



Considerations and lessons learned in standardizing interhospital transport of critically ill patients


Consideraciones y aprendizajes en la estandarización del traslado interhospitalario de pacientes críticos

Considerações e aprendizagem na padronização da transferência inter-hospitalar de pacientes críticos

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ABSTRACT

Objective: To describe the considerations and lessons learned in standardizing interhospital transport of critically ill patients. **Development:** The experience of developing a protocol for the safe transport of critically ill patients shows how relevant it is to establish clear, evidence-based guidelines to ensure patient safety, quality of care, and continuity of health care. The interhospital transfer of these patients requires meticulous planning due to the significant risks involved, which can lead to adverse events affecting both the patient and healthcare staff. Such a protocol must address numerous factors, including adequately preparing the patient and the healthcare team, effective communication among professionals, standardizing procedures, and using resources efficiently. Barriers to creating a transfer protocol include a lack of trained staff, limited material resources, and the diverse clinical needs of patients, which require a holistic, multidisciplinary approach. These challenges can be mitigated by building consensus among professionals from different specialties and validating the protocol based on prior experiences and internationally recognized best practices. **Conclusions:** Developing a clinical protocol for transporting critically ill patients is a complex process, yet it is essential for ensuring patient safety and an efficient healthcare system. This protocol must be evidence-based,

adaptable to local contexts, and involve collaboration among multidisciplinary teams from the initial clinical assessment to the execution of the transfer, always prioritizing the principle of beneficence.

Keywords: Patient Transfer; Clinical Protocols; Critical Care; Patient Safety; Safety Management.

RESUMEN

Objetivo: Describir consideraciones y aprendizajes en la estandarización del traslado interhospitalario de pacientes críticos. **Desarrollo:** La experiencia de elaborar un protocolo para el traslado seguro de pacientes críticos refleja la importancia de establecer normas claras respaldadas científicamente para garantizar la seguridad, la calidad y la continuidad de la asistencia sanitaria. El traslado interhospitalario de estos pacientes requiere una planificación rigurosa, ya que conllevan importantes riesgos y desencadenando eventos adversos, que pueden afectar tanto al paciente como al personal sanitario y estos. Este tipo de protocolo debe considerar varios factores: la preparación adecuada del equipo y del paciente, la comunicación efectiva entre los profesionales de salud, la estandarización de los procedimientos y la utilización eficiente de los recursos. Las barreras en la creación de dicho protocolo incluyen la falta de personal capacitado, recursos materiales limitados y la diversidad de necesidades clínicas de los pacientes, lo que requiere un enfoque holístico y multidisciplinario. Las dificultades se mitigan mediante el consenso entre profesionales de distintas especialidades y la validación del protocolo en base a experiencias previas y a las mejores prácticas reconocidas globalmente. **Conclusiones:** Crear un protocolo clínico para el traslado de pacientes críticos es un proceso complejo, pero esencial para garantizar la seguridad del paciente y la eficiencia del sistema de salud. Este protocolo debe estar basado en la evidencia, ser flexible según las realidades locales y contar con la colaboración de equipos multidisciplinarios, desde la valoración clínica inicial hasta la ejecución final del traslado, siempre priorizando el principio de beneficencia.

Palabras clave: Transferencia de Pacientes; Protocolos Clínicos; Cuidados Críticos; Seguridad del Paciente; Administración de la Seguridad.

RESUMO

Objetivo: Descrever considerações e lições aprendidas na padronização da transferência inter-hospitalar de pacientes graves. **Desenvolvimento:** A experiência de desenvolvimento de um protocolo para a transferência segura de pacientes graves reflète a importância de estabelecer padrões claros e cientificamente fundamentados para garantir a segurança, a qualidade e a continuidade do atendimento. A transferência inter-hospitalar desses pacientes exige um planejamento rigoroso, pois eles apresentam riscos significativos e desencadeiam eventos adversos, que podem afetar tanto o paciente quanto a equipe de saúde. Esse protocolo deve considerar vários fatores: preparação adequada da equipe e do paciente, comunicação eficaz entre os profissionais de saúde, padronização dos procedimentos e uso eficiente dos recursos. As barreiras para a criação desse protocolo incluem a falta de equipe treinada, recursos materiais limitados e a diversidade das necessidades clínicas dos pacientes, o que exige uma abordagem holística e multidisciplinar. As dificuldades são atenuadas pelo consenso entre profissionais de diferentes especialidades e pela validação do protocolo com base em experiências anteriores e nas melhores práticas reconhecidas mundialmente. **Conclusões:** A criação de um protocolo clínico para a transferência de pacientes em estado crítico é um processo complexo, mas essencial para garantir a segurança do paciente e a eficiência do sistema de saúde. Esse protocolo deve ser baseado em evidências, flexível de acordo com as realidades locais e envolver a colaboração de equipes multidisciplinares, desde a avaliação clínica inicial até a execução final da transferência, sempre priorizando o princípio da beneficência.

