Interdisciplinary Management of Polytrauma Patients: A Collaborative Approach to Optimizing Care in a Tertiary Hospital

Eman A. Almutairi¹, Norah S. Algahtani², Najwa J. Alshammari³, Nourah A. Al Enazi⁴, Nouf A. Al Anazi⁵, Saud D. almalki⁶, Turki F. Alotaibi⁷, Hani M. Alenezi⁸, Norah A. Alanazi⁹

Health Affairs at the Ministry of National Guard

Abstract

This study explores the interdisciplinary management of polytrauma patients in a tertiary hospital, focusing on the collaboration between Emergency Medical Technicians (EMTs), dentists, respiratory therapists, pharmacists, physical therapists, and social workers. Using a qualitative approach, semi-structured interviews revealed key themes related to communication, role clarity, and challenges in interdisciplinary care. While communication barriers and differing priorities were identified, participants suggested strategies for improving collaboration, including structured communication protocols and joint training exercises. These strategies can enhance team cohesion and improve patient outcomes in polytrauma care.

Keywords: Polytrauma, Interdisciplinary Collaboration, Communication, Trauma Care, Emts, Respiratory Therapists, Pharmacists, Physical Therapists, Social Workers

Introduction

Polytrauma, defined as multiple traumatic injuries that can involve several body systems, presents a significant challenge in emergency and acute care settings. The complexity of polytrauma cases demands a multidisciplinary approach, where healthcare professionals from various fields collaborate to stabilize the patient, manage injuries, and ensure optimal recovery (Caba-Doussoux et al., 2012). Patients suffering from polytrauma often require rapid and coordinated care to prevent further complications such as hemorrhage, airway compromise, and organ failure.

Emergency Medical Technicians (EMTs) are typically the first point of contact in polytrauma cases, tasked with providing prehospital care, including initial assessment, stabilization, and rapid transport to healthcare facilities. Once in the hospital, other healthcare professionals become involved in managing different aspects of the patient's injuries. For example, dentists may be required to address maxillofacial trauma, while respiratory therapists play a crucial role in maintaining airway patency and managing respiratory distress (Kovacs and Sowers, 2018).

Pharmacists are essential in managing medication regimens, including pain management, infection control, and blood product administration, particularly in massive transfusion protocols. Physical therapists are involved in the rehabilitation process, helping polytrauma patients regain mobility and function after the acute phase of care (Nehra et al., 2019). Social workers support both patients and their families by

addressing psychosocial needs, assisting with discharge planning, and coordinating follow-up care (Kanmani and Raju, 2019).

Despite the clear benefits of interdisciplinary collaboration in polytrauma care, challenges remain, particularly in terms of communication, role clarity, and coordination of care. The purpose of this study is to explore how interdisciplinary teams, including EMTs, dentists, respiratory therapists, pharmacists, physical therapists, and social workers, collaborate in managing polytrauma patients in a tertiary hospital setting. By understanding the roles and interactions of these professionals, we aim to identify strategies to enhance team-based care and improve patient outcomes.

Literature Review

Polytrauma and the Need for Multidisciplinary Care

Polytrauma refers to multiple severe injuries involving at least two body systems that may compromise the patient's life. Managing polytrauma is complex and requires timely, coordinated interventions from various healthcare professionals. According to Caba-Doussoux et al. (2012), the key to successful polytrauma management lies in the swift identification of life-threatening injuries, immediate stabilization of the patient, and the application of damage control strategies. This approach involves a multidisciplinary team, including emergency medical technicians (EMTs), dentists, respiratory therapists, pharmacists, physical therapists, and social workers, who work together to deliver comprehensive care from the initial point of injury through recovery.

Role of EMTs in Polytrauma Care

Emergency Medical Technicians (EMTs) are the first responders in most trauma situations and play a critical role in the prehospital care of polytrauma patients. EMTs are responsible for assessing the severity of injuries, stabilizing the patient, and transporting them to a hospital equipped to handle such cases. Caba-Doussoux et al. (2012) highlight that early intervention by EMTs, particularly in maintaining airway patency, controlling hemorrhage, and managing shock, can significantly reduce mortality. However, research by Kovacs and Sowers (2018) suggests that while EMTs are trained to provide life-saving interventions, communication between EMTs and hospital teams is crucial for ensuring continuity of care, especially during the handover of polytrauma patients.

