Trauma Nursing Education

Description

Globally, injury kills more than five million people each year.[1,2] External cause-of-injury categories, based on International Classification of Disease, Ninth Revision (ICD-9) codes E000-E999 and Tenth Revision (ICD-10) Chapters V and Y, accounted for 10.1% of the global burden of disease in 2013.[3] In the U.S. alone, from 2010–2016, over 1.3 million people had an injury-related cause of death (68% unintentional, 20% suicide, 8.5% homicide, and 2.5% undetermined), with a crude death rate of 63.14 per 100,000.[4] In the U.S., trauma persists as a leading cause of death across demographics and is the leading cause of death for all persons age 1–44 years.[4]

Survivors of trauma often suffer complex disabilities and functional outcomes that include physical, mental, and financial issues during their lifetime.[5,6] Traumatic injury has an additive cost burden that includes lost productive years of life, lost wages, lost productivity, and healthcare costs.[7] The costs of fatal traumatic injuries reached $214 billion in the U.S. in 2015.[7,8] It is therefore vital that injury prevention programs and best practices continue to be developed to reduce mortality and disability.[9] One such practice is the trauma-informed care (TIC) approach, which incorporates four principles: realize the prevalence of traumatic events, recognize the signs of trauma, respond by integrating trauma knowledge, and resist re-traumatization.[10]

Throughout the world, there are several trauma registries or databases, including the National Trauma Data Bank (U.S./Canada), Trauma Audit & Research Network (UK), Italian National Trauma Registry, Alberta Trauma Registry, and Quebec Trauma Care Continuum.[11] However, the absence of trauma systems in many parts of the world, particularly in low- and middle-income countries, remains a challenge to trauma system development.[12] As a result, there is worldwide motivation to establish an International Trauma Data Bank (ITDB) that would allow for international benchmarking of trauma care.[13,14]

Trauma certified nurses demonstrate exceptional knowledge, expertise (technical performance), and professionalism.[15] After two years of trauma experience, the Board of Certification for Emergency Nursing (BCEN) recommends the Trauma Certified Registered Nurse (TCRN) certification exam, which incorporates the body of knowledge in trauma nursing across the continuum of care.[15] However, more research is needed to link clinical trauma outcomes to foundational nursing education such as the Trauma Nursing Core Course (TNCC), and advanced trauma nursing education like Advanced Trauma Care for Nurses (ATCN), and International Trauma Life Support (ITLS).

ENA Position

It is the position of the Emergency Nurses Association that:

1. A standardized and organized trauma system approach improves trauma care and reduces mortality and disability.

2. Trauma-related continuing education and certification are recommended and an important adjunct for emergency nurses who provide care to trauma patients.

3. The trauma nursing process, taught in the TNCC course, is recommended as a systematic and standardized approach for the assessment, intervention, and evaluation of the trauma patient.

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4. Emergency nurses with two years of trauma nursing experience are encouraged to take the trauma certified registered nurse (TCRN) certification exam.

5. Healthcare facilities support, promote, and value the achievement of trauma nursing education and certification for emergency nurses.

6. Educating bystanders can help start emergency treatment before emergency medical services arrive. Emergency nurses are therefore encouraged to support their communities by teaching injury prevention and first aid techniques such as hemorrhage control.

7. The development and implementation of injury prevention programs and best practices are an essential component of the continuum of trauma care.

8. Emergency nurses conduct and participate in research that links clinical trauma outcomes to basic and advanced trauma nursing education.

Background

Trauma can be described as "an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being."[16] Trauma includes injury from accidents, violence, natural disaster, abuse (i.e., sexual, physical, financial, psychological), intimate partner violence, and some psychological disorders such as post-traumatic stress disorder.

According to the World Health Organization, there is a six-fold greater likelihood of death after injury in a low- and middle-income country compared with that in a high-income country.[12] This disparity can be partly attributed to the relatively poor quality of trauma care in low- and middle-income countries, a problem exacerbated by poor development, organization, and planning, as well as a scarcity of trauma programs. The worldwide development of dedicated systems of trauma care similar to those in high-income countries can improve outcomes after injury.[12]

The National Trauma Data Bank (NTDB) is the largest national registry that collects and analyzes trauma outcomes within the U.S. and Canada. The NTDB aligns with the American College of Surgeons' mission to inform the public and improve trauma care through systematic efforts in prevention, care, and rehabilitation.[17] The mission focuses on expanding and improving the trauma system so that immediate aid can be delivered to injured patients, regardless of location.[18] However, participation is voluntary, and improvement of benchmark standards is necessary.[18]

The term that commonly defines the period in which a trauma patient has the best chance of survival is the "golden hour."[19] However, many injured require immediate aid that cannot wait an hour, such as those with uncontrolled hemorrhage. Hemorrhage remains the leading cause of preventable death from trauma, accounting for 30–40% of trauma deaths.[18] It is therefore a priority to empower bystanders to serve as immediate responders by providing basic bleeding control measures, including a tourniquet.[18,20,21]

As a result of the active shooter event that occurred on December 14, 2012 at Sandy Hook Elementary School, the Joint Committee to Create a National Policy to Enhance Survivability from Intentional Mass Casualty and Active Shooter Events was convened by the American College of Surgeons (ACS) in collaboration with the various healthcare stakeholders from the federal government (the National Security Council, the U.S. military, the Federal Bureau of Investigation).[18] Additionally, governmental and nongovernmental emergency medical response organizations generated recommendations known as the Hartford Consensus. The goal of these recommendations was to create a protocol for national policy to enhance the

survivability from active shooter and other intentional mass casualty events.[18] One of the initiatives developed from the Hartford Consensus was the *Stop the Bleed* campaign.

Stop the Bleed is a national campaign that was initiated in 2015 to help improve survival from life-threatening bleeding. It provides bystanders in emergency situations with knowledge and tools to stop the bleeding and provide critical life-saving care.[22] The Stop the Bleed campaign provides free bleeding control courses to teach basic awareness, recognition, and response to bleeding. The campaign also advocates for bleeding control kits to be included in trauma kits at defibrillator locations, local organizations, airports, and hospitals.[23] Management of hemorrhage by first responders (laypeople, bystanders, law enforcement, trained providers) can avert exsanguination.[24]

Since 1986, ENA's Trauma Nursing Core Course (TNCC) has served as the standard for trauma nursing education for the care of patients who have sustained injuries.[25] TNCC covers the trauma nursing process including a comprehensive trauma assessment, rapid identification of life-threatening injuries, and enhanced interventions.[25] Other courses include Advanced Trauma Care for Nurses (ATCN),[26] Course in Advanced Trauma Nursing (CATN),[27] International Trauma Life Support (ITLS),[28] and Trauma Care After Resuscitation (TCAR).[29]

For years, injuries were viewed as accidents that were inevitable. Injuries constitute a major public health problem. A large body of epidemiological and clinical research demonstrates that injuries do not occur by chance. Like diseases, injuries follow predictable patterns, thus making them preventable.[30] More research is needed to better link clinical trauma outcomes to basic and advanced trauma nursing education.

Resources

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Developed: 2015.

Approved by the ENA Board of Directors: September 1993.
Revised and Approved by the ENA Board of Directors: April 1995.
Revised and Approved by the ENA Board of Directors: September 1997.
Revised and Approved by the ENA Board of Directors: July 1999.
Revised and Approved by the ENA Board of Directors: July 2001.
Revised and Approved by the ENA Board of Directors: July 2010.
Revised and Approved by the ENA Board of Directors: September 2015.
Revised and Approved by the ENA Board of Directors: March 2019.

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