Palavras-chave: Transferência de Pacientes; Protocolos Clínicos; Cuidados Críticos; Segurança do Paciente; Administração de Segurança.

INTRODUCTION

Interhospital transfer of critically ill patients is carried out more frequently than expected, as patients often need to receive specialized assessments and/or undergo diagnostic and therapeutic procedures. Transfer is particularly necessary when these services are unavailable at their primary healthcare facilities. During these transfers, adverse events (AEs) may occur. AEs are a serious problem, ranking among the top ten causes of mortality and disability worldwide, with two-thirds occurring in low- and middle-income countries. In high-income countries, it is estimated that one in ten patients experiences harm while in hospital care, making healthcare-related harm a significant global public health issue that results in substantial financial costs.²

Critically ill patients require more specific and intensive care to preserve their lives, depending on the severity of their condition. Consequently, medical decisions involving their health are crucial for their progression, prognosis, and recovery. When determining whether to proceed with a transfer, risks and benefits must be carefully weighed, and measures should be implemented to minimize the occurrence of AEs that directly impact care quality and safety.³

Effective communication and proper coordination among healthcare teams are essential for successfully executing this process. This underscores the importance of clinical protocols as valuable tools for organizing and standardizing procedures. Additionally, protocols are instrumental in defining valid clinical standards recognized by medical teams, thereby ensuring the quality of care and treatment continuity.⁴

Similarly, it is essential to highlight the importance of standardizing clinical practices through these instruments as guidelines for action, as they optimize patient care. Protocols are invaluable tools for healthcare control, ensuring best practices by setting minimum performance standards. Moreover, they can be used as administrative instruments to evaluate healthcare activities.⁵

Developing a protocol for safe patient transfer holds great social relevance since it proposes actions based on the most current evidence. This ensures a rigorous process and guarantees to the community and patients that the actions of healthcare teams have been carefully considered beforehand.⁶

This reflective work explores the authors' experience creating a protocol for the interhospital transfer of critically ill patients. Additionally, it describes methodological aspects that could guide the development of a tool to direct decision-making and actions appropriately during these transfers. The objective of this article is to outline key considerations and insights gained in the standardization of interhospital transfers for critically ill patients.

DEVELOPMENT

Considerations when Diagnosing Opportunities for Improvement

Given the necessity of transferring critically ill patients for the reasons previously outlined, the lack of standardized processes required for proper interhospital transfers could pose a significant issue. This may compromise patient safety and quality of care due to the numerous risks associated with transfers. According to scientific evidence, the incidence of AEs is primarily linked to equipment failure, inadequate patient preparation, poor or nonexistent team communication, and insufficient documentation, all of which can impact any stage of the transfer process.⁷⁻⁸ Additionally, the critical condition of the patient can introduce further risks due to physiological and hemodynamic changes that may worsen their clinical status. Therefore, these risks must be thoroughly assessed when deciding on a transfer, always adhering to the principle of beneficence.⁶

Resources are usually limited in healthcare, making it necessary to implement a clinical protocol that enhances the organization and efficient use of both human and physical resources.⁹

A well-supported clinical foundation and evidence-based knowledge contribute to developing protocols with higher theoretical and practical value. Such protocols facilitate sound decision-making in clinical actions and, most importantly, positively impact patient health.

Similarly, peer consensus and validation based on a multi-professional perspective and experience are essential to providing a comprehensive and integrative approach. This is particularly relevant when these protocols are implemented by a multidisciplinary team.

With the expansion of healthcare teams and the diversification of professional service delivery, multiple stakeholders have emerged, each with knowledge and expertise relevant to their respective fields. This has made effective communication and teamwork particularly critical to ensure a seamless information flow and actions that foster patient recovery. However, this work is not exempt from errors, which can impose significant financial burdens on healthcare systems by prolonging hospital stays, increasing the severity of conditions, and resulting in additional interventions to achieve recovery.⁹

While human error is inevitable, healthcare teams are committed to minimizing failures in care delivery and addressing variability-related issues by developing evidence-based guidelines and protocols.¹⁰

Currently, standardizing actions and implementing clinical guidelines are imperative for healthcare institutions. As proposed by Vera Carrasco, clinical protocols are essential tools for guiding medical decision-making, ensuring equity and efficiency in resource utilization and patient care, and enhancing safety for healthcare providers.⁵

Tools for Protocol Development

Critically ill patient transfer is a complex process requiring professionals to reflect on key aspects of healthcare quality and patient safety. It is also highly stressful for healthcare teams, and it needs to be executed by specialized and well-trained staff. A clinical protocol represents an opportunity for interventions that minimize the risk of AEs for patients and healthcare professionals involved in this procedure.^{5,11,12}

The authors of this reflection propose a logical and structured sequence of steps designed to ensure continuity of care and maintain high-quality standards during patient transfer.