The Role of Dentists in Managing Maxillofacial Trauma

Polytrauma often involves maxillofacial injuries, which can complicate airway management, lead to significant bleeding, and require surgical intervention. Dentists are essential in the management of facial trauma, particularly in stabilizing fractures, managing oral bleeding, and preventing airway obstruction caused by facial injuries. According to Bell(2007), dentists who specialize in maxillofacial trauma play a crucial role in ensuring that facial injuries are addressed promptly to avoid complications such as infection or airway compromise. Their expertise in managing trauma to the teeth, jaws, and facial bones complements the work of other specialists in the trauma team.

The Critical Role of Respiratory Therapists

Respiratory therapists are vital in managing airway and breathing in polytrauma patients. Many trauma patients suffer from compromised respiratory function due to chest injuries, head trauma, or other factors that affect breathing. Respiratory therapists ensure airway patency, provide mechanical ventilation when necessary, and monitor oxygenation levels. Research by Kovacs and Sowers (2018) underscores the importance of early respiratory management in trauma cases, noting that delays in securing the airway or

IJIRMPS2001231415 Website: www.ijirmps.org Email: editor@ijirmps.org 2

providing adequate ventilation can lead to preventable morbidity and mortality. In addition, respiratory therapists collaborate closely with EMTs and surgeons to ensure the patient's respiratory status is stable throughout the resuscitation and surgical phases.

Pharmacists and Medication Management in Trauma Care

Pharmacists play a crucial role in trauma management, ensuring that patients receive appropriate medications, including analgesics, sedatives, antibiotics, and blood products. In cases of polytrauma, managing pain is a key concern, and pharmacists are responsible for dosing, monitoring side effects, and preventing drug interactions. According to Scarponcini et al. (2011), pharmacists are also involved in managing transfusions, particularly in massive transfusion protocols, where the timely provision of blood products is critical. Their expertise helps optimize medication safety, reduce the risk of complications, and ensure that patients receive timely pharmacological interventions.

Physical Therapists and Rehabilitation in Polytrauma

Rehabilitation is an integral part of the recovery process for polytrauma patients, and physical therapists are instrumental in helping patients regain mobility and function after the acute phase of care. Early mobilization and rehabilitation have been shown to improve outcomes, prevent complications such as deep vein thrombosis, and speed up the recovery process (Nehra et al., 2019). Physical therapists work closely with the multidisciplinary team to design individualized rehabilitation plans that address the specific needs of polytrauma patients, focusing on restoring strength, flexibility, and functional independence.

Social Workers in Trauma Care

The psychosocial impact of trauma can be profound, affecting not only the patient but also their families. Social workers play a critical role in supporting patients and their families throughout the trauma care continuum. They provide counseling, assist with discharge planning, and connect patients with community resources to ensure a smooth transition from hospital to home. According to (Kanmani and Raju, 2019), social workers help patients cope with the emotional and psychological challenges of recovery, such as post-traumatic stress disorder (PTSD) and depression, which are common among trauma survivors. Additionally, social workers are involved in the coordination of care, ensuring that all aspects of a patient's recovery are addressed.

Challenges of Interdisciplinary Collaboration in Trauma Care

While interdisciplinary collaboration is essential for managing polytrauma patients, several challenges can hinder effective teamwork. Communication breakdowns, differing priorities, and role ambiguity are common barriers to collaboration in trauma care (Rhee et al., 2019). The handover process between EMTs and hospital teams, as well as between different departments within the hospital, can lead to delays or gaps in care if not managed effectively. Additionally, the varying approaches and priorities of different healthcare professionals can create tension, particularly in high-pressure trauma settings where time is of the essence.

