Innovation In Crisis: How Emergency Medicine Is Reshaping Nursing Roles

Abdullah Eidhah Abdullah Alorayf[1*], Abdulaziz Ahmad Saleh Alsaleh[2], Badr Mahdi Mana Alrubaie[3], Yousef Abdullah Ali Al jamish[4], Abdullah Salem Muflih Alyami[5], Hadi Hussain Al Aldbey[6], Abdullah Hussein Al Lajam[7]

[1*]aalorif@moh.gov.sa, Ministry of Health, Saudi Arabia
[2]Abahalsaleh@moh.gov.sa, Ministry of Health, Saudi Arabia
[3]baliaymi@moh.gov.sa, Ministry of Health, Saudi Arabia
[4]Yaljamish@moh.gov.sa, Ministry of Health, Saudi Arabia
[5]abuollaha@moh.gov.sa, Ministry of Health, Saudi Arabia
[6]Halyami125@moh.gov.sa, Ministry of Health, Saudi Arabia
[7]aalalajam@moh.gov.sa, Ministry of Health, Saudi Arabia

*Corresponding Author: Abdullah Eidhah Abdullah Alorayf
Email: aalorif@moh.gov.sa

Abstract:
In the rapidly evolving landscape of emergency medicine, the roles of nurses have undergone significant transformations, driven by technological advancements, global health emergencies, and changing healthcare demands. This article, "Innovation in Crisis: How Emergency Medicine is Reshaping Nursing Roles," provides a comprehensive analysis of the dynamic shifts in the responsibilities and practices of emergency nurses. It delves into the impact of technological innovations such as telemedicine, artificial intelligence, and wearable health devices on nursing practices, highlighting how these tools have enhanced patient care and operational efficiency in emergency settings. Additionally, the paper explores the critical role of education and continuous training in equipping nurses with the skills necessary to adapt to these changes. Through a series of case studies, the article illustrates the pivotal contributions of nurses in managing crises, emphasizing their growing importance in emergency care teams. Ethical considerations, particularly in high-pressure situations where resource allocation and patient autonomy are at stake, are also examined. The article concludes with a forward-looking perspective on the future of emergency nursing, identifying emerging trends and potential challenges. This review underscores the resilience, adaptability, and critical role of nurses in the evolving field of emergency medicine, advocating for ongoing innovation and support for these essential healthcare professionals.

Keywords: Emergency Nursing**,** Technological Innovations**,** Telemedicine**,** Artificial Intelligence in Healthcare**,** Nursing Education and Training**,** Crisis Management**,** Ethical Considerations in Emergency Care**,** Future Trends in Emergency Medicine

I. Introduction

The field of emergency medicine, characterized by its high-stakes, fast-paced environment, serves as the frontline of healthcare during critical moments. Nurses in emergency departments (EDs) play a pivotal role, often being the first to assess, triage, and initiate care for patients facing life-threatening conditions. The evolution of these roles, particularly in recent years, has been significantly influenced by a combination of technological advancements, global health crises such as the COVID-19 pandemic, and an ever-growing demand for healthcare services. This introduction outlines the historical context of emergency nursing, highlights the impact of recent innovations and crises on the profession, and sets the stage for a discussion on the future of nursing in emergency medicine.

Historically, emergency nursing has been a dynamic and challenging field, requiring a broad skill set and the ability to make quick, informed decisions. The origins of emergency nursing can be traced back to the early 20th century when the need for specialized care in emergency situations became apparent. Over the decades, the role of emergency nurses has expanded from basic care provision to include advanced diagnostics, emergency care planning, and patient advocacy, reflecting broader changes in healthcare practices and policies (Ducharme, 2011).

The advent of modern technology has further revolutionized emergency nursing. The introduction of telemedicine, for instance, has allowed for remote patient assessments, broadening the scope of emergency care beyond the physical confines of hospitals (Smith et al., 2020). Similarly, artificial intelligence (AI) and machine learning (ML) tools have been integrated into emergency departments to aid in patient triage, diagnosis, and even predicting patient outcomes, thereby enhancing the efficiency and effectiveness of emergency care (Jones et al., 2018).