In order to develop an effective protocol, it is necessary to first carry out an extensive literature review on existing research related to hospital transfer and critically ill patients. This review should use multiple health databases and meta-search engines, employing the most commonly used health descriptors. The goal is to establish a strong knowledge base that includes documented experiences from various healthcare institutions worldwide, an analysis of the main healthcare needs of critically ill patients, and observations on the most common physiological changes occurring during patient transfer.^{13,14,15,16}

The protocol should address the major challenges leading to AEs, as identified in the literature, to facilitate their mitigation. The reviewed studies emphasize the critical role of protocols as guides for assessing essential actions before conducting patient transfers, to ensure both quality and safety in their implementation.^{5,12,17,18}

There are foundational guidelines that aid in effectively developing such instruments, with various reference guides addressing this subject. One such reference is the protocol development framework proposed by Llamas and Hernández, which recommends following a well-defined structure for drafting these instruments.¹⁹ In the Chilean context, the *Guía para Elaboración y Gestión de*

Documentos para el Proceso de Acreditación en Salud from the Chilean Ministry of Health can serve as a standardized and validated structure for protocol development.²⁰

During the preparatory phase, the protocol must be structured, and the necessary body of knowledge should be defined to provide a solid theoretical foundation. It is also essential to reference existing national and international protocols to align criteria. Subsequently, during the document drafting phase, the required procedures and considerations for safe patient transfer should be meticulously addressed, incorporating evidence-based recommendations while adapting to local realities.^{19,21}

In the critical analysis phase, the document should be reviewed by peers and external experts for analysis and discussion, incorporating feedback from the expert panel.¹⁹

A crucial aspect is transfer prioritization. It is recommended to use the tool validated by the Chilean Ministry of Health—*Categorización de Usuarios según Dependencia y Riesgo de Cuidados* (CUDYR)—to determine the necessary staff based on workload. The Acute Physiology and Chronic Health Disease Classification System II (APACHE II) should be applied to assess the severity of critically ill patients requiring transfer, along with the attending physician's clinical judgment and in consensus with the healthcare team at the time of transfer. By incorporating standardized protocols, healthcare quality is improved, information systems are enhanced, and resource allocation can be optimized from a healthcare management perspective.^{22,23,24}

Barriers and Facilitators in Protocol Development

One of the primary barriers to developing an appropriate protocol is the need to consider various aspects, including patient care requirements, available material and physical resources, and, most importantly, highly trained human capital with the necessary competencies to care for critically ill patients. Based on these factors, a flowchart of actions aligned with current regulations must be established to ensure the safety of patients during transfer.²⁵

To minimize these barriers, information was gathered from the experiences of different hospitals and intensive care units worldwide that conduct critically ill patient transfers. Additionally, guidelines and recommendations from various scientific societies specializing in intensive care and anesthesiology were reviewed, focusing on aspects like stabilization, maintenance, and specialized care for these patients.^{26, 27}

Furthermore, various nursing studies on critically ill patient transfer were analyzed, particularly those examining the most frequent mistakes made during this process. These studies emphasize effective communication, technical management, and staff training as crucial factors in preventing errors.^{12,17,28,29}

Among the facilitators, the preventive maintenance and preparation of critical care equipment before transfer, the design of an efficient transfer workflow, and the prioritization of patient discharge based on stability criteria—while always adhering to the principle of beneficence—play a key role in avoiding decompensations that could be fatal during transit to the receiving hospital.³ Additionally, documentation and proper patient identification are essential components of healthcare quality assurance and a prerequisite for any clinical activity.³⁰

Another key facilitator in clinical protocols is the use of checklists, which help structure and standardize care, ensuring that all necessary conditions are met for a safe transfer.³¹ This underscores the importance of studying how to develop effective protocols and clinical guidelines, as they must be adapted to local realities and available resources. When these documents are developed in consensus with healthcare teams, properly piloted, and widely disseminated, they are excellent tools

for informed decision-making in healthcare, ultimately reducing care costs by preventing adverse events.³²

CONCLUSIONS

Throughout this reflection, the need for clinical protocols in high-risk procedures, such as the transfer of critically ill patients, becomes evident. These protocols should include a checklist and an action flowchart to ensure a safe transfer. Additionally, having qualified staff and appropriate transport equipment according to patient requirements is essential.

Healthcare institutions do not always have a specific protocol for the interhospital transfer of critically ill patients. In many cases, they rely solely on practical experience and previously acquired knowledge, which does not always guarantee safety and quality.

The role of nursing in ensuring a safe transfer extends from assessing the patient's general and hemodynamic status to providing the specific care required. This includes weighing the benefits of the transfer against its risks and ensuring proper patient preparation, as well as the necessary supplies and medications. Furthermore, it involves verifying medical equipment functionality and guaranteeing the presence of competent and well-trained staff for the procedure.

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