

The ATLS® Course: Empowering Healthcare Professionals for Excellence in Trauma Care

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Abstract

The Advanced Trauma Life Support (ATLS) course has become an indispensable tool in preparing health care professionals to provide optimal trauma care.

This article highlights the impact of the ATLS course on empowering healthcare professionals for excellence in trauma care.

By providing a standardized framework, enhancing critical decision-making skills, and promoting interdisciplinary collaboration, the ATLS course equips practitioners with the knowledge and skills necessary to effectively respond to trauma emergencies. Additionally, the course prepares healthcare professionals for the unpredictable nature of trauma care through simulation-based training and fosters a culture of continuous professional growth.

Through its emphasis on standardization, critical thinking, and continuing education, the ATLS course plays a vital role in improving patient outcomes and establishing a foundation for excellence in trauma care.

Conclusion: The ATLS course stands as a testament to the commitment of healthcare professionals to provide excellent trauma care. It empowers practitioners with the necessary knowledge, skills, and standardized approach to save lives in the critical moments following traumatic events.

Keywords: ATLS (Advanced trauma life support); medical education, trauma.

Introduction

Trauma remains the leading cause of death and posttraumatic temporary and permanent disability and posttraumatic mortality reaches 9% worldwide [1].

Because of this data, extensive efforts have been made to manage traumatic injuries at all levels.

Initially, efforts to improve trauma management focused on training prehospital staff, training hospital teams in the emergency department, and creating specialized trauma management teams within the hospital [2].

These improvements in trauma services subsequently contributed to the creation of trauma systems beginning in the 1970s [3], which provide care from prehospital care to rehabilitation, aligning with trauma prevention measures, education, scientific research, and quality management programs [4].

In recent decades, there has been a decrease in trauma mortality as a result of improved road safety legislation and media campaigns for trauma prevention[5].

Functionalization and advancement of trauma systems has resulted in improved trauma care, which has decreased M&M [6].

Trauma systems reflect collaboration among all health care providers to reduce preventable deaths and decrease morbidity and complications of injuries, which include

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trauma prevention programs, coordination of prehospital and hospital medical services management, rehabilitation care and care after discharge from the hospital for trauma victims, until their final integration into society [7].

A trauma center is a multispecialty hospital that provides multiple levels of care for patients with traumatic injuries. and are often the first step in implementing a trauma management system.

There is still no definitive definition of a trauma system, it is widely accepted that it takes years for a system to mature and become an integral part of the health system once implemented [8].

There are three steps to describe the stages of developing a trauma system: establishing a trauma center, establishing a trauma system, and maturing the trauma system.

The various characteristics of trauma systems have been highlighted in previous reviews [9].

Clinical outcomes of trauma management, such as mortality in trauma patients at different levels of the trauma system, have not been previously examined.

The objective of this article is to highlight the effectiveness of the ATLS course in reducing the mortality of victims at all levels of trauma management.

In the fast-paced world of healthcare, effective management of traumatic emergencies can mean the difference between life and death. [10]

As a call comes in from the field, the hospital team should begin to triage the patient based on their age, mechanism of injury, coagulation status, and other factors that can impact the management of the case[11, 12]

The principles of trauma management describe the basic concepts that providers need to know when treating various trauma injuries in a trauma setting.

The principles of ATLS focus on the management of traumatic injuries, using a team approach, which will highlight the value and basic roles of an interprofessional team, from assessment of the patient in the prehospital setting to their assessment and management after they have arrived at the emergency department. [10]

The Advanced Trauma Life Support (ATLS) course has emerged as a beacon of excellence, equipping healthcare professionals with the skills and knowledge needed to provide optimal trauma care. [13]

In this opinion article, we will delve into the value and significance of the ATLS course in empowering healthcare professionals for excellence in trauma care.

The implementation of modern trauma management requires a number of supporting pillars, where the ATLS philosophy is the key to the solution as follows,

Building a strong foundation in trauma education is very important, with the ATLS Course serving as a training foundation for healthcare professionals entering the field of trauma care.