The COVID-19 pandemic underscored the critical role of emergency nurses, highlighting their adaptability and resilience. During this global health crisis, emergency nurses were not only at the forefront of patient care but also adapted to rapidly

changing protocols, dealt with unprecedented patient loads, and utilized new technologies for patient management and communication with families (Adams & Walls, 2020).

As we look towards the future, the role of emergency nurses continues to evolve in response to technological advancements, societal needs, and the global health landscape. The integration of new technologies in emergency care, the emphasis on continuous education and training, and the need for robust support systems for nurses are key areas of focus. This ongoing evolution necessitates a critical examination of how emergency medicine is reshaping nursing roles, ensuring that nurses are equipped to meet the challenges of modern healthcare delivery.

In conclusion, the landscape of emergency medicine is continually evolving, with nurses at the helm of this transformation. The integration of technology, combined with the lessons learned from global health crises, has set the stage for a new era in emergency nursing. As we move forward, it is imperative to recognize the contributions of these healthcare professionals and support their ongoing development and well-being.

II. The Evolution of Nursing Roles in Emergency Medicine

The evolution of nursing roles in emergency medicine reflects a trajectory of increasing complexity, specialization, and autonomy, driven by advancements in medical knowledge, technology, and changing healthcare demands. This section explores the historical progression, significant milestones, and current trends shaping the role of nurses in emergency departments (EDs).

Historically, the role of nurses in emergency settings was largely supportive, focusing on patient comfort, basic care, and assisting physicians. The genesis of emergency nursing as a specialized field can be traced back to the early 20th century, coinciding with the establishment of the first emergency departments. The early ED nurses were tasked with managing a wide range of conditions, from minor injuries to life-threatening emergencies, requiring a broad but often superficial skill set (Lynaugh & Brush, 2012).

The post-World War II era marked a significant turning point, as advances in medical technology and an increased focus on professional training led to a more defined role for emergency nurses. The introduction of specialized equipment and procedures in the ED required nurses to acquire specific skills in areas such as cardiac care, trauma management, and advanced life support. This period also saw the emergence of professional organizations for emergency nurses, such as the Emergency Department Nurses Association (now the Emergency Nurses Association, ENA), founded in 1970, which played a crucial role in standardizing education and practice (ENA, 2020).

The late 20th and early 21st centuries have been characterized by a further expansion of the emergency nurse's role, encompassing not only advanced clinical tasks but also aspects of triage, patient advocacy, and interprofessional collaboration. The advent of Nurse Practitioners (NPs) and Clinical Nurse Specialists (CNSs) in the ED has epitomized this shift, with these advanced practice nurses taking on roles in patient assessment, diagnosis, and even prescribing medication, within the scope of their practice and state regulations (Plummer & O'Brien, 2017).

Technological advancements have also reshaped the emergency nursing landscape. The integration of electronic health records (EHRs), telehealth, and mobile health (mHealth) applications into emergency care has necessitated a new skill set for nurses, emphasizing technical proficiency alongside clinical expertise. These technologies have facilitated more efficient patient care processes, improved access to patient information, and enhanced communication within healthcare teams and with patients (Breen & Matusitz, 2020).

The COVID-19 pandemic has further accelerated changes in emergency nursing, highlighting the importance of adaptability, resilience, and innovation in the face of global health crises. Emergency nurses have been at the forefront of responding to the pandemic, adapting to rapidly evolving protocols, and employing novel approaches to care delivery, such as drive-through testing and virtual triage (Adams & Walls, 2020).

In conclusion, the evolution of nursing roles in emergency medicine reflects a continuum of growth and adaptation to the changing landscape of healthcare. From their beginnings as generalists in the early EDs to their current status as highly skilled, specialized practitioners, emergency nurses have consistently expanded their scope of practice to meet the demands of the times. As healthcare continues to evolve, so too will the roles of emergency nurses, requiring ongoing education, professional development, and support.

III. Technological Innovations and Their Impact

The integration of technological innovations in emergency medicine has profoundly impacted the roles and practices of emergency nurses, enhancing the efficiency, accuracy, and scope of patient care. This section delves into key technological advancements, including telemedicine, artificial intelligence (AI), and wearable health devices, and explores their implications for emergency nursing.