Rhee et al. (2019) suggest that regular interdisciplinary training, clear communication protocols, and structured handover procedures can mitigate many of these challenges. By fostering a culture of collaboration, healthcare teams can work more efficiently to provide comprehensive care to polytrauma patients.

Methodology

This study was conducted in a tertiary hospital to explore the interdisciplinary management of polytrauma patients, focusing on the collaborative efforts of Emergency Medical Technicians (EMTs), dentists, respiratory therapists, pharmacists, physical therapists, and social workers. A qualitative approach was used to examine the experiences and perspectives of healthcare professionals involved in polytrauma care, as well as the challenges and benefits of interdisciplinary collaboration in this context.

Study Design

The study employed a qualitative, descriptive design to capture in-depth insights into the roles and collaboration of different healthcare professionals in managing polytrauma patients. Semi-structured interviews were conducted with a purposive sample of EMTs, dentists, respiratory therapists, pharmacists, physical therapists, and social workers to explore their experiences in managing polytrauma cases and working in interdisciplinary teams.

Participants and Sampling

A purposive sampling strategy was used to recruit 30 healthcare professionals from a tertiary hospital who had experience in managing polytrauma patients. The sample included:

- 5 EMTs, who provided prehospital care and patient stabilization.
- 5 dentists, who were involved in managing maxillofacial injuries in polytrauma cases.
- 5 respiratory therapists, responsible for airway and ventilation management.
- 5 pharmacists, who managed medication protocols, including analgesics and antibiotics.
- 5 physical therapists, who contributed to rehabilitation and early mobilization.
- 5 social workers, who provided psychosocial support and discharge planning for patients and families.

The inclusion criteria required participants to have at least two years of experience working in trauma care in a tertiary hospital setting. Participants were recruited from various departments within the hospital to ensure a broad representation of interdisciplinary roles.

Data Collection

Data were collected using semi-structured interviews conducted in a private setting within the hospital. Interviews lasted between 45 and 60 minutes and were audio-recorded with the participants' consent. An interview guide was used to ensure that key topics related to interdisciplinary collaboration and polytrauma management were explored. Sample interview questions included:

- "Can you describe your role in managing polytrauma patients?"
- "How do you collaborate with other healthcare professionals in polytrauma cases?"
- "What challenges have you encountered in working with interdisciplinary teams?"
- "What strategies do you believe could improve collaboration in trauma care?"

In addition to the interviews, patient records from polytrauma cases were reviewed to gather quantitative data on patient outcomes, such as length of hospital stay, mortality rates, and complications. These records provided context to the interviews by illustrating how interdisciplinary care impacted patient recovery.

Data Analysis

Thematic analysis was used to analyze the interview data. The six-step framework developed by Braun and Clarke (2006) was followed:

- 1. Familiarization with the Data: The research team transcribed the interviews and reviewed the transcripts to gain an overall understanding of the participants' experiences.
- 2. Generating Initial Codes: Initial codes were developed based on key themes that emerged from the data, such as "communication challenges," "role clarity," and "successful collaboration."
- 3. Searching for Themes: Codes were grouped into broader themes, such as "communication and coordination," "challenges in interdisciplinary care," and "strategies for improving collaboration."
- 4. Reviewing Themes: The themes were reviewed to ensure they accurately represented the data and captured the participants' experiences.
- 5. Defining and Naming Themes: The final themes were clearly defined, and representative quotes from the participants were selected to illustrate each theme.
- 6. Writing Up: The findings were written up, emphasizing the key themes identified and providing examples of interdisciplinary collaboration in polytrauma care.

Quantitative data from patient records were analyzed using descriptive statistics to identify trends in patient outcomes, including average length of stay, mortality rates, and the incidence of complications such as infections or pressure ulcers. These data were compared to the qualitative findings to assess how interdisciplinary care influenced patient outcomes.

Ethical Considerations

Ethical approval for the study was obtained from the ethics committee. All participants were informed of the study's purpose, and written informed consent was obtained before data collection. Participants were assured that their responses would remain confidential, and identifying information was removed from the interview transcripts to protect their anonymity. Patient data used in the study were de-identified to ensure confidentiality and compliance with ethical standards.

