The Role of Multidisciplinary Teams in the Care of Geriatric Trauma Patients: A Collaborative Approach between Paramedics, Nurses, Respiratory Therapists, Laboratory Specialists, and Social Workers in a Tertiary Hospital Setting

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Abstract

This study explores the role of multidisciplinary collaboration in the care of geriatric trauma patients in a tertiary hospital setting. Using a qualitative approach, in-depth interviews were conducted with 20 healthcare professionals, including paramedics, nurses, respiratory therapists, laboratory specialists, and social workers, as well as 15 geriatric trauma patients or their caregivers. Thematic analysis revealed that effective communication, team coordination, and holistic patient-centered care significantly improved patient outcomes and satisfaction. However, challenges such as communication barriers in high-pressure situations and differing professional perspectives were noted. The study highlights the importance of structured communication protocols, early discharge planning, and team training to enhance collaborative care. These findings support the need for a cohesive, interdisciplinary approach to optimize geriatric trauma care and improve patient recovery.

Keywords: Multidisciplinary Collaboration, Geriatric Trauma, Tertiary Hospital, Team Coordination, Communication Barriers, Patient-Centered Care, Discharge Planning, Healthcare Professionals

Introduction

Geriatric trauma patients present unique challenges in healthcare due to age-related physiological changes, comorbidities, and an increased risk of complications following traumatic injuries. With the rise in life expectancy globally, the proportion of elderly individuals experiencing trauma is growing, requiring healthcare systems to adapt their approaches to meet the complex needs of this population (Eichinger et al., 2021). Trauma management in geriatric patients often necessitates a multidisciplinary approach, addressing not only the physical but also the psychological and social aspects of recovery.

In a tertiary hospital setting, collaboration among paramedics, nurses, respiratory therapists, laboratory specialists, and social workers is vital for providing high-quality care to geriatric trauma patients. Paramedics, as the first point of contact in many cases, deliver crucial pre-hospital care that can significantly influence patient outcomes by stabilizing patients before they reach the hospital (Tan et al., 2018). Upon

admission, nurses are responsible for continuous monitoring, medication administration, and coordination of care, ensuring that the patient's immediate needs are addressed. Respiratory therapists play a critical role in managing airway and breathing support, particularly in patients with respiratory compromise, which is common in trauma patients (Bergeron et al., 2003). Laboratory specialists contribute by providing diagnostic data that guide clinical decision-making, such as monitoring blood counts and detecting biochemical imbalances (Fan et al., 2016). Lastly, social workers provide essential psychosocial support, facilitating discharge planning and connecting patients with community resources to ensure continuity of care (Head et al., 2022).

Despite the clear advantages of a multidisciplinary approach, several challenges remain in coordinating care across different professional roles. These challenges include communication barriers, differences in training, and occasionally competing priorities, all of which can hinder smooth collaboration. However, when effectively integrated, multidisciplinary teams can significantly improve patient outcomes, reduce hospital stay lengths, and minimize complications (Fallon et al., 2006). This paper aims to explore the roles of paramedics, nurses, respiratory therapists, laboratory specialists, and social workers in the care of geriatric trauma patients, highlighting the importance of interdisciplinary collaboration in a tertiary hospital setting.

Literature Review

1. Geriatric Trauma: Complexity and Challenges

The management of trauma in the elderly population poses significant challenges due to the complex interplay of age-related physiological changes, multiple comorbidities, and increased vulnerability to injury-related complications. Elderly trauma patients often experience worse outcomes compared to younger individuals, including higher rates of morbidity and mortality, longer hospital stays, and increased dependence post-injury (Eichinger et al., 2021). Factors such as frailty, reduced physiological reserve, and decreased ability to recover from stressors further complicate the management of geriatric trauma patients. Recent studies highlight the need for specialized trauma care protocols tailored to the geriatric population, with an emphasis on early intervention and comprehensive, multidisciplinary management (Fallon et al., 2006).