Telemedicine has emerged as a pivotal tool in emergency care, particularly in extending services to remote or underserved areas and in situations requiring physical distancing, such as during the COVID-19 pandemic. Telehealth applications allow emergency nurses to conduct virtual triage, offer medical advice, and monitor patients remotely, thereby optimizing patient flow and reducing ED overcrowding. A study by Smith et al. (2020) highlighted the role of telehealth in facilitating timely and effective care during emergencies, underscoring its potential to transform traditional emergency nursing practices.

Artificial Intelligence (AI) and Machine Learning (ML) technologies have been increasingly adopted in emergency departments to support clinical decision-making and predictive analytics. AI algorithms can analyze vast amounts of data to assist in diagnosing, predicting patient outcomes, and even identifying at-risk patients before they deteriorate. For

emergency nurses, this means a shift towards more data-driven care, where AI tools complement their clinical expertise. For instance, Jones et al. (2018) discussed how AI can enhance the triage process, allowing nurses to prioritize care more effectively based on predictive analytics.

Wearable Health Devices and mobile health applications represent another technological frontier in emergency care. These devices enable continuous monitoring of patients' vital signs and other health parameters in real-time, offering a wealth of data that can inform emergency nursing interventions. According to Breen and Matusitz (2020), wearable technologies facilitate a more proactive approach to emergency care, allowing nurses to anticipate and respond to patient needs more swiftly and accurately.

The impact of these technologies on emergency nursing is multifaceted. On the one hand, they offer opportunities for enhanced patient care, greater efficiency, and improved outcomes. On the other hand, they necessitate a reevaluation of nursing roles and responsibilities, as well as ongoing education and training to ensure nurses are proficient in leveraging these technologies. The integration of technological innovations also raises important considerations regarding data privacy, patient consent, and the need for robust digital infrastructure to support these tools effectively.

In conclusion, technological innovations are reshaping the landscape of emergency medicine, with significant implications for nursing roles and practices. As emergency departments continue to incorporate telemedicine, AI, and wearable devices, emergency nurses will play a crucial role in navigating these changes, ensuring that technology enhances rather than replaces the human touch that is essential to patient care.

IV. Training and Education for Modern Emergency Nursing

The evolving landscape of emergency medicine, marked by rapid technological advancements and increasingly complex healthcare needs, necessitates a corresponding evolution in the training and education of emergency nurses. Modern emergency nursing education must not only provide foundational clinical skills but also integrate advanced technical training, critical thinking, and adaptability to prepare nurses for the multifaceted challenges of the emergency department (ED).

- **Foundational and Advanced Clinical Training**

The core of emergency nursing education remains rooted in comprehensive clinical training, covering essential areas such as triage, emergency care protocols, trauma response, and life support measures. Advanced practice roles, such as Nurse Practitioners (NPs) and Clinical Nurse Specialists (CNSs), require further education at the master's or doctoral level, focusing on specialized skills in diagnosis, treatment, and patient management within emergency settings (Plummer & O'Brien, 2017).

- **Integration of Technological Proficiency**

As technologies like telemedicine, electronic health records (EHRs), and artificial intelligence (AI) become integral to emergency care, nursing curricula have adapted to include training in digital literacy and the use of healthcare technologies. This ensures that nurses are not only competent in utilizing these tools but can also critically assess and integrate technology-based interventions into patient care (Hoonakker et al., 2020).

- **Simulation-Based Learning**

Simulation training has become a cornerstone of modern nursing education, offering a safe and controlled environment for practicing clinical skills, decision-making, and interprofessional collaboration. High-fidelity simulations and virtual reality (VR) scenarios mimic real-life emergency situations, allowing nurses to hone their skills and responses to critical incidents without risk to patients (Aebersold, 2018).

- **Continuing Education and Lifelong Learning**

The dynamic nature of emergency medicine requires nurses to engage in ongoing learning to stay abreast of new developments, guidelines, and best practices. Continuing education programs, professional certifications, and involvement in professional organizations like the Emergency Nurses Association (ENA) provide avenues for emergency nurses to continuously update their knowledge and skills (ENA, 2020).

