Transition "Tickets" Reduce Adverse Events During Patient Transports

Snapshot

Summary

University of Pittsburgh Medical Center (UPMC) Presbyterian Hospital developed an intra-hospital transport ticket (known as *Ticket to Ride*) that accompanies patients from their "home" inpatient unit to any diagnostic testing and procedural areas they may need to visit and then back again to the home unit. The ticket is designed to standardize the intra-hospital inpatient transport process by providing critical patient information and a checklist of steps to ensure patient safety during transport and accurate care at each destination. The program has led to significantly fewer off-unit adverse events and higher levels of patient satisfaction with the transportation process.

Developing Organizations

University of Pittsburgh Medical Center Presbyterian Hospital

Date First Implemented

2007

May

Patient Population

Geographic Location > City

What They Did

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Problem Addressed

Medical errors commonly occur during patient transfers within a hospital, largely as a result of communication errors between different teams of care providers, including misunderstandings and the omission of critical information.

- **Poor communication and patient handoffs as a common source of sentinel events:** According to the Joint Commission, 70 percent of sentinel events in 2005 were caused by poor communication, with about one-half of those events occurring during patient handoffs.[1] As part of its 2008 *National Patient Safety Goals*, the Joint Commission now requires hospitals to implement a standardized approach to communications during patient handoffs.[2]
- **Common sources of adverse events during transport:** An analysis of UPMC off-unit adverse events (events that occurred while the patient was away from his/her "home" nursing unit receiving diagnostic tests or procedures) revealed several common sources, including oxygen tanks becoming empty (some trips cover a

distance of a fourth mile each way), delayed activation of emergency response teams during transport and at destination units, the wrong patient being transported, and transporting patients to the wrong departments.[3]

Description of the Innovative Activity

UPMC Presbyterian Hospital uses a "ticket" that accompanies patients from their home unit to any diagnostic testing and procedural areas they may need to visit, and then back again to their home unit. The ticket includes critical patient information and a series of checklists for various personnel to ensure patient safety and accurate care during transportation and at each destination.

Key elements of the program include the following:

- **Transport summary and ticket to guide entire process:** Whenever a patient on any unit is scheduled for a diagnostic test or procedure, the home unit secretary prints a transport summary, drawn from the hospital's electronic health record, that includes critical information that would be needed by a rapid response team in case of an adverse event. This information includes the patient's diagnoses, isolation precautions, allergies, most recent laboratory values, vital signs, and medication list. A separate *Ticket to Ride* prints automatically when the summary is printed; it includes various sections and checklists that are completed by various staff before and during the transport process, as described in the bullets that follow.
- **Pretransportation nurse assessment:** The home unit nurse completes an initial assessment of the patient and then enters relevant information into the SBAR (situation, background,

assessment, and recommendation) section of the ticket, including ambulatory ability/assistance needed, risk of a fall, mental capabilities, sensory deficits, oxygen tank level (in liters per minute), and special equipment needs. The SBAR section is automatically populated in the sites with an electronic medical record. The nurse initials the form to indicate that a pretransportation patient assessment has been conducted. The SBAR section also includes essential elements from the transport summary, including the patient's name, allergies, and isolation status. As a part of this process, the home unit nurse asks the patient about toileting needs, pain levels and the need for medication, blankets, water, or tissues. The nurse also encourages patients to communicate any needs during their time away from the unit. (The ticket also includes a written section that describes its purpose and encourages patients to share information during the transport process.)

- **Checklists to guide transport process:** The second section of the ticket includes separate checklists for the home/sending unit nurse, escorts, and receiving and sending unit staff. Each checklist has several columns to accommodate multiple destinations if necessary. Checklists serve as a reminder to all caregivers about what to do throughout the transportation process, as described below:
    - **Home unit checklist:** The home unit staff manually completes the sending unit checklist by providing his or her contact information and verifying the patient's destination(s). The nurse then identifies the appropriate patient escort (who could be a transport staff member, an advanced patient care technician, or a nurse) based on the patient's clinical condition and equipment needs.