2. The Role of Paramedics in Geriatric Trauma Care

Pre-hospital care provided by paramedics is critical in determining the trajectory of care for geriatric trauma patients. Early stabilization, rapid transport, and appropriate pre-hospital interventions can significantly influence patient outcomes. Tan et al. (2018) argue that paramedics play a pivotal role in preventing the deterioration of vital functions, particularly in patients with respiratory distress or hemodynamic instability. Their ability to initiate life-saving interventions, such as airway management and fluid resuscitation, in the field sets the stage for further care upon hospital admission. However, the literature also suggests that paramedics face unique challenges when caring for geriatric trauma patients, including difficulties in assessing injuries due to atypical presentations and the complexity of managing pre-existing conditions alongside acute trauma (Carr, 2009).

3. Nursing Care for Geriatric Trauma Patients

Nurses are central to the management of geriatric trauma patients within hospital settings, providing continuous monitoring, coordination of care, and ensuring that patients receive timely interventions. Nursing literature emphasizes the importance of thorough assessment and vigilant care, as elderly trauma patients are prone to complications such as delirium, pressure injuries, and infections (Eichinger et al., 2021). In addition, nurses play a critical role in pain management and ensuring that patients maintain mobility during

their recovery, both of which are essential for preventing long-term disability. Studies by Bergeron et al. (2003) have shown that early and aggressive nursing interventions, particularly in the ICU and surgical settings, can reduce the incidence of complications and improve patient outcomes.

4. Respiratory Therapists and Airway Management

Airway and respiratory management is a vital aspect of geriatric trauma care, particularly for patients with underlying respiratory conditions or those who experience trauma-related respiratory distress. Respiratory therapists (RTs) are integral to maintaining adequate oxygenation and ventilation in these patients, especially in the acute and post-operative phases. According to Bergeron et al. (2003), RTs provide life-saving interventions such as intubation, mechanical ventilation, and non-invasive ventilation support. Their role extends beyond the critical care setting, as they also monitor respiratory function during rehabilitation, ensuring that patients maintain optimal respiratory health throughout their recovery. The literature suggests that close collaboration between RTs, nurses, and physicians leads to better management of respiratory complications and reduces the risk of prolonged ventilation and associated complications (Fallon et al., 2006).

5. Laboratory Specialists in Trauma Diagnostics

Laboratory diagnostics play an essential role in the assessment and ongoing management of geriatric trauma patients. Laboratory specialists contribute to trauma care by providing timely and accurate results that guide clinical decision-making, including blood counts, coagulation profiles, and electrolyte levels. Fan et al. (2016) highlight the importance of rapid diagnostic testing in detecting conditions such as anemia, coagulopathy, and infection, which are common in elderly trauma patients. Laboratory results are critical in adjusting interventions, such as fluid management, blood transfusions, and the administration of medications. Additionally, the ability to monitor biochemical markers over time allows for early detection of complications such as sepsis, further emphasizing the role of laboratory specialists in the multidisciplinary team (Carr, 2009).

6. Social Workers and Psychosocial Support

The psychosocial aspects of trauma care are often overlooked, but they are particularly important for elderly patients who may face emotional and social challenges in addition to physical recovery. Social workers provide essential services that bridge the gap between medical care and the patient's social environment. Head et al. (2022) argue that social workers play a pivotal role in discharge planning, helping to ensure that patients transition safely from hospital to home or rehabilitation facilities. They also provide support for patients and their families in dealing with the emotional and psychological impacts of trauma, which can include anxiety, depression, and fear of losing independence. Studies have shown that early social work involvement can reduce hospital readmissions and improve long-term outcomes by addressing the social determinants of health, such as access to community resources and family support (Fallon et al., 2006).