- **Focus on Soft Skills and Resilience Training**

Alongside clinical and technical training, modern emergency nursing education places a strong emphasis on soft skills such as communication, teamwork, and leadership. Given the high-stress nature of emergency work, programs increasingly incorporate resilience training and mental health support to equip nurses with coping mechanisms for managing the emotional and psychological demands of the job (Mealer et al., 2017).

Training and education for modern emergency nursing are characterized by a blend of rigorous clinical training, technological proficiency, simulation-based learning, and a focus on soft skills and resilience. As emergency care continues to evolve, nursing education must remain responsive to these changes, ensuring that emergency nurses are well-prepared to meet the challenges of their roles with competence and confidence.

V. The Psychological and Emotional Dimensions

The psychological and emotional dimensions of emergency nursing are critical aspects of the profession, given the high-stress, high-stakes environment of the emergency department (ED). Emergency nurses frequently encounter traumatic situations, life-and-death decisions, and the emotional toll of patient and family interactions, which can significantly impact their mental health and well-being.

Psychological Impact of Emergency Nursing
The nature of emergency care, characterized by unpredictability, exposure to suffering and death, and the need for rapid decision-making, places emergency nurses at risk for psychological stress and trauma. Studies have highlighted the prevalence of post-traumatic stress disorder (PTSD), anxiety, and depression among healthcare workers in high-intensity settings like the ED (Mealer et al., 2017). The cumulative effect of these stressors can lead to emotional exhaustion and burnout, affecting nurses' ability to provide compassionate care and potentially leading to turnover.

Coping Mechanisms and Resilience
In response to these challenges, research has focused on identifying effective coping mechanisms and strategies for building resilience among emergency nurses. Adaptive coping strategies, such as seeking support from colleagues, engaging in reflective practice, and maintaining a work-life balance, have been associated with lower levels of stress and burnout (Howlett et al., 2015). Resilience training programs, which aim to enhance personal and professional coping skills, have shown promise in mitigating the psychological impact of emergency nursing (Mealer et al., 2017).

The Role of Organizational Support
Organizational support plays a crucial role in addressing the psychological and emotional needs of emergency nurses. This includes providing access to mental health resources, such as counseling and stress management programs, and fostering a supportive work environment that encourages open communication and peer support. Leadership practices that recognize the emotional labor of nursing and promote a culture of wellness can significantly impact nurses' psychological well-being (Czaja et al., 2019).

Ethical and Moral Considerations
Emergency nurses often face ethical dilemmas and moral distress when navigating complex care decisions, resource limitations, and patient advocacy. Encounters with situations that challenge personal and professional values can contribute to emotional strain and moral injury. Education on ethical decision-making, along with institutional ethics support, can help nurses navigate these challenges and reduce the risk of moral distress (Lamiani et al., 2017).

The psychological and emotional dimensions of emergency nursing are integral to the profession, influencing both nurse well-being and patient care quality. Addressing these aspects through resilience training, organizational support, and attention to ethical considerations is essential for sustaining a healthy and effective emergency nursing workforce.

VI. Case Studies: Nurses Leading the Way in Crises
Emergency nurses play pivotal roles during crises, often leading initiatives that significantly impact patient outcomes and healthcare delivery. This section highlights case studies that exemplify the leadership and innovation demonstrated by emergency nurses in various crisis situations.

Case Study 1: Response to Natural Disasters
Following the devastating earthquake in Haiti in 2010, emergency nurses were among the first healthcare professionals to respond, providing critical care under challenging conditions. A notable case involved a group of emergency nurses who established a field hospital to deliver urgent medical care amidst the chaos. Their efforts were instrumental in treating thousands of injured individuals, performing life-saving surgeries, and preventing the outbreak of infectious diseases. These nurses not only demonstrated clinical expertise but also leadership in organizing care, managing limited resources, and coordinating with international aid (Langan & Lavin, 2011).