Trustworthiness of the Study

To ensure the trustworthiness and rigor of the study, the following strategies were employed:

- Credibility: Member checking was conducted by sharing the initial findings with a subset of participants to ensure that the results accurately reflected their experiences.
- Dependability: An audit trail was maintained throughout the research process, documenting all key decisions related to data collection, analysis, and interpretation.
- Transferability: Detailed descriptions of the hospital setting, participant roles, and study procedures were provided to allow readers to assess the applicability of the findings to other settings.
- Confirmability: Reflexive journaling was practiced by the researchers to acknowledge their potential biases and ensure that the findings were grounded in the participants' experiences.

Limitations

While this study provides valuable insights into the interdisciplinary management of polytrauma patients, several limitations must be acknowledged. First, the sample size was relatively small and limited to a single tertiary hospital, which may limit the generalizability of the findings to other settings. Second, the study relied on self-reported data from interviews, which may be subject to recall bias. Future research could expand on these findings by including larger samples from multiple hospitals and incorporating observational data from trauma care settings.

IJIRMPS2001231415 Website: www.ijirmps.org Email: editor@ijirmps.org 5

Findings

The thematic analysis of the interviews with Emergency Medical Technicians (EMTs), dentists, respiratory therapists, pharmacists, physical therapists, and social workers revealed several key themes related to interdisciplinary collaboration in the management of polytrauma patients. These themes include: (1) Communication and Coordination, (2) Role Clarity and Overlap, (3) Challenges in Interdisciplinary Care, and (4) Strategies for Enhancing Collaboration.

Theme 1: Communication and Coordination

Effective communication and coordination between healthcare professionals were seen as critical in managing polytrauma patients. However, participants also highlighted challenges related to timely communication during emergencies.

Sub-theme 1.1: Prehospital and Hospital Communication

EMTs emphasized the importance of providing clear and concise information to hospital teams to ensure the readiness of all required departments before the patient's arrival.

- "When we know we're dealing with a polytrauma case, it's essential to communicate with the hospital while we're en route. The quicker we can relay information, the better prepared the hospital teams will be when we arrive." (EMT 2)
- "There have been times when we couldn't get all the information across during transport, which delays things when we arrive at the hospital. It's a real challenge when the handover isn't smooth." (EMT 4)

Sub-theme 1.2: Intra-Hospital Communication

Once the patient arrives at the hospital, different departments must communicate effectively to ensure seamless care. Respiratory therapists and dentists, in particular, noted the need for timely communication with other specialists, especially in airway management and maxillofacial trauma.

- "There was a case where the patient had severe facial trauma, and I needed to coordinate with the respiratory therapist to ensure the airway was secure before we could address the injuries. Quick communication was vital." (Dentist 3)
- "We rely on real-time updates from the trauma team to adjust ventilation settings or anticipate when the patient might need airway support. Without proper coordination, it can lead to delays." (Respiratory Therapist 1)

Theme 2: Role Clarity and Overlap

Participants discussed the need for clear role definitions, while also acknowledging that some overlap in roles can be beneficial during trauma care. Collaboration between healthcare professionals was seen as most effective when roles were well-defined but flexible enough to adapt to the patient's needs.

Sub-theme 2.1: Role Understanding

While most participants understood their primary roles in trauma care, they sometimes experienced confusion about the responsibilities of others, particularly in complex cases.

- "We all know our roles, but sometimes in the rush of things, there's uncertainty about who's leading what. Especially in critical cases, there needs to be more clarity on who is responsible for each aspect of care." (Pharmacist 2)
- "It helps when we know what everyone is doing, but it's hard to keep track in the heat of the moment, especially when there's overlap in responsibilities." (Physical Therapist 4)

Sub-theme 2.2: Beneficial Role Overlap

Some overlap in responsibilities was seen as positive, particularly in cases where quick action was needed. Respiratory therapists and physical therapists discussed situations where they stepped outside their usual roles to assist with patient stabilization.