7. Multidisciplinary Collaboration in Geriatric Trauma Care

The benefits of multidisciplinary collaboration in the management of geriatric trauma patients are well-documented. Fallon et al. (2006) highlight that when paramedics, nurses, respiratory therapists, laboratory specialists, and social workers work cohesively, patient outcomes improve significantly. Multidisciplinary teams help to address the full spectrum of care needs, from acute stabilization to long-term rehabilitation, and ensure that patients receive holistic, individualized care. However, the literature also points to barriers in effective collaboration, such as communication gaps and differing professional priorities. Addressing

these barriers through enhanced communication, team training, and shared protocols is key to improving care for this vulnerable population (Eichinger et al., 2021).

Methodology

1. Study Design

This study employed a qualitative research design to explore the experiences and perspectives of multidisciplinary healthcare professionals and geriatric trauma patients regarding the role of collaborative care in a tertiary hospital setting. A phenomenological approach was used to gain deep insights into the lived experiences of healthcare providers and patients, focusing on how interdisciplinary collaboration influenced patient outcomes and care quality.

2. Study Setting and Population

The study was conducted in a tertiary hospital, specifically in the emergency department, trauma units, and intensive care units where geriatric trauma patients were treated. The participants included:

- Healthcare Providers: A total of 20 multidisciplinary team members were purposively selected, including paramedics, nurses, respiratory therapists, laboratory specialists, and social workers. Participants were chosen based on their involvement in the care of geriatric trauma patients during the study period.
- Patients: 15 geriatric trauma patients or their caregivers were also recruited to explore their experiences with the care provided by the multidisciplinary team.

3. Data Collection

Interviews with Healthcare Providers

In-depth, semi-structured interviews were conducted with healthcare professionals to explore their perspectives on the impact of interdisciplinary collaboration on patient care. The interviews focused on the following areas:

- Team communication and coordination: How information was shared and decisions were made between team members.
- Roles and responsibilities: How each team member perceived their role in relation to others and the patient.
- Challenges and barriers: Identifying difficulties in collaboration and ways to improve multidisciplinary work.

Each interview lasted between 30 and 60 minutes, and was conducted face-to-face or via secure video conferencing, depending on the participant's preference. All interviews were audio-recorded and transcribed verbatim for analysis.

Patient Interviews

Semi-structured interviews were also conducted with 15 geriatric trauma patients or their caregivers to explore their experiences with the care provided by the multidisciplinary team. Key interview topics included:

- Perceptions of care: Patients 'views on how well the healthcare team worked together.
- Communication with the team: How well patients or caregivers understood the roles of different healthcare professionals.
- Overall satisfaction: Patient reflections on the quality of care and the impact of teamwork on their recovery.

The interviews with patients lasted between 20 and 45 minutes, and were conducted either in the hospital or via telephone post-discharge.

4. Data Analysis

The collected qualitative data were analyzed using thematic analysis following the steps proposed by Braun and Clarke (2006). The analysis involved:

- 1. Familiarization with the data: The research team thoroughly reviewed the interview transcripts to gain an overall understanding of the content.
- 2. Initial coding: Open coding was conducted to identify key concepts, patterns, and phrases related to multidisciplinary collaboration and patient experiences.
- 3. Theme development: Codes were grouped into broader categories, and overarching themes were identified.
- 4. Reviewing themes: The research team reviewed and refined the themes to ensure they were supported by the data and accurately reflected participants 'experiences.
- 5. Defining and naming themes: Each theme was clearly defined and supported with representative quotations from the interviews.

To ensure the reliability and validity of the analysis, two researchers independently coded the transcripts and then compared their findings. Any discrepancies were resolved through discussion, ensuring consensus on the final themes.

5. Ethical Considerations

Ethical approval for the study was obtained from the ethics committee. All participants were provided with detailed information about the study and gave written informed consent prior to participation. Participants were assured of their anonymity and the confidentiality of their responses. Transcripts were de-identified before analysis to protect participants 'privacy.

6. Limitations

This study focused on a single tertiary hospital, which may limit the generalizability of the findings to other healthcare settings. Additionally, while the interviews provided valuable insights, the reliance on self-reported data may introduce some bias, as participants may have tailored their responses based on their perceptions of the study's objectives. Future research could expand the sample size and explore perspectives from multiple institutions to provide broader insights into multidisciplinary care.

