

Commentary

Just Culture in a Fragmented System: Ethical and Quality Imperatives in Cross-Institutional Tracheostomy Care

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Abstract

Although the ethical imperative to respond to medical errors that cause patient harm is well established, reporting errors that span institutional boundaries introduces added ethical, professional, and practical challenges. This article examines these tensions through the fictitious case of a patient who had repeated tracheostomy dislodgement, highlighting the responsibilities of healthcare professionals to maintain transparency, foster trust, and promote systemic quality improvement. While disclosing errors to patients and families is widely recognized as essential to ethical and patient-centered care, reporting mistakes made by colleagues, especially across healthcare systems, raises issues of professional responsibility, institutional accountability, and medicolegal risk. Healthcare professionals must navigate considerations of individual accountability versus systemic failure to support a culture of learning. In high-risk settings such as tracheostomy care, adverse events often arise from both human error and systemic deficiencies, underscoring the need for structured reporting mechanisms that support ethical disclosure, interprofessional communication, and data-driven quality improvement. This discussion highlights the evolving expectations for professional self-regulation, the role of structured feedback in improving care, and the ethical imperative to protect future patients while maintaining fairness to colleagues. Advancing patient safety is thus predicated on strengthening institutional policies and fostering a culture of accountability without instilling fear or inappropriately attributing blame. A just culture approach, emphasizing learning, transparency, and systemic improvement, provides a pathway to reconciling ethical obligations with practical solutions, ensuring the highest standards of care.

INTRODUCTION: ETHICS AND SAFETY IN A FRAGMENTED SYSTEM

When patients receive care across two or more institutions, clinical handoffs increase the risk of fragmented communication and system-level failures. In tracheostomy care, identifying and responding to adverse events involves ethical, professional, and operational considerations. Although the ethical imperative to disclose errors is well recognized, the approach to management of errors that occurred at an unaffiliated institution is nuanced. This article presents a fictional case of tracheostomy dislodgement and subsequent hypoxic brain injury, highlighting the need for a coordinated response to medical harm. The approach incorporates principles of just culture, seeking to balance accountability with learning and system improvement. As the healthcare landscape becomes increasingly interdisciplinary, there is a growing need for frameworks that support shared accountability, transparency, and safety.

CASE VIGNETTE: RECURRENT TRACHEOSTOMY DISLODGEEMENT AND HARM

The following fictional case depicts considerations in intersystem tracheostomy care.

A 62-year-old patient with a tracheostomy was transferred from a regional hospital at their family's request following a dislodgement of the tracheostomy and ensuing clinical deterioration. The patient had presented to the outside hospital with pneumonia that progressed to acute respiratory distress syndrome. The patient required prolonged invasive mechanical ventilation, and the tracheostomy was performed for pulmonary hygiene and to accelerate liberation from the ventilator. The patient was sedated and received a central line for vasopressor support and continuous renal replacement therapy. The patient had been steadily improving until the incident of tracheostomy tube dislodgement, which led to an episode of prolonged hypoxia.

According to the outside hospital medical records, tracheostomy tube dislodgements had occurred on three prior occasions, but the tube had been replaced without incident. The most recent dislodgement occurred during transport for an imaging procedure. There were multiple unsuccessful attempts to replace the tube and restore ventilation. As the patient's oxygenation declined, a code was initiated. The tracheostomy was successfully inserted, restoring oxygenation, capnography, and circulation but unfortunately the intervening period led to a significant hypoxic brain injury. The patient had recent seizure activity, portending poor prognosis for recovery of cognitive function.

After the patient was transferred to the new receiving hospital, an otolaryngology consult is placed to evaluate the tracheostomy site. On exam, the patient is unresponsive, with extensive sub-

cutaneous emphysema throughout the neck and chest. The tracheostomy seems to sit high in the patient's neck. On closer inspection, the device is through the cricothyroid membrane, and there is a large false tract anterior to the trachea, with marked soft tissue trauma. The otolaryngologist recommends revising the cricothyrotomy to a tracheostomy, and the family seeks answers regarding what happened and who is responsible.

