Original Article

Community Medicine

Knowledge and Practices of Basic Life Support amongst the Ambulatory Staff in Karachi

1. Kiran Mehtab 2. Santosh Kumar 3. Raees Ahmed 4. Waqas Ahmed 5. Sajeer Bhura

1. Asstt. Prof. of Community Medicine, JSMU, Karachi 2. Asstt. Prof. of Anatomy, JSMU, Karachi
3. Asstt. Prof. of Physiology, JSMU, Karachi 4. House Officer Medicine, JPMC, Karachi
5. Final Year Student, JSMU, Karachi

ABSTRACT

Objective: To assess the Knowledge and Practice of Basic Life Support in the ambulatory staff services in Karachi.
Study Design: Cross Sectional Study
Place and Duration of Study: This study was conducted at Sindh Medical University (JSMU) from March 1st to October 30th, 2011.
Materials and Methods: Sample size of 283 was drawn using non- probability purposive sampling ,ambulance staff members belonging to 10 ambulance services in the city, mainly Aman Foundation, Edhi, Chippa, Khidmat-e-Khalq Foundation were interviewed through structured questionnaire. The data was collected & analyzed on SPSS version 17.
Results: Out of the 283 ambulatory staff members, 72.5% of the staff had no knowledge of Basic Life Support, 27.4% had knowledge. 14% answered correctly about the position in which a heart attack patient should be placed, 90% answered wrongly about patient whose clavicle had been fractured. 72% of the ambulatory staff actually checked oxygen flow in the tank after they had put the mask on the patient, 65% of the staff had removed the helmet of accident patients.64.8% had no idea about the respiratory rate, pulse count of an adult, 76.2% didn't know about the complications of an Intravenous installation.
Conclusion: The study proved major lapses in knowledge & practices in Basic Life Support for ambulatory staff. Implementation of first aid's protocol are fully neglected, yielding an ambulance service that might let the patients suffer undue circumstances and also directly affects major indicators of primary health care.
Key Words: Basic Life Support, Ambulatory services, Knowledge, Practices.

INTRODUCTION

The timely provision of pre- hospital care can limit the cascade of events that rapidly lead to death/ disability. Ambulances play a great role in decreasing mortality, morbidity in the cases of injury, trauma[1]. Ambulances are few in Pakistan, not staffed by medical personnel[2] , In most cases, ambulances is staffed by the driver, clerk for transferring the patient[3] .In the world the patients are attended by emergency medical technician. EMTs are trained to assess a patient's condition, perform emergency medical procedures as needed maintaining patient's airway with adequate breathing, cardiovascular circulation until the patient can be transferred to advanced medical care[4]. Evidence has shown deaths are prevented, disability averted in trauma, pregnancy, myocardial infarction, stroke, sepsis by upgrading the emergency services[5] .Injury has become a major cause of death, disability world-wide[6] .Interventions include cardiopulmonary resuscitation, defibrillation, controlling severe external bleeding, preventing shock, body immobilization to prevent spinal damage, splinting of bone fracture[7].

MATERIAL AND METHODS

A cross sectional was conducted; data was collected by using a structured questionnaire. A sample size of 283 ambulatory staff members was drawn through non-probability purposive sampling. Ambulance staff members belonging to 10 ambulance services in the Karachi city, mainly Aman Foundation, Edhi, Chippa, Khidmat-e-Khalq Foundation were interviewed through structured questionnaire. The study was conducted from March 1st – October 30th, 2011 in Karachi, data was collected, analyzed on SPSS version 17.

RESULTS

Out of 283 ambulatory staff members, 72.5% had no knowledge of Basic Life Support; 27.4% had knowledge, only 14% were able to answer correctly the position in which a heart attack patient should be placed, 90% answered wrongly. 72% of the ambulatory staff actually checked oxygen flow in the tank after putting mask on the patient, 65% of the staff had remove the helmet of a patient involved in a vehicle accident. 64.8% of the staff had no idea about the respiratory rate, pulse of an adult.76.2% didn't know about the complications of an IV installation, four major ambulatory services of Karachi, 28.6% the staff of Aman Foundation had better knowledge of basic life support. Chippa, Edhi ambulances were most ignorant with regards to knowledge of basic life support. KKF men had meager knowledge of BLS as they were vulnerable to commit errors while predisposing the

practices of BLS. 58% of the ambulatory staff didn't know the correct answer. Aman Foundation had most of the answers correct as compared to the rest of the service.

