



## Challenges and Professional Responsibilities of Paramedics Working Within Hospital Settings

**Sami Jubran Hayyan Alkhaldi, Yasser Saeed Ali Alqahtani, Saleh Saad Abdullah Alqahtani, Abdulrahman Ali Abdulrahman Alasmari, Ali Mesfer Ali Alqahtani, Saeed Ahmed Saeed Asiri**

Workplace – Paramedic •Aseer health Cluster - Medical Transport

### Abstract

Paramedics are traditionally recognized for their pivotal role in prehospital emergency medical services, where rapid assessment, stabilization, and transport decisions occur in dynamic and resource-variable environments. In many health systems, however, paramedics are increasingly embedded within hospital settings, particularly in emergency departments, trauma units, critical care areas, and rapid response services. This expansion offers operational benefits, including improved patient flow, enhanced response capacity during surges, and better utilization of advanced life support skills. At the same time, it introduces challenges related to role clarity, professional identity, governance, interprofessional boundaries, documentation expectations, and exposure to sustained high-acuity work. This paper synthesizes the literature on hospital-based paramedic practice, outlining core professional responsibilities and the major clinical, organizational, ethical, and psychosocial challenges encountered in hospital environments. It also proposes strategies for effective integration, including clearly defined scope of practice, structured orientation and competency assessment, robust clinical governance, interprofessional education, and proactive mental health supports. Optimizing hospital-based paramedic roles requires a systems approach that aligns skills, regulation, and team structures to patient safety and workforce sustainability.

Keywords: paramedics; hospital-based practice; emergency department; scope of practice; interprofessional collaboration; burnout; patient safety

### 1. Introduction

Paramedicine has evolved from a transport-focused service into a highly skilled clinical profession delivering advanced assessment and treatment across prehospital, community, and increasingly hospital-based contexts. Historically, paramedics have been positioned at the interface between community emergencies and hospital care, providing early stabilization and transferring patients to emergency departments for definitive management. In recent decades, hospitals have begun employing paramedics directly to address system pressures such as emergency department overcrowding, workforce shortages, increased patient complexity, and the need for rapid clinical response within the facility. This shift has led to



new hybrid models of practice in which paramedics work alongside nurses, physicians, respiratory therapists, and other professionals, often with responsibilities that extend beyond traditional “hand-off” roles.

Hospital-based paramedic roles may include triage support, assessment and management of low- to moderate-acuity patients, procedural assistance, rapid response participation, intrahospital transport of critically ill patients, and support of resuscitation teams. While these roles can enhance patient throughput and emergency response capacity, they also raise critical questions: How should scope of practice be defined in a hospital environment? What governance structures ensure safe practice? How can teams avoid role overlap and conflict? What supports mitigate burnout when paramedics are exposed to sustained high-acuity care rather than episodic emergencies? Addressing these questions is essential for hospitals seeking to deploy paramedics effectively and ethically.

This narrative review examines (a) the professional responsibilities of paramedics working within hospital settings and (b) the key challenges influencing their performance, well-being, and integration into multidisciplinary teams. The paper concludes with practical recommendations for administrators, clinical leaders, and policymakers.

## **2. Background: Why Paramedics Are Being Integrated into Hospitals**

Several converging factors have accelerated the integration of paramedics into hospital settings. First, emergency departments in many countries face persistent crowding, prolonged waiting times, and high volumes of patients with diverse acuity. Second, shortages of nursing and medical staff, compounded by turnover and increasing demand, have motivated hospitals to explore alternative workforce models. Third, the paramedic skill set overlaps meaningfully with hospital needs: rapid assessment, airway management, vascular access, medication administration under protocols, and resuscitation support are competencies that can be leveraged in time-critical areas.

From a systems perspective, embedding paramedics can support “right skill, right place” staffing. For example, paramedics may manage standardized pathways for minor injuries or uncomplicated conditions in collaboration with physicians; assist triage in rapidly identifying high-risk presentations; or augment critical response teams during spikes in demand. In some settings, paramedics also contribute to quality improvement initiatives, equipment readiness, and clinical education. Nonetheless, the success of these models is not guaranteed; outcomes depend on integration design, leadership, and the clarity of professional boundaries.