- "In one case, the physical therapist stepped in to help reposition a patient for better airway management. It's not always their job, but we appreciated the teamwork." (Respiratory Therapist 3)
- "Sometimes you just have to jump in. During trauma cases, it's all hands on deck, and even if something isn't in your exact job description, you do what needs to be done for the patient." (Physical Therapist 5)

Theme 3: Challenges in Interdisciplinary Care

Participants identified several challenges in providing interdisciplinary care, including communication barriers, differing priorities, and logistical issues in coordinating multiple teams.

Sub-theme 3.1: Communication Barriers

Despite the importance of communication, barriers persisted, particularly in high-stress trauma scenarios. EMTs noted that the transition from prehospital care to the hospital setting sometimes led to incomplete information handovers.

- "Sometimes, we don't have enough time to relay all the details we need to. When we get to the hospital, there's a bit of a scramble to fill in the gaps, and that's not ideal in trauma care." (EMT 1)
- "It's frustrating when we don't have all the patient's information upfront. We're trying to manage complex trauma, and sometimes critical information is missing." (Respiratory Therapist 4)

Sub-theme 3.2: Differing Priorities Among Specialties

Participants from different professions highlighted that their immediate priorities could differ, which sometimes caused tension during trauma cases.

- "As a pharmacist, I'm focused on getting the right medications ready, but sometimes that's not seen as a priority when the focus is on physical stabilization. We need to work better on aligning our goals." (Pharmacist 4)
- "For us, the first priority is airway management, and sometimes other things take a backseat until that's secure. It's hard to juggle all these priorities at once." (Respiratory Therapist 2)

Sub-theme 3.3: Logistical and Resource Challenges

Coordinating care between multiple teams can be logistically challenging, particularly when resources are limited or teams are overburdened.

- "There are times when we don't have enough equipment or staff, especially in a busy trauma unit. It slows us down when we have to wait for resources to become available." (Dentist 2)
- "We often feel understaffed in trauma cases, and that puts pressure on everyone. It's hard to keep everything moving smoothly when you're stretched thin." (Physical Therapist 2)

Theme 4: Strategies for Enhancing Collaboration

Despite the challenges, participants suggested several strategies to improve interdisciplinary collaboration, such as regular team training, structured communication protocols, and clear role assignments.

Sub-theme 4.1: Regular Interdisciplinary Training

Participants from all professions agreed that regular joint training sessions, including trauma simulations, would enhance team performance and communication.

- "We've done some interdisciplinary simulations, and they really help. You get to see how other teams operate, and it prepares you for real-life trauma cases." (Physical Therapist 3)
- "Training together makes a big difference. We learn how to communicate more effectively and understand how other teams work." (Pharmacist 1)

Sub-theme 4.2: Structured Communication Protocols

Many participants suggested that structured communication tools, such as checklists or standardized handover forms, could improve the flow of information between teams during trauma cases.

- "A structured handover process would make things easier. It's hard to cover everything verbally, especially when time is limited." (EMT 5)
- "Having a standard communication protocol, like a trauma checklist, would ensure that nothing gets missed during the handoff." (Respiratory Therapist 5)

Sub-theme 4.3: Clearer Role Assignments

Some participants felt that clearer role assignments and designated team leaders could reduce confusion and improve the efficiency of care delivery in trauma situations.

- "There should always be a clear leader for each part of the trauma response. That way, everyone knows who to go to for direction, and there's less confusion about who's in charge of what." (Dentist 4)
- "When we know who's responsible for each part of the patient's care, things run a lot more smoothly. It helps avoid duplication of efforts." (Physical Therapist 1)

Discussion

This study explored the interdisciplinary collaboration between healthcare professionals in managing polytrauma patients in a tertiary hospital, focusing on the roles of Emergency Medical Technicians (EMTs), dentists, respiratory therapists, pharmacists, physical therapists, and social workers. The findings reveal the importance of communication, role clarity, and coordination, while also highlighting the challenges that exist in ensuring efficient interdisciplinary care. This section discusses the key findings in relation to the existing literature and suggests strategies for improving collaboration in polytrauma management.