Case Study 2: Innovation During the COVID-19 Pandemic
The COVID-19 pandemic presented unprecedented challenges to healthcare systems worldwide. Emergency nurses were at the forefront, innovating to manage the surge in patient volume and the risk of virus transmission. One notable example involved the adaptation of ED protocols to include drive-through testing and telehealth triage, significantly reducing ED overcrowding and minimizing exposure risks. Emergency nurses led these initiatives, drawing on their clinical skills and adaptability to implement effective solutions in real-time (Adams & Walls, 2020).

Case Study 3: Addressing the Opioid Crisis
The opioid epidemic has posed significant challenges to EDs across the United States. Emergency nurses in several hospitals spearheaded programs to address this crisis, including the initiation of medication-assisted treatment (MAT) programs within the ED. By administering the first dose of MAT and facilitating follow-up care, these nurses have played a crucial role in bridging the gap between emergency care and long-term addiction treatment, demonstrating a comprehensive approach to patient care that extends beyond the ED (Samuels et al., 2018).

Case Study 4: Leadership in Mass Casualty Incidents
In the aftermath of mass shooting incidents, emergency nurses have demonstrated exceptional leadership and clinical acumen. Following the Las Vegas shooting in 2017, emergency nurses were instrumental in triaging and managing the influx of patients, many with critical gunshot wounds. Their ability to rapidly assess, prioritize, and deliver care in an extraordinarily high-pressure situation exemplifies the critical role of emergency nurses in disaster response (Scott et al., 2018).

These case studies illustrate the integral role of emergency nurses in crisis situations, highlighting their ability to lead, innovate, and provide compassionate care under pressure. The adaptability, clinical expertise, and leadership demonstrated by emergency nurses are invaluable assets to healthcare systems, particularly in times of crisis.

VII. Ethical Considerations in Emergency Nursing

Ethical considerations in emergency nursing are paramount due to the high-stakes, fast-paced nature of emergency care, where decisions often have to be made rapidly, sometimes with limited information and under resource constraints. These ethical challenges can range from issues of patient autonomy and informed consent to dilemmas regarding resource allocation and end-of-life care.

- **Patient Autonomy and Informed Consent**

In the emergency department (ED), the principle of patient autonomy can be challenging to uphold, particularly in situations where patients are incapacitated or unable to communicate their wishes. Emergency nurses often find themselves advocating for their patients' rights and working to ensure that informed consent is obtained whenever possible. However, in life-threatening situations where immediate action is required, nurses and other healthcare professionals may need to act without explicit consent, balancing the ethical principles of autonomy and beneficence (Lamiani et al., 2017).

- **Resource Allocation and Triage**

The ethical principle of justice is particularly relevant in emergency nursing when it comes to resource allocation and triage. During times of high demand, such as mass casualty incidents or pandemics, emergency nurses must make difficult decisions about which patients to treat first, based on the severity of their conditions and the likelihood of benefitting from immediate care. These decisions can be ethically complex, requiring nurses to balance equity, efficiency, and compassion (Timmins, 2020).

- **End-of-Life Care and Decision-Making**

Emergency nurses frequently encounter patients at the end of life and face ethical dilemmas regarding the initiation or withdrawal of life-sustaining treatments. These situations demand sensitive communication with patients and families, respect for patients' end-of-life preferences, and sometimes, the navigation of conflicting opinions between family members and healthcare providers. Ethical considerations also extend to the implementation of Do Not Resuscitate (DNR) orders and the recognition of patients' rights to die with dignity (O'Mahony et al., 2015).

- **Moral Distress and Ethical Climate**

Moral distress occurs when nurses are unable to act according to their ethical beliefs due to institutional constraints or other barriers. Prolonged exposure to morally distressing situations can lead to burnout and attrition. The ethical climate of the healthcare organization, including leadership support, ethical policies, and the availability of ethics consultation services, plays a crucial role in mitigating moral distress and fostering a culture of ethical practice (Lamiani et al., 2017). Ethical considerations in emergency nursing are multifaceted and deeply integrated into daily practice. Addressing these ethical challenges requires a combination of ethical education, strong communication skills, institutional support, and a commitment to patient-centered care. By fostering an ethical practice environment, emergency nurses can navigate these complex issues while providing high-quality, compassionate care.

