THE ESSENTIAL ROLE OF NURSES IN EARLY RISK RECOGNITION AND MANAGEMENT IN TRAUMA AND CANCER CARE
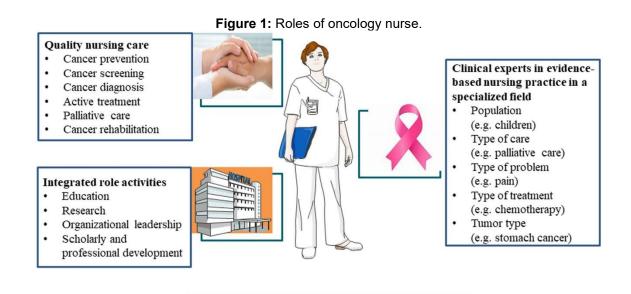
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ABSTRACT
Nurses play a fundamental role in the early recognition and management of clinical risk conditions across a variety of healthcare settings. In the context of polytraumatized patients, their ability to monitor vital signs, assess clinical symptoms, and maintain clear communication with the multidisciplinary team is crucial for preventing severe complications and reducing mortality. Studies conducted by Iyengar et al. (2023) and Schuster et al. (2024) highlight the significance of early intervention and the application of trauma care protocols to enhance patient outcomes. Similarly, research by Tiago et al. (2020) demonstrates the critical impact of nursing documentation in identifying the early signs of sepsis among surgical patients, reinforcing the importance of accurate and timely records for clinical decision-making. In prehospital settings, the research by Cantão et al. (2020) underscores how structured nursing interventions can preserve vital signs and improve survival chances for trauma patients. Additionally, Skrobanski et al. (2019) emphasize the contribution of primary care nurses in the early detection of cancer, while identifying barriers such as insufficient training and communication challenges. Mahon (2015) further supports the need for integrating cancer risk assessment and preventive strategies into everyday nursing practice to enhance patient outcomes. Overall, the evidence reviewed highlights the indispensable position of nurses in early risk identification and management. Continuous professional development, investment in training, and fostering confidence in clinical decision-making are essential to empowering nurses in their roles. By strengthening nursing practices, healthcare systems can achieve safer, more efficient, and patient-centered care, ultimately improving morbidity, mortality, and quality of life for diverse patient populations.

Keywords: Early Risk Recognition. Nursing Interventions. Polytrauma Management. Cancer Early Detection. Patient Outcomes.

INTRODUCTION

The participation of nurses in the early detection of risk conditions in polytraumatized patients is fundamental to improving prognosis and reducing mortality. Patients suffering from multiple injuries in different regions of the body are at constant risk of serious complications, making rapid and effective intervention crucial. Within this context, nurses assume a vital role through continuous monitoring, clinical assessment, and the maintenance of clear communication with the multidisciplinary team. The prompt identification of conditions such as hypovolemic shock, respiratory failure, or traumatic brain injury relies heavily on vigilant monitoring of vital signs and the evaluation of symptoms. Nurses are often the first professionals to notice changes in parameters like blood pressure, heart rate, oxygen saturation, and body temperature, enabling swift interventions such as fluid resuscitation, oxygen therapy, or airway stabilization. Furthermore, they are key in ensuring the efficient communication of the patient's status to the healthcare team and in applying clinical care protocols, contributing significantly to the coordination and quality of emergency care.

Figure 1: Roles of oncology nurse.

Roles of oncology Nurse.[a]

[a] Based on information from the scope of practice of oncology nursing from the Jordan Nursing Council (6)
Source: Li et al. (2023).

In a study conducted by Iyengar et al. (2023), the management of polytrauma patients—individuals who suffer injuries affecting multiple organs or systems—was explored, emphasizing that trauma remains a leading cause of mortality among young adults. The study highlighted how improvements in trauma systems, prehospital evaluation,

patient transport, and in-hospital treatment, along with the application of advanced trauma life support (ATLS) guidelines, have positively impacted survival rates. Recognizing patterns of trauma-related mortality has led to the development of early appropriate care (EAC) strategies, aimed at optimizing the timing and nature of interventions. Throughout each stage of the patient's care—prehospital, emergency resuscitation, hospital stabilization, and rehabilitation—the early recognition of risks and effective interventions were identified as crucial elements for improving clinical outcomes.

