair that could be used throughout all phases of the procedures, which would eliminate transfers and create fewer hazards for patients and staff members.

The new system has reduced risk of falls and staff member injury and has improved efficiency.

Key words: *patient falls, injuries, patient transfer systems.*
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members at a time. The transport procedure was as follows:

1. Upon arrival, the patient was placed in a recliner, or, if the patient was not ambulatory, in a bed.
2. When called for surgery, ambulatory patients were either walked across the hall or wheeled in a wheelchair to the preoperative holding area. Nonambulatory patients were laterally transferred to a surgery stretcher.
3. When ambulatory patients arrived in the preoperative holding area, they were provided with a step stool to transfer to the surgery stretcher.
4. In the holding area; patients were assessed; received their block (eg, retrobullar, peribulbar, local); and were wheeled into surgery, then the stretcher was docked to the pedestal.
5. When surgery was over, ambulatory patients were moved from the OR to the hallway and asked to move from the surgery stretcher to a wheelchair. Then the patients were taken across the hall and transferred into a recliner. Non-ambulatory patients were returned to their rooms and laterally transferred back into their beds.

Chair Evaluation Process

The facility's director of surgical services decided that the answer to better patient care transport lay not in refining the existing process, but in finding an innovative transport solution. The existing system required a fixed pedestal in the center of the room that would lift the table top off of the wheel base. If the pedestal failed (ie, was unable to raise or lower the table), then the room could not be used until the pedastal could be repaired. At the AORN Congress Exhibit Hall and other venues (eg, American Academy of Ophthalmology), OR staff members investigated virtually every stretcher and chair on the market.

Clinical evaluations involved companies bringing their transport chair or bed to the facility so the staff could look at it, review the features, sit on it, and determine whether they wanted to try it in the department. Transport chairs were rated for patient comfort, ease of use, and physician accessibility to the patient during surgery (ie, placement of the surgeon's legs) with all necessary foot pedals (eg, microscope, phacoemulsifer machine).

"Zero-Transfer Solution"

Based on the clinical evaluations, nurse managers selected a surgical chair for the facility. The chair's motorized patient positioning and adjustable height could accommodate every possible position required during the surgical process—from sitting up to lying fully reclined. This meant that patients could stay in the same chair through all phases of their procedure; thus eliminating transfers that could be hazardous to both patients and staff members.

Initial Results

By adopting this zero-transfer solution, Bascom Palmer made significant progress in realizing its three primary goals. We knew we had reached our goals when we had no patient falls and no worker's compensation cases regarding back pain from transferring patients. We also improved our patient flow without having to transfer more patients.

Reduced risk of patient falls. Goal #9 of the Joint Commission's 2009 National Patient Safety Goals[1] requires health care facilities to reduce the risk of patient harm resulting from falls by implementing a fall-reduction program. By eliminating the need for patient transfers and using a unit that lowers to allow a patient to get in and out of the chair with ease, Bascom Palmer has significantly reduced the likelihood that a patient will suffer a fall during any phase of the surgical process.

Reduced staff member injuries. The most current statistics from the American Nurses Association state that 52% of nurses complain of chronic back pain and that 12% leave the profession every year citing back pain as a major factor. Additionally, 20% of nurses transfer to a different unit, out of direct care, or to other employment because of back problems, neck problems, or shoulder injuries.[2]

> *Using proper body mechanics and taking the time to use the appropriate equipment in the transfer and repositioning of patients reduces the risk of injury for both nurse and patient.*[4]

In the 24 months since we began using the new surgical chair, we have not had a nurse suffer an injury during patient transfer.

Efficient patient flow and staff utilization. Table 1 illustrates staff time spent on the former patient transfer process at Bascom Palmer. Note that four staff members were required at each of the three patient transfers, consuming a total of 36 staff minutes. By reducing the number of transfers to zero, the new solution has allowed this time to be redirected to other types of patient care.[3]

Table 1
Staff Time Usage for the Former Patient Transfer Process

	Staff member	Time in minutes
Transfer #1	Nurse	3
	Nurse	3
	Anesthesia care provider	3
	Scrub person	3
Transfer #2	Nurse	3
	Nurse	3
	Transport staff member	3
	Scrub person	3
Transfer #3	Nurse	3
	Nurse	3
	Transport staff member	3
	Pediatric acute care unit nurse	3
Total staff time		36

Operational Implications

Bascom Palmer nurse managers have observed advantages to the zero-transfer solution, which may affect a health care institution's quality of care, staff well-being, and operational bottom line. These advantages include a decrease in stress level when transferring patients because nurses no longer physically move the patient, as well as a more efficient use of time because a transporter pushes the chair right to the surgical suite.