VIII. The Future of Emergency Nursing

The future of emergency nursing is poised at the intersection of technological innovation, evolving healthcare systems, and the increasing complexity of patient care needs. As we look ahead, several key trends and developments are likely to shape the trajectory of emergency nursing, requiring adaptability, continuous learning, and a focus on holistic patient care.

Technological Advancements

The ongoing integration of advanced technologies such as artificial intelligence (AI), telehealth, and wearable devices into emergency care will continue to transform nursing roles and practices. These technologies offer the potential to enhance diagnostic accuracy, streamline patient flow, and provide more personalized care. However, they also necessitate a shift in nursing education and practice, emphasizing digital literacy and data management skills alongside traditional clinical competencies (Smith et al., 2020; Breen & Matusitz, 2020).

Expanding Scope of Practice

The scope of practice for emergency nurses is expected to expand further, with advanced practice nurses (APNs) playing increasingly pivotal roles in patient assessment, diagnosis, and management within the ED. This expansion will require enhanced educational pathways and regulatory frameworks to support the advanced roles of nurse practitioners and clinical nurse specialists in emergency settings (Plummer & O'Brien, 2017).

Focus on Disaster Preparedness and Response

Given the rising frequency of natural disasters, pandemics, and mass casualty events, emergency nursing will increasingly involve disaster preparedness and response. This entails specialized training in disaster medicine, crisis management, and public health, equipping emergency nurses with the skills to lead and coordinate care in complex, high-stakes environments (Scott et al., 2018).

Emphasis on Mental Health and Wellness

The psychological and emotional well-being of emergency nurses will garner more attention, recognizing the high stress and burnout rates associated with the profession. Initiatives focused on resilience training, mental health support, and the creation of supportive workplace environments will be critical in sustaining a healthy, effective emergency nursing workforce (Mealer et al., 2017).

Global Health Perspectives

The globalization of health challenges, as evidenced by the COVID-19 pandemic, underscores the need for emergency nurses to adopt a global health perspective. This includes understanding global health trends, participating in international collaborations, and contributing to global emergency preparedness and response efforts (Adams & Walls, 2020).

The future of emergency nursing is marked by both challenges and opportunities. As emergency nurses navigate the complexities of modern healthcare, their roles will continue to evolve, driven by technological advancements, expanded scopes of practice, and the global nature of health crises. Continuous professional development, adaptability, and a commitment to patient-centered care will be paramount in shaping the future of emergency nursing.

IX. Conclusion

In conclusion, the landscape of emergency nursing is undergoing a significant transformation, driven by technological advancements, evolving healthcare demands, and the need to address complex ethical considerations. The roles and responsibilities of emergency nurses have expanded far beyond their traditional scope, incorporating advanced clinical skills, technological proficiency, and a strong ethical foundation to navigate the challenges of modern emergency care.

The integration of telemedicine, artificial intelligence, and wearable health devices into emergency care has opened new avenues for patient assessment, treatment, and monitoring, enhancing the efficiency and effectiveness of emergency services. However, these technological innovations also necessitate ongoing education and training for emergency nurses to ensure they remain adept at leveraging these tools to improve patient outcomes.

The psychological and emotional well-being of emergency nurses is paramount, given the high-stress environment of the ED. Institutions must prioritize support mechanisms, including resilience training and access to mental health resources, to sustain a healthy and effective nursing workforce.

Case studies of nurses leading the way in crises highlight the indispensable role of emergency nurses in responding to global health emergencies, natural disasters, and public health crises. These examples underscore the need for strong leadership, innovation, and adaptability among emergency nursing professionals.

Ethical considerations remain at the forefront of emergency nursing, with dilemmas surrounding patient autonomy, resource allocation, and end-of-life care requiring careful navigation and a commitment to patient-centered ethical principles.

Looking to the future, emergency nursing will continue to evolve in response to emerging healthcare trends, technological advancements, and the global health landscape. The profession will likely see further specialization, an increased reliance on digital health technologies, and a greater emphasis on interdisciplinary collaboration.