Table No.1. Frequency of positive & negative results from the ambulatory staff.

S. No	Questions asked	Yes %	No %
1	Staff Trained	83.6%	16.4%
2	Staff knew normal pulse, respiratory rate	35.2%	64.8%
3	Staff knew recovery position after a heart attack	14.6%	85.4%
4	Staff knew complications after I/V intervention	23.8%	76.2%
5	Staff knew symptoms of heart attack	16.0%	84.0%
6	Staff had knowledge of handling a broken collar bone	9.6%	90.4%
7	Staff had knowledge of a helmet during a road traffic accident	32.9%	67.1%
8	Staff had knowledge of operating an oxygen tank	27.6%	72.4%
9	Staff had knowledge of minimum time to cover a 7km distance	59.8%	40.2%

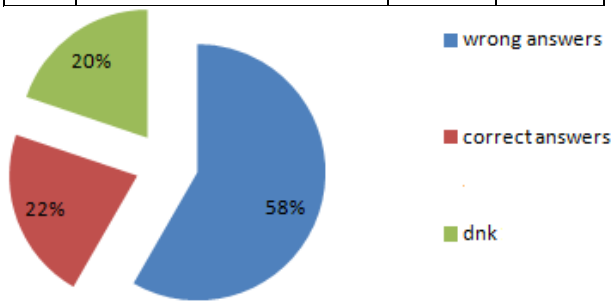

Figure No.1: Frequencies of correct & incorrect answers presented by the ambulatory staff.

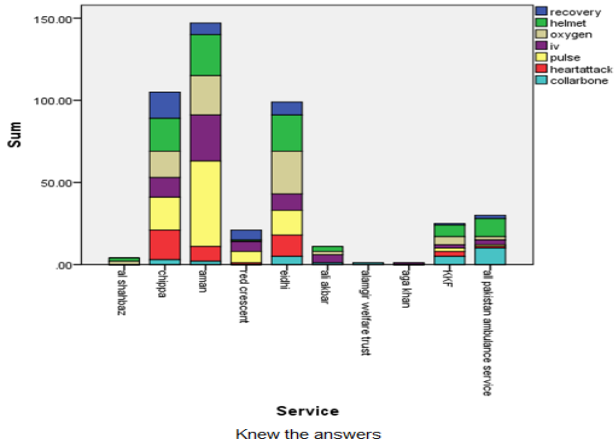

Figure No.2: Comparison of correct answers given by the ambulatory staff.

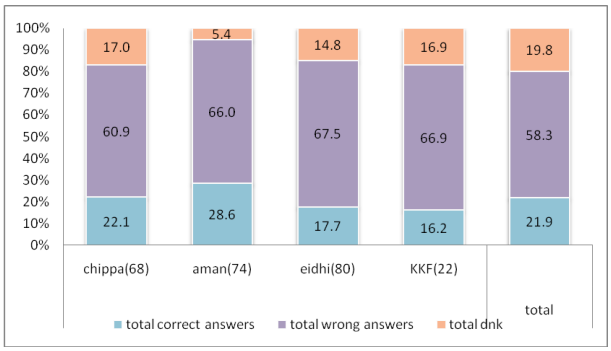

Figure No.3: Comparison of answers given by Chippa, Aman Foundation, Edhi, Khidmat-e-Khalq foundation