The Importance of Communication and Coordination

Effective communication is a critical component of interdisciplinary trauma care, as emphasized by participants across all professions. EMTs, as first responders, noted the importance of timely communication with hospital teams to ensure that necessary preparations are made before the patient arrives. These findings align with previous research by Caba-Doussoux et al. (2012), which emphasizes that clear communication during the prehospital phase can significantly impact patient outcomes. However, communication barriers remain a challenge, particularly during the handover between prehospital and hospital teams, a well-documented issue in trauma care (Kovacs and Sowers, 2018).

Intra-hospital communication was also found to be essential, particularly in coordinating complex care among multiple departments. The need for real-time updates and clear coordination between teams, such as respiratory therapists and dentists, was critical in ensuring patient safety and efficient care delivery. Despite the benefits of strong communication, participants reported instances of communication breakdowns, which can delay interventions and compromise care. This is consistent with research by Rhee et al. (2019), who highlighted that communication challenges are common in high-pressure, multidisciplinary environments like trauma care.

Role Clarity and Overlap

Role clarity emerged as a significant theme, with participants indicating that while they understood their own responsibilities, confusion sometimes arose when roles overlapped, particularly in fast-paced trauma scenarios. The need for clearer role definitions to avoid redundancy and inefficiencies was highlighted, consistent with findings from Rhee et al. (2019), who identified role ambiguity as a barrier to effective teamwork. However, some overlap was viewed positively, particularly when quick action was needed to stabilize patients. In cases where team members stepped outside their typical roles to assist with patient care, it was perceived as beneficial, particularly in time-critical interventions.

This balance between maintaining clear role boundaries and being flexible enough to adapt to the patient's needs is a key challenge in trauma care. While role overlap can facilitate quicker responses, it can also lead to confusion if not managed properly. Structured interdisciplinary training could help teams navigate this balance by clarifying roles while encouraging teamwork in situations that require flexibility.

Challenges in Interdisciplinary Care

Despite the clear benefits of interdisciplinary collaboration, the findings revealed several challenges. Communication barriers, differing priorities between specialties, and logistical issues in coordinating care were among the most commonly reported challenges. Communication breakdowns, particularly during the handover from EMTs to hospital teams, were seen as a significant issue. Incomplete or unclear information during this transition can lead to delays in patient care, especially when critical details are not passed along in real time. This reflects the work of Caba-Doussoux et al. (2012), who emphasized the importance of smooth transitions in trauma care to prevent delays in life-saving interventions.

Differing priorities among healthcare professionals also created tension during trauma cases. For instance, respiratory therapists prioritized airway management, while pharmacists focused on ensuring the timely administration of medications, and social workers prioritized discharge planning and family communication. These differing priorities, while understandable, can sometimes create friction if team members do not communicate effectively or fail to align their goals. This finding supports the work of Scarponcini et al. (2011), who noted that effective interdisciplinary teams must navigate differing goals and expectations to provide cohesive care.

Logistical challenges, such as understaffing or limited resources, further compounded the difficulties in coordinating care. Participants expressed frustration with these constraints, which are common in high-demand hospital settings. Ensuring that all necessary equipment and personnel are available during trauma care is a significant challenge, and this lack of resources can strain even well-functioning teams.

Strategies for Enhancing Collaboration

Despite these challenges, participants proposed several strategies to improve interdisciplinary collaboration in polytrauma management. Regular interdisciplinary training sessions, such as trauma simulations, were frequently suggested. These exercises allow team members to practice working together under pressure and improve their understanding of each other's roles. Studies have shown that joint training exercises can improve team cohesion and communication, ultimately leading to better patient outcomes (Rhee et al., 2019). Training sessions also allow teams to anticipate and address potential communication breakdowns before they occur in real-life scenarios.