In another perspective, Tiago et al. (2020) analyzed how nursing documentation contributes to the early identification and management of sepsis in surgical patients. This retrospective, quantitative study examined the records of 28 patients at a university hospital, revealing that early signs of systemic inflammatory response syndrome (SIRS) and organ dysfunction typically emerged within the first five days of hospitalization. The findings emphasized that most initial signs were captured in electronic monitoring systems or nursing notes, underscoring the critical role nurses play in recognizing the early onset of sepsis. Through accurate and timely documentation, nurses enhance patient safety and support more effective clinical decision-making processes, ultimately impacting patient recovery and the success of healthcare interventions.

Focusing on pediatric care, Schuster et al. (2024) conducted a prospective cohort study to investigate injury patterns, early care, and outcomes in pediatric polytrauma patients at a Level I trauma center. Stratifying the patients by age groups, the research found that motor vehicle accidents were the leading cause of trauma in most age groups, with falls being more common among younger children (0–5 years). Head injuries were identified as significant predictors of mortality, reinforcing the necessity for prompt recognition and intervention. Moreover, both the Injury Severity Score (ISS) and the preclinical Glasgow Coma Scale (GCS) proved to be valid predictors of patient outcomes. The study stresses that early identification and tailored interventions based on injury patterns and patient age are critical strategies to enhance survival rates among pediatric trauma victims.

Turning attention to prehospital care, the work of Cantão et al. (2020) explored nursing interventions for polytrauma patients before hospital admission. Through a systematic literature review with a qualitative and descriptive approach, the authors described the clinical and pathophysiological aspects of trauma and outlined the necessary steps for sequential patient care. Their findings highlighted the importance of structured and systematic interventions in prehospital settings, reinforcing that timely and organized

nursing actions significantly reduce the risks of deterioration and death, while maintaining the patient's vital signs until arrival at a healthcare facility.

Additionally, the contribution of primary care nurses to cancer early detection was addressed by Skrobanski et al. (2019) in a systematic review. Analyzing studies from various countries, the authors observed wide variability in nurses' knowledge and frequency of discussing early diagnosis with patients, influenced by healthcare system differences and potential methodological biases. Common obstacles identified included lack of time, insufficient training, communication difficulties, and fear of negative patient reactions. These findings point to an urgent need for better preparation and ongoing education of nurses to ensure they are confident and competent to address cancer prevention and early detection with patients effectively.

Finally, Mahon (2015) emphasized the importance of nursing practice in cancer prevention through a review of evidence-based resources. The study underlined the diverse roles nurses can assume in assessing cancer risk and promoting preventive actions across different clinical settings. Mahon advocated that every patient should receive appropriate cancer risk assessments along with recommendations tailored to primary, secondary, or tertiary prevention strategies. Her analysis reinforced that integrating risk assessment into routine nursing care can significantly contribute to better health outcomes and underscores the essential place of nurses in public health initiatives related to cancer control.

The role of nurses in the early recognition of risk conditions across different clinical scenarios is undeniable. Whether in the management of polytraumatized patients, the identification of sepsis in surgical patients, or the early detection of cancer, nurses are consistently positioned at the frontline of patient care. Their technical expertise, vigilance, and ability to act swiftly are critical for preventing complications and reducing mortality rates. Studies show that prompt nursing interventions, whether through monitoring vital signs or careful documentation, significantly improve patient outcomes and ensure timely medical responses.

The importance of ongoing education and training for nurses is also evident. As research by Iyengar et al., Tiago et al., Schuster et al., and others highlights, nurses need continuous professional development to adapt to evolving healthcare protocols and technologies. Their role in multidisciplinary teams is vital, ensuring communication flows seamlessly and that care protocols are applied effectively. In addition, the evidence reviewed by Skrobanski et al. and Mahon emphasizes the necessity of empowering nurses

to address cancer prevention and early diagnosis proactively, bridging gaps between patients and health promotion strategies.

Overall, strengthening nursing practices in early risk recognition is fundamental to enhancing the quality and efficiency of healthcare services. Investment in nursing education, clinical support, and evidence-based practice development will not only improve immediate patient care but also contribute to broader public health goals. Nurses' unique positioning allows them to act as key agents in reducing morbidity and mortality, improving recovery rates, and supporting healthcare systems in delivering safer, more effective care.

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