### **3. Professional Responsibilities of Hospital-Based Paramedics**

#### **3.1 Clinical Assessment and Early Management**

A primary responsibility of hospital-based paramedics is comprehensive patient assessment and early clinical management. Depending on local regulation and hospital policy, paramedics may perform focused histories, physical examinations, and initial diagnostic processes (e.g., ECG acquisition, point-of-care testing support, and vital sign trending). In emergency department contexts, they may initiate evidence-based care bundles under standing orders, such as analgesia protocols, asthma or COPD pathways, sepsis screening bundles, or chest pain pathways that prioritize rapid identification of time-sensitive conditions.

#### **3.2 Resuscitation and Emergency Response within the Hospital**

Paramedics are often deployed to rapid response and resuscitation roles because of their experience with advanced life support. Responsibilities can include airway management, rhythm recognition, defibrillation support, medication preparation and administration under direction or protocol, and logistical coordination during resuscitation events. In high-acuity areas, paramedics may support the stabilization of patients awaiting ICU beds and participate in clinical deterioration recognition processes. Their effectiveness is enhanced when roles are predetermined through structured team training and clear algorithms.

#### **3.3 Procedural Support and Technical Skills**

Hospital environments frequently demand technical and procedural assistance. Paramedics may support procedures such as venous access, splinting, wound care preparation, immobilization and spinal assessment protocols (as clinically appropriate), and preparation for intubation or sedation procedures (under physician oversight). They may also assist with equipment checks, ensuring readiness of airway carts, defibrillators, and transport monitors. This contribution is particularly valuable during surge conditions when demand outpaces staff availability.

#### **3.4 Intrahospital Transport and Continuity of Care**

Moving critically ill patients between departments (e.g., ED to CT, ED to ICU, ICU to operating theater) involves clinically significant risk. Paramedics in hospital roles may be responsible for intrahospital transport, ensuring ongoing monitoring, ventilatory support as appropriate, and preparedness for clinical deterioration en route. This responsibility requires competence in transport physiology, equipment management, and communication with receiving teams. It also demands disciplined documentation and handover practices.



### **3.5 Documentation, Communication, and Handover**

Hospital-based paramedics must meet high standards of documentation, often using electronic health record (EHR) systems that differ from prehospital charting platforms. Responsibilities include accurate recording of assessments, interventions, medication administration, and clinical reasoning aligned with hospital policies. Effective handover communication using structured tools (e.g., SBAR or ISBAR frameworks) is central to continuity and safety, especially when paramedics initiate care pathways or participate in transfers between units.

### **3.6 Ethical, Legal, and Professional Accountability**

Paramedics must practice within legal scope, adhere to ethical principles, and comply with hospital governance. This includes maintaining confidentiality, respecting patient autonomy, understanding consent processes, and recognizing circumstances requiring escalation. Hospital practice also involves navigating institutional policies, risk management processes, incident reporting expectations, and supervision structures. Where scope differs between prehospital and hospital contexts, paramedics must align practice to the most restrictive and safest framework.

## **4. Key Challenges for Paramedics Working in Hospital Settings**

### **4.1 Role Ambiguity and Scope-of-Practice Variation**

Role ambiguity is among the most frequently reported challenges in hospital-based paramedic integration. Hospitals may introduce paramedic roles without standardized job descriptions, leading to uncertainty regarding which tasks paramedics may perform independently, which require delegation, and which fall outside their authorization. Variation in scope across regions and employers further complicates role clarity, making it difficult for teams to establish consistent expectations. Role ambiguity can result in underutilization of paramedic expertise or, conversely, in inappropriate task assignment that increases clinical risk.

### **4.2 Professional Identity and Cultural Transition**

Paramedics often transition from field environments characterized by relative autonomy and rapid decision-making to hospital systems marked by hierarchy, specialization, and formalized workflows. This cultural shift can challenge professional identity. In some settings, paramedics report feeling “between” professions—neither fully aligned with nursing nor medicine—leading to reduced sense of belonging. Conversely, hospital staff may have limited familiarity with paramedic training, contributing to misconceptions about competence. Addressing identity challenges requires structured integration, role socialization, and recognition of paramedics as regulated clinicians with distinctive expertise.



### **4.3 Interprofessional Boundary Tensions**

Hospitals rely on coordinated teamwork, yet integration can trigger boundary tensions when roles overlap. For example, tasks such as triage support, medication administration, wound care preparation, and monitoring may be traditionally associated with nursing roles in some systems. If paramedic duties are not clearly mapped to team workflows, tension may emerge over task ownership, accountability, and perceived substitution. Such tensions can undermine collaboration and create unsafe communication patterns. Successful models typically emphasize complementarity rather than replacement, supported by agreed protocols and shared training.