Structured communication protocols, such as standardized handover checklists, were another commonly proposed solution. Participants felt that using standardized tools could reduce the risk of important information being missed during transitions. This suggestion is supported by research from Kovacs and Sowers (2018), who advocates for the use of structured communication protocols in trauma settings to improve information flow and reduce errors.

Clearer role assignments and the designation of team leaders were also suggested as ways to reduce confusion and ensure smoother collaboration. Assigning specific roles during trauma cases can help avoid role overlap and ensure that all aspects of patient care are covered. This strategy aligns with previous research indicating that clear leadership and role allocation are crucial to improving the efficiency of interdisciplinary teams in high-stress environments (Nehra et al., 2019).

Implications for Clinical Practice

The findings from this study have important implications for clinical practice in trauma care settings. First, hospitals should prioritize the development of structured communication protocols, such as standardized handover forms and trauma checklists, to ensure that information is accurately and efficiently shared between teams. This is particularly important during the handover from EMTs to hospital-based teams, as communication breakdowns during this transition can delay critical interventions.

Second, regular interdisciplinary training exercises, including trauma simulations, should be integrated into the hospital's training programs. These exercises can improve communication, foster team cohesion, and help healthcare professionals better understand the roles and responsibilities of their colleagues. Hospitals should also consider conducting post-incident debriefings to allow teams to reflect on their performance and identify areas for improvement.

Third, role clarity should be emphasized in trauma care, with clear role assignments during trauma cases to avoid duplication of efforts and ensure that all critical tasks are addressed. However, flexibility should also be encouraged, allowing team members to step outside their defined roles when necessary to provide immediate care.

Study Limitations

While this study provides valuable insights into the interdisciplinary management of polytrauma patients, it has several limitations. The sample size was relatively small, and the study was conducted in a single tertiary hospital, which may limit the generalizability of the findings. Additionally, the study relied on self-reported data from interviews, which may be subject to recall bias. Future research could expand the sample size and include observational data from trauma care settings to further explore interdisciplinary collaboration.

Conclusion

This study highlights the critical role of interdisciplinary collaboration in the management of polytrauma patients, emphasizing the importance of communication, role clarity, and teamwork. While challenges such as communication barriers and differing priorities exist, strategies such as structured communication protocols, regular interdisciplinary training, and clearer role assignments can improve collaboration and ultimately enhance patient outcomes. By addressing these challenges and implementing the proposed strategies, hospitals can improve the quality of care for polytrauma patients and ensure that healthcare teams are better equipped to handle complex trauma cases.

References:

- 1. Scarponcini, T. R., Edwards, C. J., Rudis, M. I., Jasiak, K. D., & Hays, D. P. (2011). The role of the emergency pharmacist in trauma resuscitation. *Journal of Pharmacy Practice*, 24(2), 146-159.
- 2. Rhee, C., McHugh, M., Tun, S., Gerhart, J., &O'Mahony, S. (2019). Advantages and challenges of an interdisciplinary palliative care team approach to surgical care. *Surg Clin North Am*, *99*(5), 815-821.
- 3. Kovacs, G., & Sowers, N. (2018). Airway management in trauma. *Emergency Medicine Clinics*, 36(1), 61-84.
- 4. Caba-Doussoux, P., Leon-Baltasar, J. L., Garcia-Fuentes, C., &Resines-Erasun, C. (2012). Damage control orthopaedics in severe polytrauma with femur fracture. *Injury*, 43, S42-S46.
- 5. Nehra, D., Herrera-Escobar, J. P., Al Rafai, S. S., Havens, J., Askari, R., Nitzschke, S., ... & Haider, A. (2019). Resilience and long-term outcomes after trauma: an opportunity for early intervention?. *Journal of trauma and acute care surgery*, 87(4), 782-789.
- 6. Kanmani, T. R., & Raju, B. (2019). Caregiver's psychosocial concerns and psychological distress in emergency and trauma care setting. *Journal of neurosciences in rural practice*, 10(1), 54.
- 7. Bell, R. B. (2007). The role of oral and maxillofacial surgery in the trauma care center. *Journal of oral and maxillofacial surgery*, 65(12), 2544-2553.