

Investigating Risk Factors in Hospital Patient Transfer Processes

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P354

INTRODUCTION

The hospital has established comprehensive standards for patient transfers within the facility, covering pre-transfer preparations, the transfer process, and post-transfer activities. These guidelines ensure that nursing staff confirm the patient's transfer level and prepare relevant equipment accordingly. Any discrepancies or changes in the patient's condition require consultation with a physician to reassess the transfer level, ensuring appropriate preparation by transfer personnel.

AIM

This study aims to investigate the risk factors associated with hospital patient transfer processes and to develop strategies to mitigate these risks, enhancing patient safety and the overall quality of care.

RESULTS

The implementation of an electronic transfer sheet has facilitated the automatic export and real-time accessibility of essential patient information through the medical record system. This enhancement ensures that transfer personnel have immediate access to vital patient details, thereby improving the accuracy and safety of the transfer process.

Moreover, the system has led to a significant reduction in transfer-related errors, as the standardized digital format minimizes the risk of miscommunication and information loss. The electronic sheet includes critical data such as drug allergies, current medications, oxygen requirements, and any therapy restrictions, which are automatically updated and accessible in real-time.

Feedback from medical staff indicates an increase in efficiency and confidence during transfers, contributing to a more streamlined and reliable patient transfer procedure overall.

"We have established an operational standard document for the classification of in-hospital patient transfers and have formulated related standards based on the transfer classifications." (Table1)

METHOD

The in-hospital patient transfer process is shown in Figure 1.



Figure 1. Hospital Patient Transfer Process

A "System Diagram - Cause Analysis" was employed to identify and analyze adverse events during patient transfers. Five key issues were identified: non-compliance with transfer classifications by medical staff, divergent perceptions among transport-related personnel, lack of patient recognition by transfer personnel, insufficient equipment, and incomplete contact information among service staff. To address these issues, an electronic patient transfer sheet was implemented, providing real-time access to crucial patient details such as drug allergies, applied lines, oxygen saturation, therapy restrictions, and special infection control measures. (Figure 2.)