HOW SHOULD THE CONSULTING OTOLARYNGOLOGIST RESPOND?

Framework for patient safety modeled by individual institutions

The Institute of Medicine's report "To Err is Human: Building a Safer Health System" ushered in the modern patient safety movement aimed at ensuring safe, high-quality care.¹ The high rates of medical errors reported roused public awareness and promoted systematic reporting of errors within healthcare institutions. This practice is essential for learning from incidents, identifying root causes, and preventing future harm.

Since the report's publication in 1999, numerous frameworks for safety have been developed and integrated into healthcare systems. The traditional Safety-I paradigm focuses on understanding system failures through tools such as root-cause analysis, with the goal of standardizing processes to minimize error. The Safety-II paradigm offers a complementary perspective, focusing on understanding system successes, with the goal of fostering flexibility and resilience.² Various models—such as the Institute of Medicine's Six Aims for Healthcare Quality, the Systems Engineering Initiative for Patient Safety (SEIPS) model, and the Swiss Cheese model—provide frameworks for analyzing and preventing future patient harm within the Safety-I and II paradigms.^{3,4} Incorporating safety frameworks within healthcare institutions are broadly regarded as essential components of high-performing healthcare systems.

Despite their demonstrated utility within individual institutions, these frameworks have not been extended to inter-institutional level. Transitions of care between healthcare institutions—such as hospital-to-hospital transfers or handoffs from inpatient to outpatient providers—are high-risk for disruptions in continuity of care and are insufficiently addressed by existing frameworks applied within institutions. Given that patients frequently move between healthcare institutions, achieving truly resilient healthcare systems will require expanding the application of patient safety frameworks to include inter-system transitions.

Application of existing frameworks

In the case described, the adverse event of hypoxic brain injury should trigger internal reporting mechanisms. However, these processes occur at the institutional level and the patient has now transferred their care to a new institution. Through this case, we examine how existing intra-system (institutional) models could be applied to this patient following inter-system care transfer and subsequent error discovery.

Proactive approach to safety for patients with surgical airway

Delivering high quality tracheostomy care involves teamwork across multiple healthcare professionals, including nurses, respiratory therapists, speech-language pathologists, and physicians and surgeons.⁵⁻⁸ The complexity of care increases the risk of adverse outcomes due to human or system factors. Effective teamwork and communication are crucial in managing tracheostomy patients and preventing complications.^{1,2} Despite significant progress in team-based approaches, healthcare facilities report incidence rates of adverse events ranging from 20% to 30% among tracheostomy patients.⁹ These patients are vulnerable to a wide range of adverse respiratory complications, including inadvertent dislodgement,

tracheostomy tube occlusion, airway hemorrhage, or wound breakdown that can precipitate life-threatening emergencies.^{5,3-9-16} Anticipatory strategies and timely intervention by qualified personnel can often prevent harm or death. However, while the incidence of such events can be reduced, even the most advanced centers may experience catastrophic events that are traumatic for patients, families and professionals.

When these patients transition between institutions, it is especially crucial that their airway management is thoroughly documented to minimize risk of harm as the specific context of prior care should inform decision-making for future providers.¹⁰ For instance, documented prior instances of tracheostomy tube dislodgement in the patient's medical records could inform clinical decision-making; a longer device or better securement might avoid recurrent dislodgement. Interdisciplinary input is often necessary to troubleshoot the considerations of anatomy, ventilation, and positioning.¹¹⁻¹³ Likewise, a patient's precarious condition due to prior respiratory infections or anatomical anomalies complicates tracheostomy care management. While any adverse outcome remains concerning, interprofessional collaboration and systemic improvements can mitigate risks.¹⁴ Healthcare professionals at the receiving institution were not involved with a patient's care at the time of harm and may lack this comprehensive information, highlighting the importance of robust communication and meticulous documentation to evaluate and address medical errors. Given that the scenario presented lacks detailed information regarding the circumstances leading to the adverse outcome, discussions with the initial care team are needed as it may shed light on the intentions and factors that contributed to the event.