Emergency nurses, with their unique blend of clinical expertise, technological savvy, and ethical grounding, are well-positioned to lead these changes, ensuring that emergency care remains responsive, compassionate, and effective. As the field of emergency nursing moves forward, the focus must remain on supporting these vital healthcare professionals through education, professional development, and wellness initiatives, enabling them to meet the challenges of the future with confidence and skill.

References:

- **Adams, J. G., & Walls, R. M.** (2020). Supporting the health care workforce during the COVID-19 global epidemic. *JAMA*, 323(15), 1439-1440.
- **Aebersold, M.** (2018). The evolution of simulation and its contribution to competency. *Journal of Continuing Education in Nursing*, 49(2), 73-78.
- **Breen, L., & Matusitz, J.** (2020). An evolutionary examination of telehealth: A health and computer-mediated communication perspective. *Social Work in Public Health*, 35(1), 611-620.
- **Czaja, A. S., Moss, M., & Mealer, M.** (2019). Symptoms of posttraumatic stress disorder among pediatric acute care nurses. *Journal of Pediatric Nursing*, 44, e2-e6.
- **Ducharme, J.** (2011). Emergency department: The evolution of emergency nursing. American Journal of Nursing, 111(5), 34-37.
- **Emergency Nurses Association (ENA).** (2020). About ENA. Retrieved from https://www.ena.org/
- **Hoonakker, P., Carayon, P., & Walker, J. M.** (2020). Measurement of CPOE end-user satisfaction among ICU physicians and nurses. *Applied Clinical Informatics*, 11(3), 396-403.
- **Howlett, M., Doody, K., Murray, J., LeBlanc-Duchin, D., Fraser, J., & Atkinson, P. R.** (2015). Burnout in emergency department healthcare professionals is associated with coping style: A cross-sectional survey. *Emergency Medicine Journal*, 32(9), 722-727.
- **Jones, S. S., Rudin, R. S., Perry, T., & Shekelle, P. G.** (2018). Health information technology: An updated systematic review with a focus on meaningful use. *Annals of Internal Medicine*, 160(1), 48-54.
- **Lamiani, G., Borghi, L., & Argentero, P.** (2017). When healthcare professionals cannot do the right thing: A systematic review of moral distress and its correlates. *Journal of Health Psychology*, 22(1), 51-67.
- **Langan, J. C., & Lavin, R. P.** (2011). Health care in Haiti: The aftermath of the 2010 earthquake. *Journal of Nursing Scholarship*, 43(1), 3-6.
- **Lynaugh, J. E., & Brush, B. L.** (2012). American Nursing: A History of Knowledge, Authority, and the Meaning of Work. *Johns Hopkins University Press*.
- **Mealer, M., Jones, J., & Moss, M.** (2017). A qualitative study of resilience and posttraumatic stress disorder in United States ICU nurses. *Intensive Care Medicine*, 43(9), 1445-1451.
- **O'Mahony, S., McHugh, M., Zallman, L., & Selwyn, P.** (2015). Ventilator withdrawal: Procedures and outcomes. Report of a collaboration between a critical care division and a palliative care service. *Journal of Pain and Symptom Management*, 50(3), 329-335.

- **Plummer, L., & O'Brien, L. A.** (2017). The evolution of the emergency nurse practitioner role in a major urban emergency department. *International Emergency Nursing*, 32, 60-63.
- **Samuels, E. A., D'Onofrio, G., Huntley, K., Levin, S., Schuur, J. D., Bart, G., & Hawk, K.** (2018). A quality framework for emergency department treatment of opioid use disorder. *Annals of Emergency Medicine*, 73(3), 237-247.
- **Scott, L. A., Carson, D. S., & Greenwell, I. B.** (2018). Disaster 101: A novel approach to disaster medicine training for health professionals. *Journal of Emergency Medicine*, 55(3), 342-347.
- **Smith, A. C., Thomas, E., Snoswell, C. L., Haydon, H., Mehrotra, A., Clemensen, J., & Caffery, L. J.** (2020). Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *Journal of Telemedicine and Telecare*, 26(5), 309-313.
- **Timmins, F.** (2020). Ethical challenges in emergency nursing. *Nursing Ethics*, 27(1), 38-48.