Building a strong foundation in education is very important, with the ATLS Course serving as a training foundation for healthcare professionals entering the field of trauma care.[14]

It provides a structured framework and comprehensive education on the initial assessment, resuscitation and stabilization of trauma patients.

By instilling this solid foundation, the ATLS course ensures that healthcare professionals possess the essential skills necessary to respond effectively to traumatic emergencies.[15]

Promoting Standardization: One of the greatest strengths of the ATLS course lies in its promotion of standardization. By adhering to a common language and systematic approach, healthcare professionals trained in ATLS can seamlessly collaborate, regardless of their geographical location or medical background. This uniformity leads to enhanced communication, improved teamwork, and ultimately, better patient outcomes. [16]

Enhancing Critical Decision-Making: Trauma care often demands quick and accurate decision-making in high-pressure situations. The ATLS course hones the ability of healthcare professionals to think critically and make sound judgments when faced with time-sensitive and life-threatening scenarios. By training practitioners to rapidly assess, prioritize, and initiate appropriate interventions, the course empowers healthcare professionals to make informed decisions that can significantly impact patient survival.[17, 18]

Preparing for the Unexpected: Trauma care can present complex and unpredictable challenges. The ATLS course prepares healthcare professionals for these unexpected hurdles by incorporating simulation-based training. This practical experience allows practitioners to familiarize themselves with real-life trauma scenarios, enabling them to remain calm, adapt quickly, and make crucial decisions when faced with unforeseen circumstances. By honing their skills through simulation, healthcare professionals are better equipped to handle the dynamic and unpredictable nature of traumatic emergencies.[19]

Continual Professional Growth: The ATLS course is not a destination but rather a starting point for continuous professional growth in trauma care. It lays the groundwork for ongoing learning, encouraging healthcare professionals to stay updated with the latest advancements, research, and best practices in trauma management. By engaging in further education, attending conferences, and participating in advanced trauma courses, practitioners can expand their knowledge and expertise, ensuring the provision of high-quality, evidence-based care to their patients.[19, 20]

Conclusion:

The ATLS course stands as a testament to the commitment of healthcare professionals to provide excellent trauma care. It empowers practitioners with the necessary knowledge, skills, and standardized approach to save lives in the critical moments following traumatic events.

By fostering standardization, promoting critical decision-making, preparing for the unexpected, and facilitating ongoing professional growth, the ATLS course

plays an indispensable role in enhancing the quality and outcomes of trauma care worldwide.

It is through this investment in education and continuous improvement that we pave the way for a future where every trauma patient receives the best possible care, regardless of the circumstances.