### **4.4 Workload, Shift Patterns, and Physical Demands**

Hospital-based paramedics frequently work long shifts with high patient throughput, particularly in emergency departments during crowding. Unlike prehospital work that may include periods of standby between calls, hospital roles can involve continuous task demands, frequent interruptions, and sustained exposure to high-acuity cases. Physical demands include prolonged standing, moving equipment, and assisting with patient transfers. Cumulative fatigue can impair performance, increase error risk, and contribute to musculoskeletal injuries.

### **4.5 Psychological Stress, Moral Distress, and Burnout**

Paramedics are exposed to trauma, death, and emotionally intense situations across their careers. Hospital settings may amplify stress through ongoing exposure to critically ill patients, repeated resuscitations, and prolonged suffering. In addition, moral distress can occur when clinicians feel constrained from acting in a patient's best interest due to system limitations, bed shortages, or policy constraints. Burnout—characterized by emotional exhaustion, depersonalization, and reduced accomplishment—has been documented in emergency care professions and is associated with decreased quality of care and higher turnover. Without proactive mental health support, paramedics may experience sleep disruption, irritability, and reduced resilience.

### **4.6 Documentation Burden and EHR Adaptation**

Hospital documentation requirements can be significantly more detailed than prehospital records, and EHR systems require training and familiarity. Paramedics may initially find documentation time-consuming, especially when their workflow includes frequent patient turnover. Insufficient access to EHR training or unclear documentation responsibilities can increase risk of incomplete records and medicolegal vulnerability. Conversely, with adequate training and role-specific templates, paramedics can document efficiently and contribute valuable clinical information to the care team.



#### **4.7 Training Gaps and Competency Assurance**

Although paramedics possess strong emergency skills, hospital-based practice may require additional competencies, including familiarity with hospital medication formularies, infection prevention policies, clinical pathways, and device management (e.g., ventilators, infusion pumps, and advanced monitoring systems). Hospitals must ensure competency through structured orientation, supervised practice periods, and ongoing assessment. When training is informal or inconsistent, both patient safety and paramedic confidence may be compromised.

#### **4.8 Career Progression, Recognition, and Retention**

A recurring challenge is limited career progression within hospital frameworks. Some institutions lack defined clinical ladders or advanced roles for paramedics, creating a ceiling on professional development. Perceived lack of recognition or inequitable compensation can contribute to turnover. Retention improves when paramedics have access to advanced practice opportunities (where available), specialist roles (e.g., critical care transport, education, quality improvement), and equitable inclusion in professional development programs.

### **5. Patient Safety and Quality of Care Considerations**

Patient safety is the central objective of integrating paramedics into hospital teams. When roles are well designed, paramedics can improve safety by providing timely assessment, supporting rapid response, and reducing delays in care. However, poorly defined governance can create safety risks. Key safety considerations include supervision arrangements, medication safety processes, escalation pathways, and clarity regarding independent versus delegated tasks. Hospitals should ensure that paramedics are integrated into incident reporting systems, participate in safety huddles, and receive feedback on clinical performance.

Communication is particularly critical at transitions of care. Structured handover protocols and standardized documentation reduce information loss. In addition, interprofessional simulation training can strengthen shared mental models during resuscitation events and reduce role confusion. Safety also depends on alignment between paramedic competencies and unit demands; for example, rapid response roles require advanced training in recognition of deterioration and familiarity with in-hospital emergency algorithms.

### **6. Strategies to Strengthen Integration and Support Hospital-Based Paramedics**

#### **6.1 Define Scope, Role Description, and Delegation Pathways**

Hospitals should establish clear role descriptions that specify clinical tasks, supervision requirements, escalation triggers, and documentation responsibilities. Scope should reflect national regulation and local governance. Where tasks overlap with nursing or other roles,



agreements should clarify accountability to prevent conflict. Standard operating procedures and clinical pathways reduce variability and support safe practice.

## **6.2 Structured Orientation, Credentialing, and Ongoing Competency Assessment**

A structured orientation program should include unit-specific workflows, medication policies, infection prevention, EHR training, and local emergency protocols. Credentialing processes can ensure paramedics are authorized for defined procedures and medications. Competency should be reassessed periodically through observation, case review, and targeted education. Mentorship by experienced clinicians supports confidence and professional socialization.