Approach to communicating with the care team

The standard of care for tracheostomy is to insert the device through the trachea, usually between the second and third tracheal rings, and a cricothyrotomy is a less stable airway that also increases risk of laryngeal injury or subglottic stenosis. The presence of cricothyrotomy is a deviation from standard of care. When care deviates from the standard there are many possible rationales including clinical factors, situational factors (resources, acuity, personnel available) and the care team's knowledge/skill.

The professionals at the referring hospital should be contacted as they can provide further information regarding the event and may be unaware of the error if not informed. Most clinical errors are unintentional, and discussing these incidents with involved healthcare professionals promotes learning opportunities. Such discussions should aim to distinguish individual errors from system failures, ensuring a thorough understanding of contributing factors to adverse outcomes. Providing constructive feedback to the referring team ensures colleagues understand the situational factors affecting decision-making processes. Direct feedback mechanisms offer a timelier intervention compared to formal reporting systems and can allow for conversation about available models that can prevent future recurrence. Open dialogue supports a culture of safety and continuous improvement in clinical practices.¹⁵

Approach to communicating with the patient and their families

Disclosing concern about an error or adverse event that occurred at another healthcare institution is fraught with ethical complexities. There is limited guidance for healthcare professionals on how to manage errors made by colleagues, particularly when these errors span across different institutions. While the ethical principles of beneficence, non-maleficence and justice clearly support a policy of full and open disclosure to patients for any error, the situational factors contributing to the event are often not fully understood by the discovering provider. It is important to demonstrate humility in drawing conclusions when one was not present, does not possess the full clinical picture, and may be relying on incomplete, secondhand, or possibly inaccurate information. Structured methods such as root cause analysis and actions that are often pro-

vided at the institution providing care would typically be unavailable in the context of intersystem cases; such limitations underscore the need for avoiding overreach in interpreting individual behavior or clinical decision-making. Consequently, the provider should first attempt to contact the care team responsible, offering them the opportunity to disclose the error to the patient or provide further information about the circumstances surrounding the care.

Ultimately, however, in all cases in which an error surfaces, the discovering provider should prioritize open communication with the patient's family, honoring their right to information and fostering a trusting patient-provider relationship.¹⁶ This proactive approach empowers families to make informed decisions about further care. Patients and their families desire transparency regarding all clinical incidents,¹⁷ including those involving colleagues of the treating physician,¹⁸ which reinforces the importance of open disclosure and patient autonomy. Therefore, in this case, the care team should explain the rationale for revising to tracheostomy and ensure understanding of the goals of the family for care, including discussing the potential implications of prolonged hypoxia for prospects for recovery. Importantly, this conversation should focus on the patient's care, rather than disparaging the initial care team and institution.

Approach to initiating a systems response

In many instances, assigning blame for errors proves less constructive than identifying structural changes necessary for preventing recurrence. In a culture of safety, it is not only high-profile errors like wrong-site surgeries that are reported but also less conspicuous errors such as omissions, near misses, or inappropriate procedures that endanger patients without offering benefit. Shifting from a blame-oriented culture to one that prioritizes error reduction requires a just culture that fosters communication and transparent reporting.¹

While not all types of patient harm are due to errors, all forms, including those arising from interprofessional and intersystem contexts, should be documented. The Patient Safety Network categorizes types of patient harm as follows: adverse events, which refer to harm from medical care rather than the underlying disease; near misses, which are unsafe situations that could have led to harm but did not, often indistinguishable from a preventable adverse event except for the outcome, and medical errors as any act of commission or omission that exposed patients to a potentially hazardous situation.¹⁹ Data capture of all types of patient harm allows for identification of patterns both within and between patient care incidents. For example, adverse events involving patient transport to radiology may be uncommon on any given floor of a large hospital but tracking incidents at hospital or inter-system level can be a catalyst for adopting best practices, such as systematic changes emphasizing improvements in patient handoff protocols and implementing new policies to mitigate sentinel events.²⁰