DISCUSSION

Injury accounts for 16% of the global burden of disease. One of the leading causes of mortality, morbidity worldwide; it affects low, middle income countries like Pakistan. Evidence showed deaths are prevented, disability averted in trauma, pregnancy, myocardial infarction, stroke, sepsis by upgrading emergency services. Heavy traffic, overcrowding of the city, large number of injuries, especially RTAs, are common in Karachi[8]. BLS programs should be conducted in all corners, sectors of society, with the intention of creating numerous basic life support responders[9, 10;] It is a must to standardize training in basic life support[11, 12]. Ambulatory staff should actually be saving lives rather than just transporting dying patients to the hospital, a large number of calls are for transporting dead bodies[13]. Vital time is lost in reaching a government-designated[14], Ambulance act is present[15], Lack of resuscitation skills in basic life support (BLS) has been identified as a contributing factor to poor outcomes[16]

CONCLUSION

The study concluded major lapses in knowledge & practices in Basic Life Support for ambulatory staff. Implementation of first aid's protocol are fully neglected, yielding an ambulance service that might let the patients suffer undue circumstances and directly affects major indicators of primary health care. Government must take major steps to save the lives of patients.

REFERENCES

1. Mahmood KT. Management of the patient from the site of accident to the hospital/ pre-hospital care. J Pharm Sci & Res 2010;2(12):804-80.
2. Bhatti JA, Razzak JA, Lagarde E, Salmi LR. Differences in police, ambulance, and emergency department reporting of traffic injuries on Karachi-Hala road, Pakistan. BMC Res Notes 2011;4:75.

3. Baqir SM, Ejaz K. Role of pre-hospital care and ambulance services in Karachi. JPMA 2011; 61(12):1167-9.
4. Obaidullah, Farooq S. Clinical Protocols: Introduction to a Useful Strategy in Clinical Practice. J Pak Med Assoc 2000;97(10):33-40.
5. Siddiqui M, Siddiqui SR, Zafar A, Khan FS. Factors delaying hospital arrival of patients with acute stroke. J Pak Med Assoc 2008;58(4): 178-82.
6. Mock C, Lormand J, Gossen J, Joshipura M, Peden M. Guidelines for essential trauma care. Geneva. World Health Organization 2004; 27: 19-57.
7. Sasser S, Varghese M, Kellermann A, Lormand J. Prehospital trauma care systems. Geneva: World Health Organization 2005;27: 21-31.
8. Zafar H, Jawad, Memon AA, Hameed A, Effendi MS, Shamim MS, Qureshi S, et al. Terrorist bombings: Medical response in a developing country. J Pak Med Assoc 2011;61(6):561-6.
9. Shiwani MH, Gadit AM. Medical negligence: A growing problem in Pakistan. J Pak Med Assoc 2010;61(6): 610-1.
10. Karim MS, Zaidi S. Medical negligence: A growing problem in Pakistan. The Pakistan Development Review 1999; 38(4): 661–688.
11. Siddiqi S, Kielmann AA, Khan MS, Ali N,ghaffar A, Shiekh U, Mumtaz Z, et al. The effectiveness of patient referral in Pakistan. J Oxford 2010;
12. Abassi SH, Kazi G, Mughal MJ. Provisional Health Policy Pakistan 2005;11-16.
13. Razzak JA, Cone DC, Rehmani R. Emergency medical services and cultural determinants of an emergency in Karachi, Pakistan. Prehospital Emergency Care 2001; 5(3): 312-6.
14. Channa R, Jaffrani HA, Khan AJ, Razzak JA. Transport time to trauma facilities in Karachi: an exploratory study. Transport time to trauma facilities in Karachi: an exploratory study. Internl J Emergency Med 2008; 1(3): 201-4.
15. Chandrasekran S, Kumar S, Bhat SA, Kumar S, Shabbir PM, Chandrasekran VP. Awareness of basic life support among medical, dental, nursing students and doctors. Indian J Anaesth 2010; 54(2): 121–126.
16. Passali C, Pantazopoulos I, Dontas I, Patsaki A, Barouxis D, Troupis G, Xanthos T. Evaluation of nurses' and doctors' knowledge of basic & advanced life support resuscitation guidelines. Nurse Educ Practice 2011;11(6):365-9

Address for Corresponding Author:
Dr. Kiran Mehtab:
Assistant Professor,
Community Medicine Department.
Sindh Medical College, (DUHS), Karachi
Email: kiranalisyed@yahoo.com
Cell #: 0333-3188237