- **Escort checklist:** The home unit staff gives the transport summary and ticket to the escort, who reviews, completes, and documents the steps in the transport section of the checklist. This section reminds the escort of important activities, such as checking the patient's identification wristband, verifying the destination(s), introducing himself/herself to the patient, checking the oxygen tank level, and other vital steps to ensure safety.
- **Receiving unit checklist:** When the escort delivers the patient to the destination unit, a staff member on the unit reviews the receiving unit checklist, completing and documenting the following activities: checking the patient's wristband, introducing himself/herself to the patient, and checking the oxygen tank level.
- **Sending unit checklist:** When the diagnostic test or procedure is completed, a staff member from that unit reviews, completes, and documents activities included in the "sending unit" portion of the checklist before releasing the patient for transport back to the home unit. When an interventional procedure has been performed, the staff member also places a red sticker on the ticket to alert the home unit nurse that the patient has returned and to remind the nurse to immediately enter follow up orders (e.g., checking vital signs and assessing the procedure site) into the electronic health record. This entry automatically generates a follow up care task list for the home unit nurse.

- **Regular check of oxygen supply levels:** Oxygen tank levels are checked at every handoff, with cylinders replaced if necessary. (Transport personnel had been trained to check oxygen tank

cylinders prior to the implementation of the program; transporters were trained to change the low-volume oxygen cylinders as part of the Ticket to Ride implementation.) Reference cards, posted wherever tanks and cylinders are stored, convert oxygen tank volumes to hours/minutes of available oxygen; pocket versions of these cards are carried by transport personnel. A separate section of the ticket, labeled the *Intra-Hospital Patient Transportation Summary*, provides space to list oxygen levels at various destinations, along with the time that levels were checked at each destination; staff members who check the oxygen levels are expected to initial the level/time in space provided on the ticket.

References/Related Articles

Pesanka DA, Greenhouse P, Rack L, et al. Ticket to ride: reducing handoff risk during hospital patient transport. J Nurs Care Qual. 2008 Aug 26. [Epub ahead of print]. [PubMed]

Joint Commission International Center for Patient Safety, Nine Patient Safety Solutions. Communication during patient hand-overs. 2007 May;1(3). Available at: http://www.ccforpatientsafety.org/30723/

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Did It Work?

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Results

Pre- and post-implementation data show that the *Ticket to Ride* program has reduced the frequency of off-unit adverse events and increased patient satisfaction levels with the transportation process.

- **Fewer off-unit adverse events:** The program has significantly reduced off-unit adverse events, including oxygen-related events and cardiopulmonary and respiratory arrests.
    - **Oxygen-related events:** Two off-unit oxygen-related events

occurred during the quarter prior to implementation, while seven occurred during the quarter in which the program was implemented. (This rise is likely due to the increased awareness of these kinds of events that was created by the program's introduction). During the first 6 months after program implementation, only one off-unit oxygen-related event occurred.

    - **Fewer cardiac and respiratory arrests:** The number of Condition A (cardiac/respiratory arrests requiring resuscitation) and Condition C (clinical crisis requiring rapid response team intervention) events fell from 63 during the first 6 months of 2007 to 36 during the same time period in 2008, a 43-percent decline.

- **Higher patient satisfaction:** Patient surveys show that satisfaction with transport staff increased from 84.9 in August 2007 to 86.1 in April 2008.
- **Increased adherence to checklist steps:** While pre-implementation data are not available on all care processes included in the checklists (because there was no expectation that staff document these processes), available data suggest that the frequency of providing the home unit nurse’s name and direct telephone number rose from 16 percent before program implementation to 100 percent afterward; a similar increase was seen in the frequency of checking of the patient's armband by transporters.

Evidence Rating *(What is this?)*

Moderate: The evidence consists of before-and-after comparisons of key outcomes measures, including the number of off-unit oxygen-

related and cardiac/respiratory events, and patient satisfaction with the transport process.

