ISSN: 2469-5823

Senmar and Aliakbari. Int Arch Nurs Health Care 2022, 8:179
DOI: 10.23937/2469-5823/1510179
Volume 8 | Issue 4
Open Access

International Archives of
Nursing and Health Care

LETTER TO EDITOR

Futility in Cardiopulmonary Resuscitation of Pre-Hospital Emergency

***Mojtaba Senmar*[1*] *and Mohaddese Aliakbari*[2]**

[1]*Social Determinants of Health Research Center, Research Institute for Prevention of Non-Communicable Diseases, Qazvin University of Medical Sciences, Qazvin, Iran*

[2]*Emergency Medical Service Center, Qazvin University of Medical Sciences, Qazvin, Iran*

***Corresponding author:** *Mojtaba Senmar, Social Determinants of Health Research Center, Research Institute for Prevention of Non-Communicable Diseases, Qazvin University of Medical Sciences, Qazvin, 34851-37449, Iran, Tel: +98-912-0592-073*

Out-of-hospital cardiac arrest (OHCA) is cardiac arrest that occurs outside of a hospital setting [1]. Cardiopulmonary resuscitation (CPR) is the foundation of treatment for this major global health problem with high mortality, that improving patient' chances of survival [2,3]. The results of a meta-analysis study on OHCA showed that the rate of survival to hospital admission, the rate of survival to hospital discharge, the pooled 1-month survival rate and the 1-year survival rate are 22.0%, 8.8%, 10.7% and was 7.7%, respectively [4]. Improving the quality and effectiveness of care for these patients is one of the tasks of pre-hospital emergency [2].

Pre-hospital emergency as a health management system is one of the most important pillars of providing medical services around the world [5], which is responsible for responding to emergency phone requests, sending to the place, providing care by trained staff at the scene of the accident, providing care in the vehicle and transporting the person to the selected medical center [6]. Although facilities, equipment and age of the patient are effective factors in successful resuscitation [7]. It should be noted that successful resuscitation depends on a strong chain of survival with the cooperation of the community, hospital, dispatch center, and ambulance [8]. The goal of emergency medical service (EMS) is to improve response time, respond to dispatch calls as often as possible, and ensure quality CPR [8]. In this system, personnel often provide advanced life support to patients with OHCA [8]. But staff in pre-hospital emergency teams is limited [9]. Therefore, it should be said that one of the barriers to CPR in the EMS is the lack of human resources [2].

In Iran's EMS, people call 115 and provide the reason for the call and a history of the patient's problems to the dispatch unit [10]. After identify the emergency situation of the patient, the dispatch personnel send the information and the main problem of the patient to the nearest emergency center [10]. The current policy is that for all CPR missions, only two personnel are organized, and these two must perform all CPR maneuvers and actions [2]. Apart from this, if the patient is transferred to the hospital, one of the two personnel must drive the ambulance. One or two person CPR for patients who are far from the hospital. It can cause many costs for the patient and the family. Separately, in the absence of an automatic massage machine, performing CPR by one person in the back of the ambulance brings difficulties. It seems that CPR in EMS is faced with a concept called futility.

Futility is a contentious term that has eluded clear definition [11]. With the proposed descriptions either too rigid or too vague to cover many aspects of medical care [11]. Futility is generally difficult to define, especially when dealing with CPR and other life-sustaining measures [11], so there are several definitions of futility in CPR [12]. But is the futility or assumption of the futility of CPR a cause not to perform this maneuver or not? How ethics are adhered to if a CPR is fulfilled, and

Citation: Senmar M, Aliakbari M (2022) Futility in Cardiopulmonary Resuscitation of Pre-Hospital Emergency. Int Arch Nurs Health Care 8:179. doi.org/10.23937/2469-5823/1510179

Accepted: December 09, 2022: **Published:** December 11, 2022

if CPR is not carried out, what ethical principles have not been observed. A question whose answer can reveal cases of cultural conflicts, the diversity of facilities and equipment's among different societies and lead to the creation of general and specified opinions and reactions at the level of society and policy makers. On the one hand, ethical principles state that participation in procedures without the possibility of reasonable profit is prohibited [13]. There is no right to harm the patient and all patients have the right to be treated fairly and equally by others [14], and on the other hand, in clinical practice, there are no well-established criteria or guidelines to determine futility [12].