In this case, episodes of tracheostomy tube dislodgement prior to hypoxia may have been missed opportunities. The successful replacement of the tracheostomy tube on three prior occasions reflects the role of standardized care protocols, and best practices in the management of tracheostomy patients. Mortality rates among tracheostomy patients, ranging from 10-60% due to comorbid conditions, underscore the heightened risk of complications or adverse events.^{21,22} However, complications arising from intrahospital transport are often preventable with optimal care pathways, highlighting the need for standardized transport practices for ensuring patient safety.^{20,23}

Despite compelling evidence favoring standardization protocols for tracheostomy care and hospital transports, significant disparities persist among hospitals.²⁴⁻²⁸ In many centers, management of tracheostomies relies on anecdotal knowledge rather than institutional guidelines.²⁹⁻³¹ Studies estimate that 25% of patient mortality in this population stems from healthcare professionals' inadequate understanding of tracheostomy or laryngectomy care.³⁹ Variability in practices and the lack of comprehensive

training and guidelines increase risks for these vulnerable patients, especially when providers lack confidence in proper management, highlighting the need for standardized education, training, and protocols to improve patient safety.^{20,32-36} Standardizing approaches required collaboration across systems, which could be initiated by adverse events such as this scenario if there are inter-institutional databases.

The limited infrastructure for reporting of medical errors across systems underscores, rather than undermines, the need for a culture of accountability within the profession for self-regulation. While some may perceive reporting as punitive, a more enlightened perspective recognizes that appropriate use of reporting systems ensures a fair investigative process that benefits both patients, clinicians, and healthcare systems. Reporting errors to oversight bodies ensures an equitable investigation process. Independent oversight reduces bias and ensures robust adverse event management and continuous improvement.³⁶ A proactive approach supports putting the welfare of patients first, in keeping with the priorities of patients and their families navigating complex care.³⁷⁻⁴⁰

However, effective cross-system reporting databases must be non-punitive in intention and impact except in cases of highly egregious errors. Recognizing that errors are inherent, the fear of being reported can stifle professional relationships, erode psychological safety, and discourage requests for assistance. Critical feedback or reporting of a colleague may deter future referrals, compromising care quality or patient access. Reforms needed include statutory protections for individuals and institutions reporting errors to regulatory bodies, a commitment to investigating inter-system errors, and robust whistleblower protections.⁴¹

Communication pathways across institutions are not currently prioritized, presenting a missed opportunity to improve patient care. Aggregated data and root cause often uncover systemic failures, leading to improved institutional practices and national policies. Historical medical interventions often seem inappropriate by today's standards, highlighting the need to standardize best practices and adopt evidence-based approaches across our entire healthcare system through an interprofessional team approach.

CONCLUSION: FROM INSTITUTIONAL SILOS TO SHARED ACCOUNTABILITY

As healthcare delivery becomes increasingly complex and distributed across systems, there is a growing need to bridge institutional silos and modernize approaches to intersystem medical errors. In tracheostomy care, preventable harm usually arises from a confluence of latent system failures, fragmentation, and unclear responsibilities. A just culture approach involves standardized mechanisms for cross-system communication, interprofessional feedback, and protections that allow for non-punitive error reporting and support for clinicians in speaking up without fear of retribution. Pathways for inter-institutional learning that preserving fairness and humility in assessing care delivery can transform isolated incidents into catalysts for improvement. Collaboration across institutional boundaries can thereby promote learning, trust, and safe, high quality care for patients.

Conflict of Interest

The authors declare no conflicts of interest related to the content of this manuscript.

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