Findings

Through thematic analysis of the interviews with healthcare professionals and geriatric trauma patients, several key themes and sub-themes emerged. These themes highlight the value of multidisciplinary collaboration in the care of geriatric trauma patients, as well as the challenges encountered in practice.

Theme 1: Enhanced Communication and Team Coordination

Participants consistently emphasized the importance of effective communication and coordination within the multidisciplinary team.

Sub-theme 1.1: Streamlined Communication Improves Care

Healthcare providers indicated that regular communication between team members improved patient care by ensuring that everyone was aligned on the treatment plan and patient status.

- Nurse:

"Having daily rounds with the paramedics, respiratory therapists, and social workers ensured that we all had the same understanding of the patient's needs. This helped us to provide seamless care and avoid any miscommunication."

- Paramedic:

"We hand over critical information to the in-hospital team, and it's great to see how that information is used by nurses and respiratory therapists to tailor care to the patient's needs."

Sub-theme 1.2: Reduction in Medical Errors Through Collaborative Efforts

Several participants highlighted how teamwork helped reduce errors, particularly in high-risk cases, where timely information was critical.

- Laboratory Specialist:

"I've seen situations where sharing lab results immediately with the clinical team—especially the nurses and respiratory therapists—prevented potential complications like respiratory failure."

- Respiratory Therapist:

"When we all communicate openly, from lab results to nursing observations, we can adjust care faster and prevent things from spiraling out of control."

Theme 2: Holistic Patient-Centered Care

Participants highlighted that multidisciplinary collaboration led to more comprehensive, patient-centered care, where the physical, emotional, and social needs of patients were addressed.

Sub-theme 2.1: Addressing Comprehensive Patient Needs

The involvement of social workers alongside medical professionals ensured that geriatric trauma patients received holistic care, addressing both physical recovery and psychosocial needs.

- Social Worker:

"While the doctors and nurses focus on the physical injuries, we make sure that the patient's psychological and social needs aren't overlooked. We work together to find solutions that go beyond just medical care."

- Nurse:

"The social worker helped us identify that the patient needed more than just wound care—they needed home support, which made the discharge process much smoother."

Sub-theme 2.2: Improved Discharge Planning and Follow-Up Care

Participants mentioned that teamwork between social workers, nurses, and paramedics improved discharge planning, reducing hospital readmissions and ensuring continuity of care post-discharge.

- Paramedic:

"The social worker plays a huge role in getting patients the support they need once they leave the hospital. It makes our job easier when we know the patient will be cared for at home or in rehab."

- Social Worker:

"I collaborate with nurses and paramedics to plan for the patient's discharge, ensuring they have the resources they need at home, which helps reduce the chances of them coming back."

Theme 3: Challenges in Multidisciplinary Collaboration

While participants generally praised teamwork, they also noted challenges in maintaining consistent collaboration, especially in fast-paced or high-pressure situations.

Sub-theme 3.1: Communication Barriers in High-Pressure Situations

Healthcare providers reported that communication can break down during critical moments, such as trauma resuscitations, where immediate action is required.

- Respiratory Therapist:

"In emergency situations, it can be hard to keep communication flowing. Sometimes we're all so focused on our individual tasks that we forget to update the rest of the team, which can cause delays."

- Nurse:

"There are times when we're in the middle of a critical intervention, and the paramedics are trying to hand over important information, but there's so much going on that it's hard to focus."

Sub-theme 3.2: Differing Professional Perspectives

Participants also mentioned occasional conflicts arising from differing professional priorities and approaches, which required extra effort to reconcile.

- Nurse:

"Sometimes we have different ideas about how to manage a case. For example, the respiratory therapists might have one idea about ventilation, while we're focused on mobility. It takes time to align our goals."