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References

- World Health Organization. Injuries and Violence: The Facts 2014. WHO: Geneva: WHO; 2014.
- Alharbi R, Mosley I, Miller C, Hillel S, Lewis V. Factors associated with physical, psychological and functional outcomes in adult trauma patients following road traffic crash: a scoping literature review. *Transportation Res Interdiscip Perspect.* 2019;3:100061. <https://doi.org/10.1016/j.trip.2019.100061>.
- Mann NC, Mullins RJ, MacKenzie EJ, Jurkovich GJ, Mock CN. Systematic review of published evidence regarding trauma system effectiveness. *J Trauma.* 1999;47(3): S25–33. <https://doi.org/10.1097/00005373-199909001-00007>
- Rotondo MF, Cribari C, Smith RS. American College of Surgeons Committee on Trauma. Resources for optimal care of the injured patient. Chicago: American College of Surgeons; 2014. p. 6.
- Moore L, Champion H, Tardif P-A, Kuimi B-L, O'Reilly G, Leppaniemi A, et al. Impact of trauma system structure on injury outcomes: a systematic review and meta-analysis. *World J Surg.* 2018;42(5):1327–39. <https://doi.org/10.1007/s00268-017-4292-0>.
- Alharbi RJ, Lewis V, Shrestha S, Miller C. Effectiveness of trauma care systems at different stages of development in reducing mortality: a systematic review and meta-analysis protocol. *BMJ Open.* 2021;11(6):e047439. <https://doi.org/10.1136/bmjopen-2020-047439>.
- Mattson ME, Cai R, Woodward A. Emergency department visits vs. fatalities among substance-impaired underage youths involved in motor vehicle crashes. *J Safety Res.* 2015; 53:45–51. <https://doi.org/10.1016/j.jsr.2015.03.007>.
- Peitzman AB, Courcoulas AP, Stinson C, Udekwo AO, Billiar TR, Harbrecht BG. Trauma center maturation: quantification of process and outcome. *Ann Surg.* 1999;230(1):87–94. <https://doi.org/10.1097/0000658-199907000-00013>.
- James D, Pennardt AM. Trauma Care Principles. [Updated 2023 May 31]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK547757/>
- Newgard CD, Lin A, Eckstrom E, Caughey A, Malveau S, Griffiths D, Zive D, Bulger E. Comorbidities, anticoagulants, and geriatric-specific physiology for the field triage of injured older adults. *J Trauma Acute Care Surg.* 2019 May;86(5):829-837. [PMC free article] [PubMed]
- Galvagno SM, Massey M, Bouzat P, Vesselinov R, Levy MJ, Millin MG, Stein DM, Scalea TM, Hirshon JM. Correlation Between the Revised Trauma Score and Injury Severity Score: Implications for Prehospital Trauma Triage. *Prehosp Emerg Care.* 2019 Mar-Apr;23(2):263-270. [PubMed]
- Bouillon, B., Kanz, K. G., Lackner, C. K., Mutschler, W., & Sturm, J. (2004). Die Bedeutung des Advanced Trauma Life Support (ATLS) im Schockraum [The importance of Advanced Trauma Life Support (ATLS) in the emergency room]. *Der Unfallchirurg, 107*(10), 844–850. <https://doi.org/10.1007/s00113-004-0847-2>
- Michael P. Hogan, Darrell C. Boone, Trauma education and assessment, *Injury, Volume 39, Issue 6, 2008, Pages 681-685, ISSN 0020-1383, https://doi.org/10.1016/j.injury.2008.02.009.*
- Rotondo, Michael. "About ATLS". The American College of Surgeons. The American College of Surgeons. Retrieved 1 September 2020.
- Jayaraman S, Sethi D, Chinnock P, Wong R. Advanced trauma life support training for hospital staff. *Cochrane Database of Systematic Reviews* 2014, Issue 8. Art. No.: CD004173. DOI: 10.1002/14651858.CD004173.pub4. Accessed 11 July 2023.
- Schipper, I. B., & Schep, N. (2017). ATLS als baanbreker in het traumaonderwijs [ATLS - a pioneer in trauma education; history and effects]. *Nederlands tijdschrift voor geneeskunde, 161*, D1569.
- Dogjani, A., Gjata, A., Haxhirexha, K., Blloshmi, A., Shandro, S., & Laqja, S. (2020). Advanced Trauma Life Support training. How useful it is?. *Albanian Journal of Trauma and Emergency Surgery, 4*(2.4), 28-29. <https://doi.org/10.32391/ajtes.v4i2.4.171>
- Vassiliu, P., Mavrogenis, A., Theos, C., Koulouvaris, P., Massalis, I., Geranios, A., Bartsokas, C., Gerazounis, M., Tepetes, K., Kamparoudis, A., Stergiopoulos, S., Stavropoulos, M., & Androulakis, J. (2022). Advanced trauma life support course for medical students. A new era?. *Frontiers in surgery, 9*, 1025920. <https://doi.org/10.3389/fsurg.2022.1025920>
- Mohammad, A., Branicki, F., & Abu-Zidan, F. M. (2014). Educational and clinical impact of Advanced Trauma Life Support (ATLS) courses: a systematic review. *World journal of surgery, 38*(2), 322–329. <https://doi.org/10.1007/s00268-013-2294-0>
- Agron Dogjani, Kastriot Haxhirexha, Arben Gjata, Alfred Ibrahim, Amarildo Blloshmi. Medical Emergency Services in Albania, the Challenges and Improvements of Concepts in Management. *Journal of Surgery and Research* 5 (2022): 449-461. DOI:10.26502/jsr.10020242