According to the above, it can be said that EMS personnel face many challenges, limitations and problems in CPR [15]. Clinical guidelines based on medical factors help make decision-making in pre-hospital resuscitation in some countries, while others countries rely on individual judgment [16]. The decision-making process in the pre-hospital emergency context is complicated [16]. Therefore, on the one hand, there is a need to provide a clear definition of the futility of CPR in the pre-hospital emergency context, which takes into account the lack of human resources and equipment. And on the other hand it seems that managers and policy makers should take steps to solve the lack of human resources and equipment.

References

1. Thibodeau J, Werner K, Wallis LA, Stassen W (2022) Out-of-hospital cardiac arrest in Africa: a scoping review. BMJ Open 12: e055008.
2. Dehghan-Nayeri N, Nouri-Sari H, Bahramnezhad F, Hajibabaee F, Senmar M (2021) Barriers and facilitators to cardiopulmonary resuscitation within pre-hospital emergency medical services: A qualitative study. BMC Emerg Med 21: 120.
3. Moscarelli A, Iozzo P, Ippolito M, Catalisano G, Gregoretti C, et al. (2020) Cardiopulmonary resuscitation in prone position: A scoping review. Am J Emerg Med 38: 2416-2424.
4. Yan S, Gan Y, Jiang N, Wang R, Chen Y, et al. (2020) The global survival rate among adult out-of-hospital cardiac arrest patients who received cardiopulmonary resuscitation: A systematic review and meta-analysis. Crit Care 24: 61.
5. Norouzinia R, Ebadi A, Yarmohammadian MH, Chian S, Aghabarary M (2021) Relationship between resilience and self-efficacy with professional quality of life in EMS personnel. Journal of Hayat 27: 176-189.
6. Farrokhi P, Irannejad B, Hajizadeh A (2022) Job stress and its management methods among pre-hospital emergency staff in Iran: A systematic review. Journal of Rafsanjan University of Medical Sciences 21: 661-676.
7. Aliakbari H, Azimian J, Hasandoost F, Momeni M, Rashvandi F (2019) A study of the outcomes and effective factors on cardiopulmonary resuscitation in an educational hospital. International Journal of Epidemiologic Research 6: 20-23.
8. Wang Y, Zhang Q, Qu GB, Fang F, Dai XK, et al. (2022) Effects of prehospital management in out-of-hospital cardiac arrest: Advanced airway and adrenaline administration. BMC Health Serv Res 22: 546.
9. Borkowska MJ, Smereka J, Safiejko K, Nadolny K, Maslanka M, et al. (2021) Out-of-hospital cardiac arrest treated by emergency medical service teams during COVID-19 pandemic: A retrospective cohort study. Cardiol J 28: 15-22.
10. Saberian P, Conovaloff JL, Vahidi E, Hasani-Sharamin P, Kolivand PH (2020) How the COVID-19 epidemic affected prehospital emergency medical services in Tehran, Iran. West J Emerg Med 21: 110-116.
11. Vivas L, Carpenter T (2021) Meaningful futility: Requests for resuscitation against medical recommendation. J Med Ethics 47: 654-656.
12. Beck K, Vincent A, Cam H, Becker C, Gross S, et al. (2022) Medical futility regarding cardiopulmonary resuscitation in in-hospital cardiac arrests of adult patients: A systematic review and meta-analysis. Resuscitation 172: 181-193.
13. Glober NK, Tainter CR, Abramson TM, Staats K, Gilbert G, et al. (2019) A simple decision rule predicts futile resuscitation of out-of-hospital cardiac arrest. Resuscitation 142: 8-13.
14. Haddad LM, Geiger RA (2022) Nursing ethical considerations. In: StatPearls [Internet]. StatPearls Publishing, Treasure Island (FL), USA.
15. NDehghan-Nayeri N, Bahramnezhad F, Hajibabaee F, Senmar M (2021) Challenges of organisational structure and human resources in pre hospital emergency medical systems for cardiopulmonary resuscitation: A qualitative study. Journal of Clinical and Diagnostic Research 15: 6-11.
16. Milling L, Kjær J, Binderup LG, de Muckadell CS, Havshøj U, et al. (2022) Non-medical factors in prehospital resuscitation decision-making: A mixed-methods systematic review. Scand J Trauma Resusc Emerg Med 30: 24.