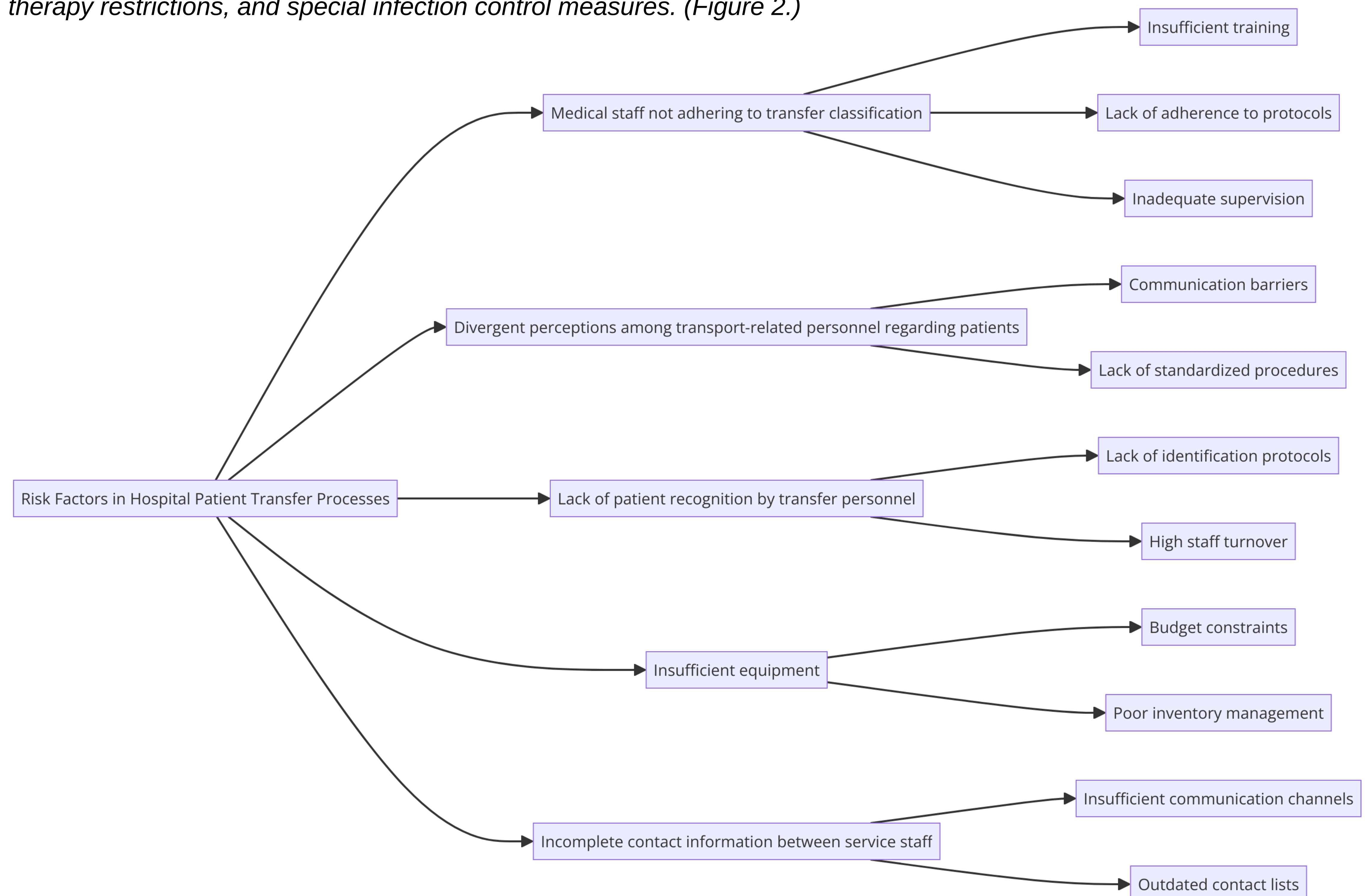


Figure 2. Risk Factors in Hospital Patient Transfer Processes

Table 1. In-hospital patient transfer grading summary table

Transfer Level	Items	Transfer Personnel	Equipment
Level 1 - Adult	1. tracheal intubation or tracheostomy and require respiratory support (using a resuscitation ball or respirator) 2. use non-invasive positive pressure respirators 3. Intensive care unit patients sent for examination 4. First-level knife patient transportation 5. MEWS red light 8 points (inclusive) or above 6. Transfer to intensive care unit 7. Other unstable conditions requiring physician evaluation	Medical team, nurse, transport staff, respiratory therapist (if necessary)	Cardiac monitor, blood pressure monitor, oxygen equipment, emergency equipment
Level 1 - Pediatric	1. Positive pressure respiratory support is required 2. Intensive care unit patients sent for examination 3. First-level knife patient transportation 4. Vital signs are unstable 5. transferred to the intensive care unit 6. Suspected or active bleeding 7. Change in consciousness (coma index <13 points or rapid decrease) or restlessness	Medical team, nurse, transport staff, respiratory therapist (if necessary)	Cardiac monitor, blood pressure monitor, oxygen equipment, emergency equipment
Level 2 - Adult	1. MEWS red light 6-7 points 2. Use oxygen FIO2 ≥50% or more 3. need to be accompanied by a nurse after being evaluated by a doctor before transfer	Nurse, transport staff	Physiological monitor, blood pressure monitor
Level 2 - Pediatric	1. Premature infants who require continuous monitoring of vital signs 2. Only by using low-flow oxygen (1-6 L/min) treatment can SPO2 be maintained ≥90% 3. Vital signs were unstable within 24 hours, but returned to normal after treatment 4. Use intravenous sedation or intravenous anti-cramp drugs	Nurse, transport staff	Physiological monitor, blood pressure monitor
Level 3	Routine transport, the patient's condition is stable	Transport staff	None

CONCLUSIONS

Patient safety is paramount in medical quality, with the primary objective of preventing unnecessary harm during medical care. Enhancing the patient transfer process through professional assessment, meticulous equipment preparation, and effective handover procedures directly correlates with increased safety and the prevention of adverse events. The optimization of the information system plays a crucial role, as it allows for the automatic adjustment of transfer levels based on specific parameters, reducing the risk of oversight during transfer risk assessments. The integration of patient data and the fostering of consensus among transfer personnel collectively uphold the safety of the patient transfer process.

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