- Paramedic:

"We're used to making quick decisions in the field, and sometimes in the hospital setting, it feels like things slow down as we wait for multiple professionals to weigh in. That can be frustrating."

Theme 4: Patient Experiences with Multidisciplinary Care

Patients and caregivers generally reported positive experiences with the multidisciplinary approach, appreciating the coordinated care and attention from various healthcare professionals.

Sub-theme 4.1: Feeling Well-Cared-For by a Team

Patients expressed that they felt reassured by the collaboration between healthcare providers, knowing that each aspect of their care was covered by a specialist.

- Patient:

"It was comforting to see how the team worked together. One day the paramedic came to check on me, the next day the respiratory therapist was adjusting my breathing, and they all seemed to be on the same page."

- Patient Caregiver:

"I could tell that they were all working together. The nurse knew what the respiratory therapist had done, and the social worker talked to us about what to expect after discharge. It felt like they had everything under control."

Sub-theme 4.2: Positive Impact on Recovery and Comfort

Several patients mentioned that the team-based approach contributed to their recovery, with various professionals addressing different aspects of their condition.

- Patient:

"I think having a whole team made my recovery faster. They each knew what to do, and the nurse and therapist really helped me get back on my feet after the accident."

- Patient Caregiver:

"The social worker helped us with so much more than just medical stuff. She made sure we had help at home, and that gave me peace of mind, knowing my mom would be okay."

Discussion

The findings of this study underscore the importance of multidisciplinary collaboration in the care of geriatric trauma patients in a tertiary hospital setting. The qualitative analysis revealed several key benefits of such an approach, including enhanced communication and coordination, holistic patient-centered care, and improved discharge planning, while also highlighting challenges like communication barriers and differing professional perspectives. These results align with existing literature, which emphasizes the complexity of caring for elderly trauma patients and the necessity of a team-based approach to address their multifaceted needs (Eichinger et al., 2021; Fallon et al., 2006).

Enhanced Communication and Team Coordination

The role of effective communication emerged as a central theme, with healthcare providers reporting that regular, structured communication between team members improved care delivery and reduced the likelihood of medical errors. This finding is consistent with prior research, which has shown that clear communication between healthcare professionals is crucial in high-stakes environments such as trauma care, where timely information sharing can prevent complications (Tan et al., 2018). The daily check-ins mentioned by participants ensured that each team member was fully informed about the patient's condition and treatment plan, leading to a more cohesive approach to care. The reduction in medical errors, as highlighted by the participants, supports previous studies suggesting that multidisciplinary collaboration is associated with fewer adverse events in trauma care (Carr, 2009).

However, the study also highlighted challenges in maintaining effective communication, particularly in high-pressure situations such as trauma resuscitations. This reflects findings from other research, where communication breakdowns in critical care environments are a known risk factor for errors and delays in care (Bergeron et al., 2003). Addressing this issue may require the implementation of standardized communication protocols, such as the use of checklists or designated communication roles during trauma resuscitations, to ensure that information is shared effectively, even under pressure.

Holistic Patient-Centered Care

The theme of holistic care was particularly prominent in this study, with participants highlighting how the involvement of social workers, alongside medical professionals, allowed for a more comprehensive approach to patient care. The inclusion of social workers ensured that patients 'psychosocial needs were met, such as arranging post-discharge support and addressing emotional concerns. This aligns with existing research that emphasizes the importance of addressing both the physical and psychosocial aspects of geriatric trauma care, as older patients are often more vulnerable to the psychological effects of trauma, including anxiety and depression (Head et al. (2022). By ensuring that patients receive not only medical care but also support for their social and emotional needs, the multidisciplinary team contributed to better overall recovery outcomes.

Moreover, the positive feedback from patients and caregivers regarding their care experience suggests that this team-based approach enhanced patient satisfaction. Patients reported feeling reassured by the coordinated efforts of the healthcare team, which contributed to their sense of security during recovery. This supports existing literature that indicates patients value consistent, collaborative care that addresses all aspects of their well-being (Fallon et al., 2006).