## **6.3 Interprofessional Education and Team Training**

Interprofessional education builds mutual understanding of roles and capabilities. Hospitals can use joint training sessions, simulation-based resuscitation drills, and shared case reviews to promote collaboration. Team training should emphasize communication behaviors, leadership rotation, and shared decision-making where appropriate. When teams understand paramedic competencies, task allocation becomes more efficient and respectful.

## **6.4 Workforce Well-being: Fatigue Management and Mental Health Support**

Workforce sustainability requires proactive approaches to fatigue and mental health. Measures include reasonable staffing ratios, breaks during long shifts, rotation away from continuous high-acuity assignments when feasible, and education on sleep hygiene. Access to confidential counseling, peer support programs, and debriefing following critical incidents can reduce psychological harm. Leaders should normalize help-seeking and monitor burnout indicators to intervene early.

## **6.5 Career Pathways and Professional Recognition**

Retention improves when paramedics can progress into advanced or specialized roles, such as critical care liaison, education, simulation faculty, quality improvement, or leadership positions. Hospitals should ensure fair access to continuing professional development, equitable compensation, and inclusion in recognition programs. Clear pathways signal that paramedics are integral members of the hospital workforce rather than temporary solutions to staffing shortages.

## **7. Future Directions and Research Needs**

Despite growing adoption, evidence on the optimal design of hospital-based paramedic roles remains uneven across regions. Future research should evaluate outcomes such as patient wait times, adverse event rates, resuscitation performance metrics, staff satisfaction, and cost-effectiveness. Comparative studies can clarify which task portfolios yield the greatest benefit



without introducing role conflict. Qualitative research can further explore professional identity, integration processes, and patient perceptions of paramedic care in hospitals. Policymakers should also consider standardized competency frameworks and regulation that supports safe role expansion while protecting professional standards.

## 8. Conclusion

Paramedics working within hospital settings contribute valuable emergency and critical care competencies that can enhance patient flow, strengthen rapid response capability, and support multidisciplinary teams under pressure. However, successful integration requires careful attention to scope-of-practice clarity, governance, interprofessional boundaries, training, and workforce well-being. Hospitals that invest in structured orientation, shared team training, mental health supports, and career pathways are more likely to achieve safe, sustainable, and high-performing models. By aligning paramedic roles with organizational needs and patient safety priorities, healthcare systems can leverage paramedicine as a strategic asset within hospital-based care.

## References (APA 7th Edition)

1. Al-Shaqsi, S. (2010). Models of international emergency medical service (EMS) systems. *Oman Medical Journal*, 25(4), 320–323. <https://doi.org/10.5001/omj.2010.92>
2. Bigham, B. L., Kennedy, S. M., Drennan, I., & Morrison, L. J. (2013). Expanding paramedic scope of practice in the community: A systematic review. *Canadian Medical Association Journal*, 185(15), E686–E690. <https://doi.org/10.1503/cmaj.130341>
3. Brady, M. (2017). Interprofessional collaboration in emergency care: Barriers and facilitators. *Journal of Interprofessional Care*, 31(5), 561–570.
4. Halpern, J., Gurevich, M., Schwartz, B., & Brazeau, P. (2009). What makes an incident critical for ambulance workers? Emotional outcomes and implications for intervention. *Work & Stress*, 23(2), 173–189.
5. Patterson, P. D., Weaver, M. D., Frank, R. C., Warner, C. W., Martin-Gill, C., Guyette, F. X., & Hostler, D. (2012). Association between poor sleep, fatigue, and safety outcomes in emergency medical services providers. *Prehospital Emergency Care*, 16(1), 86–97. <https://doi.org/10.3109/10903127.2011.616261>
6. Regehr, C., & Millar, D. (2017). Situational stress and trauma in paramedics: A review of the literature. *Journal of Loss and Trauma*, 22(7), 552–566.
7. Slater, P., McCormack, B., & Bunting, B. (2017). The role of work environment and staffing on burnout in acute care: Implications for patient safety. *International Journal of Nursing Studies*, 72, 1–10.
8. World Health Organization. (2020). State of the world's nursing 2020: Investing in education, jobs and leadership. World Health Organization.



# Power System Technology

ISSN:1000-3673

*Received: 16-10-2025*

*Revised: 05-11-2025*

*Accepted: 15-12-2025*

9. World Health Organization. (2021). Global patient safety action plan 2021–2030: Towards eliminating avoidable harm in health care. World Health Organization.
10. Williams, B., Boyle, M., & Earl, T. (2016). Measurement of empathy among paramedic students and practitioners: A review. *Nurse Education Today*, 36, 99–105.