How They Did It

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Context of the Innovation

UPMC Presbyterian Hospital has 800 beds and handles approximately 34,000 inpatient admissions annually and roughly 12,000 inpatient transports (excluding transports at discharge) each month. The *Ticket to Ride* program was developed after a review of response team reports of off-unit events indicated an opportunity to improve patient safety during the intra-hospital transport process.

Planning and Development Process

Key elements of the planning and development process included the following:

- **Eliciting senior leadership support:** A multidisciplinary team, including representatives from senior administration, nursing, respiratory therapy, transport, risk management, information services, patient relations, and ancillary department management provided senior administrators with data documenting the frequency of adverse events during the patient transport process, which convinced leaders to support an initiative to improve this process.
- **Designing the program:** The team met weekly over a 4- to 5-month period to design, pilot test, and amend the ticket and redesigned transport process.
- **Designing the oxygen card:** The team designed the oxygen tank volume reference card to make it easy for relevant individuals to know how much time remained before the tank needed to be

refilled.

- **Introducing new process to staff:** Unit-level and department-level management introduced the ticket and new process to staff; because the ticket was designed to be as straightforward as possible, minimal explanation of its use was required. Unit secretaries received coaching on the process to ensure that they understood the purpose of the ticket and the need to provide it and the transport summary to the escort.

Resources Used and Skills Needed

- **Staffing:** The program requires no new staff, as existing staff incorporate it into their daily routines. Staff members who were involved in program development and design also incorporated this work into their existing responsibilities.
- **Costs:** No costs have been incurred in the development or ongoing execution of this initiative.

Funding Sources

University of Pittsburgh Medical Center Presbyterian Hospital

Tools and Other Resources

The *Ticket to Ride* is reprinted in Pesanka DA, Greenhouse P, Rack L, et al. Ticket to ride: reducing handoff risk during hospital patient transport. J Nurs Care Qual. 2008 Aug 26. [Epub ahead of print]. [PubMed]

Adoption Considerations

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Getting Started with This Innovation

- **Design the program with future expansion in mind:** Because the team knew that the program would eventually be adopted system-wide, they considered the varying circumstances of different UPMC institutions during the design process.
- **Be prepared for some staff resistance:** Coaching and mentoring that emphasizes data on adverse events, the purpose of the new process, and the ultimate goal of improving patient safety can be helpful in overcoming this resistance. Sharing real stories of adverse events can be particularly powerful.

Sustaining This Innovation

Continually monitor off-unit adverse events: If events continue to occur, consider amending or expanding items included on the ticket to better reflect the needs of the patient population.

Use By Other Organizations

The program is being rolled out to the other 19 UPMC hospitals.

Comment on this innovation/Read other comments.

[1] Improving handoff communications: meeting National Patient Safety Goal 2E. Jt Comm Perspect Patient Saf. 2006 Aug;6(8):9-15.

[2] The Joint Commission. 2008 National Patient Safety Goals: Hospital Program. Available at: http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm

[3] Pesanka DA, Greenhouse P, Rack L, et al. Ticket to ride: reducing handoff risk during hospital patient transport. J Nurs Care Qual. 2008 Aug 26. [Epub ahead of print]. [PubMed]

Innovation Profile Classification

Patient Population:	Geographic Location > City
Stage of Care:	Acute care
Setting of Care:	Hospital Inpatient - Hospital Type > Teaching hospital
Patient Care Process:	Pre-Care Processes > Transportation to care; Active Care Processes: Diagnosis and Treatment > Patient safety; After Care Processes > Hand-offs and end-of-shift reports; Transitions between settings; Care Management Processes > Coordination of care; Procedure and policy compliance; Provider-provider communication
IOM Domains of Quality:	Safety
Organizational Processes:	Medical record keeping; Policies and procedures; Process improvement
Developer:	University of Pittsburgh Medical Center Presbyterian Hospital

Funding Sources: University of Pittsburgh Medical Center Presbyterian Hospital

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