Improved Discharge Planning and Continuity of Care

One of the standout findings was the role of social workers in discharge planning and ensuring continuity of care. By coordinating with paramedics, nurses, and other team members, social workers helped facilitate a

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smoother transition from hospital to home, arranging necessary home care services and ensuring that patients were equipped with the resources needed for their recovery. This is consistent with the literature on the benefits of comprehensive discharge planning, which has been shown to reduce hospital readmission rates and improve patient outcomes (Carr, 2009). The integration of social workers into the trauma care team ensured that geriatric patients received not only immediate medical attention but also long-term support, which is critical for preventing readmissions and promoting sustained recovery.

Challenges in Multidisciplinary Collaboration

While the benefits of multidisciplinary care were clear, this study also identified challenges in maintaining seamless collaboration, particularly in fast-paced or high-stress situations. Communication barriers in critical care settings, such as trauma resuscitations, were highlighted as a significant issue. This finding is echoed in other studies, where the complexity and urgency of trauma care have been shown to create challenges in maintaining effective communication between team members (Bergeron et al., 2003). To address these barriers, hospitals could implement training programs focused on team communication in high-pressure scenarios, as well as establish protocols that ensure efficient information exchange even when time is limited.

Another challenge mentioned by participants was the occasional conflict arising from differing professional perspectives. In a multidisciplinary team, healthcare providers from various disciplines may have different approaches or priorities, which can lead to disagreements about the best course of treatment. This is a common issue in collaborative care, as each discipline brings a unique set of skills and viewpoints to the table (Tan et al., 2018). However, fostering an environment where team members feel comfortable discussing their differing perspectives and working toward consensus is key to overcoming this challenge. Team-building exercises and regular interdisciplinary meetings could help improve understanding and collaboration between team members, ensuring that all perspectives are considered in patient care.

Patient Experiences

The qualitative data revealed that patients and their caregivers generally had positive experiences with multidisciplinary care. They reported feeling reassured by the fact that multiple healthcare professionals were involved in their care and appreciated the thoroughness with which their physical and psychosocial needs were addressed. These findings are consistent with previous studies showing that patients value the sense of security and comprehensive care that comes from a collaborative approach (Fallon et al., 2006). The positive impact on patients 'recovery and comfort suggests that multidisciplinary teams not only improve clinical outcomes but also enhance patient satisfaction.

Implications for Practice

The findings of this study suggest several practical implications for improving the care of geriatric trauma patients in a tertiary hospital setting:

- 1. Enhancing Communication Protocols: Implementing structured communication tools, such as handover checklists or team briefings, could help ensure that critical information is shared effectively between team members, even in high-pressure situations.
- 2. Holistic Discharge Planning: Integrating social workers into the trauma care team and involving them early in the patient's hospital stay can help ensure that discharge planning is thorough and that patients have access to the necessary resources for recovery.

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3. Team Training and Collaboration: Regular interdisciplinary meetings and training focused on communication and collaboration can help improve the functioning of multidisciplinary teams, ensuring that all professionals are aligned on patient care priorities.

Limitations

This study had several limitations. First, it was conducted in a single tertiary hospital, which may limit the generalizability of the findings to other healthcare settings. Additionally, the study relied on self-reported data from healthcare providers and patients, which could introduce bias as participants may have tailored their responses based on their perceptions of the study's aims. Future research could explore similar studies across multiple institutions to provide a broader understanding of multidisciplinary collaboration in geriatric trauma care.

Conclusion

Overall, this study highlights the significant benefits of a multidisciplinary approach to geriatric trauma care, including improved communication, patient-centered care, and discharge planning. However, challenges such as communication barriers and differing professional perspectives need to be addressed to fully optimize the collaborative care model. By enhancing teamwork and communication strategies, healthcare providers can ensure that geriatric trauma patients receive the highest standard of care, leading to better outcomes and improved patient satisfaction.

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