Improved physician access to the patient. The chair has a 39-inch height range, permitting patients to be placed at an ergonomic height so that anesthesia care providers no longer have to bend over to do their preoperative work. In addition, there is enough leg room under the unit to permit two physicians who are sitting at the head of the bed access to the patient, which is a specific requirement at Bascom Palmer.

Patient comfort. The chair has an exceptionally wide and long patient surface, as well as a 500-lb patient weight capacity that accommodates larger patients more comfortably than other transport chairs. It also eliminates the need for additional super-sized transport equipment.

Reduced equipment storage and inventory. By keeping the patient in the same unit throughout the surgical process, our facility no longer needs to store stretchers in the hallway. Long-term, transport equipment inventory might be reduced overall because one unit serves multiple purposes.

Greater ease of use. The unit's smaller size and aerodynamic nature allows for easier transport through doorways and around corners. This has improved working conditions for transport staff members.

Summary

By eliminating multiple patient transfers during the surgical process, Bascom Palmer Eye Institute has improved quality of care and operational efficiencies by reducing the likelihood of patient falls, measurably reducing nursing staff injuries, and improving overall patient flow and staff member usage.

Additional improvements have been seen—or are anticipated—in the areas of physician access to the patient, patient comfort and positioning, equipment storage and inventory, and ease of use. These results reflect not only Bascom Palmer's adherence to the principles of the Joint Commisson's National Patient Safety Goals, but also the Institute's commitment to superior patient care and continuous improvement. – AORN –

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AORN Legislative Map Helps Members Be Advocates

The Public Policy section of the AORN web site provides access to the most current laws and regulations related to AORN legislative priorities in individual states. This resource center also provides details about state and regional AORN legislative coordinators, links to nursing organizations and nurse practice acts, and news about the latest developments on public policy initiatives. The "Get Involved" button gives site users contact information for their legislators and other decision-makers. For more information, visit *http://www.aorn.org/PublicPolicy/LegislativeMap/*.

Patient Education Before Discharge Has Many Benefits

Educating patients about their after-hospital care instructions (ie, how to take their medications, when to schedule follow-up appointments) reduces the likelihood of readmission to the hospital or a visit to the emergency department (ED) by 30%, according to a February 2, 2009, news release from the Agency for Healthcare Research and Quality (AHRQ).

Patients' follow-up care instructions provided in a hospital discharge summary often are not made available to the patients primary care physician in a timely fashion. This can create confusion about the patient's follow-up care that could lead to a return visit to the hospital. In response to this problem, a research team at Boston University Medical Center's Department of Family Medicine developed the Re-Engineered Hospital Discharge Program (RED), a multifaceted program to educate patients about their post-hospital care instructions. The program was tested through a randomized controlled trial. A specialized nurse helped patients

- arrange follow-up appointments,
- confirm medication routines, and
- understand their diagnoses using a personalized instruction booklet.

Additionally, a pharmacist contacted the patients within two to four days of discharge to reinforce their medication plans and answer questions.

The results of the program showed a 30% reduction in subsequent ED visits by the 370 patients who participated in the RED program compared with the 368 patients who did not. Fewer hospital visits benefited hospitals by reducing the total costs (ie, a combination of actual hospitalization costs and estimated outpatient costs) by an average of $412 for patients receiving education compared to those who did not. Additionally, 94% of the participating patients left the hospital with a follow-up appointment with their primary care physician as opposed to 35% of the nonparticipants; 91% of participating patients had their discharge summaries sent to their primary care physicians within 24 hours of discharge. The medication review did not prove to be as beneficial, with 65% of the RED program participants having at least one problem with their medications, and half of those cases requiring corrective action by the pharmacist.

Educating patients before they leave the hospital reduces readmissions, emergency department visits and saves money [news release]. Rockville, MD: Agency for Healthcare Research and Quality; February 2, 2009.