

# Issues in the Referral System of Pediatric Trauma Patients

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Trauma is one the leading causes of morbidity and mortality all over the world.<sup>1</sup> In the developed world the care provided to trauma victims has improved over the years. This is due to the presence of an integrated system of dealing with road traffic accidents and other traumatic injuries, from the site of the incident to the dedicated trauma centers or designated hospitals where initial treatment is provided based upon the surgical needs of the victim. At each step in this system of care it is expected that patient's condition will improve. Multiple guidelines are available that aim to provide recommendations to various stake holder as to how to organize ambulance services, communications, referral system and in-hospital protocols based upon latest evidence. This is expected to further strengthen the trauma care delivery.<sup>2</sup>

American College of Surgeons introduced Advanced Trauma Life Support Course more than four decades ago in the United States which is now available in more than 100 countries all over the world.<sup>3</sup> This course is also available in Pakistan through College of Physicians & Surgeons Pakistan. The concept of initial assessment and management includes primary survey, secondary survey and transfer to definitive care. The "common language" used in this course is "ABCDE".

Tertiary care hospitals in a populous country like Pakistan are over burdened with large number of referrals. An audit of pattern of patients managed in emergency room is therefore important. This may help in identifying whether appropriate patients who need treatment at trauma center are received. Inappropriate referrals are burden on the scarce resources of the

public sector hospitals. It also deprives needy trauma patients of surgical services.<sup>4</sup> This also overburdens the healthcare providers. A liaison between different hospitals from periphery to an appropriate nearby medical facility that can provide services to the trauma victim in a timely manner improves the outcome. This also highlights the importance of effective ambulance services that can be used to transport the trauma victim from the site of accident to the nearest hospital and for inter-hospital transfer as well.

Prehospital emergency providers in many countries are trained to deal with immediate life threatening injuries. Many courses are available to train the emergency providers in a similar pattern to ATLS. A continuity of care is thus guaranteed. In Pakistan, rescue emergency services 1122 is a welcome addition to the existing fragmented ambulance services system.

The importance of inter-hospital transfer cannot be underestimated. It is needed when medical services that are required for the treatment of the trauma patients are not available. However, before any transfer is made, life threatening injuries must be dealt with and potentially life threatening injuries are also addressed. It is appropriate to have memorandum of understanding with the referral hospital. A proper communication with the trauma team on-call, and relay of precise information about the needs of the patient is an important skill. A modified "ABC-SBAR" mnemonic (airway, breathing, circulation followed by situation, background, assessment, and recommendation) improves hand-offs process.<sup>5</sup>

In the United States, trauma centers are designated different levels after verification based upon the services that can be provided to victims of accidents. This include both the human resources and available logistics including physical space, designated service areas, different devices, equipment and others. Trauma centers are designated from Level I to Level V. Trauma centers are also verified as adult and pediatric based upon the age group that a facility can manage. A Level I trauma center must provide comprehensive care to the trauma patients from the arrival, to discharge and till thorough rehabilitation is completed.<sup>6</sup>

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In a case report published in this issue of JSP a pediatric age group patient, though received initial care at the "trauma center" but then referred out to a facility that did not have pediatric surgical services, without prior information.<sup>7</sup> This type of referral endangers the trauma victim. It also revealed that the hospital was not a designated Level I trauma center. In a metropolitan city of Karachi non availability of Level I trauma center is of concern. Medical community and policy makers should take this issue seriously and plan on urgent basis how it can be addressed. Pediatric patients need equal care as that of an adult.

#### REFERENCES:

1. Hamadi HY, Zakari NMA, Tafili A, Apatu E, Spaulding A. A cross-sectional study of trauma certification and hospital referral region diversity: A system theory approach. *Injury*. 2021 ;52:460-6. doi: 10.1016/j.injury.2020.10.101.
2. National Clinical Guideline Centre. Major trauma service delivery. NICE guidelines NG40. 2016. [Internet] Available from URL <https://www.nice.org.uk/guidance/ng40/evidence/full-guideline-pdf-2313258877> accessed on June 28, 2023.
3. Bonjour TJ, Charny G, Thaxton RE. Trauma resuscitation evaluation times and correlating human patient simulation training differences—what is the standard? *Military Med*. 2016;181:e1630–e6, <https://doi.org/10.7205/MILMED-D-14-00486>.
4. Ntakiyiruta G, Wong EG, Rousseau MC, Ruhungande L, Kushner AL, Liberman AS, et al. Trauma care and referral patterns in Rwanda: implications for trauma system development. *Can J Surg*. 2016;59:35-41. doi: 10.1503/cjs.008115.
5. McCrory MC, Aboumatar H, Custer JW, Yang CP, Hunt EA. "ABC-SBAR" training improves simulated critical patient hand-off by pediatric interns. *Pediatr Emerg Care*. 2012;28:538-43. doi: 10.1097/PEC.0b013e3182587f6e.
6. Southern AP, Celik DH. EMS, Trauma center designation. 2023. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan–. PMID: 32809388. Accessed in June 2023.

7. Nazar F. Need of appropriate referral system for acutely injured children: An experience from the largest city of Pakistan. *J Surg Pakistan*. 2023;28(2):XX

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