

YOU DARE COLLAPSE IN A HOSPITAL

Dr A Asad, Dr Rishya M, Dr Amin, Dr Anand, Dr Shahrul, Dr Srilatha

Department of Trauma and Emergency, PPUM, 2011

ABSTRACT

To assess the knowledge of CPR and awareness of latest changes in BLS new guidelines 2010, a survey was made among the health care providers in Malaysia which included nurses, paramedics, ambulance personnel and ambulance drivers. A worrying number of respondents were not sure of recognizing when to start the CPR. The most troublesome finding of the survey was use of AED and overall lack of awareness with new changes in 2010 guidelines.

INTRODUCTION

The Malaysian emergency response system in life threatening situations is deployment of fully equipped ambulance with paramedics, nurse and very rarely a doctor. 2010 guidelines concerning BLS / ACLS have led to significant changes making it easier to follow chest compressions.

CPR is the foundation technique for the emergency treatment of cardiac arrest. The standardized training of CPR technique has been emphasized more than ever in last few years.

CPR is taken as something every doctor knows when they take MBBS scroll in a graduation ceremony..... quite true that every doctor in that ceremony has heard of CPR and quite often has seen or done CPR during the hospital posting but the question arises if that experience is enough for a leading role in a case of collapsed patient when the need arises. A common man also thinks that nurses and paramedics personnel know their CPR technique and will be able to save a life in danger. But is this statement as true as people thinking every doctor can operate in the theatre?

When to start CPR, when to use AED and who should be trained and who should be required to renew their BLS / ACLS training are some of the questions that needs to be addressed within our health system in Malaysia.

MATERIAL AND METHODS

Object : The author and team have been involved in many training sessions of CPR technique to masses and with many BLS and ACLS sessions involving health care personnel's.

While training was involving HCPs (Healthcare providers) the idea was to find out the knowledge and technique the groups had in terms of recognizing a

collapse victim, how many seconds required for pulse check and more importantly the use and familiarity with AED which is now the integral part of BLS. The focus was also on the awareness of new AHA guidelines among our HCPs.

Participants from the training were selected for the study and they were randomly selected by the organizing hosts and the participants in any one session included HCPs from more than one institution.

Investigation methods:

The survey was conducted by questionnaire which was self designed and revised repeatedly, reviewed and checked by peer experts and tested by preview survey.

The content of the questionnaire included:

- Technique of hand placement on chest, when to call for help and time for pulse check.
- Usage of AED
- Common BLS 2010 changes.

Statistical Method: The data of questionnaire was processed using chi square test, considering $P < 0.05$ as the level of significance.

RESULTS

As this was a pilot study of an on going study which will ultimately have roughly 1000 respondents, in this survey 80 questionnaire were collected.

General: All the participants were above the 20 years of age and all were involved with health care facilities. There was no determinant for sex and level of education. Except for two Indian national participants all the rest were Malaysian national.

Knowledge of CPR: Knowledge of CPR among the HCPs in general was good especially those who worked in ICU and in bigger institutions. 17.6 % were however not sure when to start the chest compression

confirming the age old problem of recognition of collapse or impending collapse. It was nevertheless encouraging to see that 86 % will call for help when they witness a collapse. Only 2.9 % wanted to check for pulse for 20 seconds.

AED usage: Automated external defibrillator is now an integral part of BLS sequence and should be made popular among our health care providers. In the survey 26.4 % wanted to use it after completing 2 minutes of CPR which defies the sequence in BLS guidelines 2011. However 67.7% will stop the CPR when AED arrives.

BLS Guidelines 2011: The new guidelines by AHA 2011 should be taught aggressively among HCPs as it has made initial chest compressions easy to start. In the survey 88.2 % did not know the right sequence in the case of drowning.

DISCUSSION

As per the expectations and perception of CPR among HCPs the actual knowledge and technique of CPR was not heart warming. The basic knowledge of CPR needs to be refreshed and strengthened. Recognition of collapse or impending collapse is an integral part of BLS sequence 2010 and the correct answer to this was only 82.4 %. AED which is so important and integral in the new guidelines did not find much familiarity with our HCPs and much awareness and importance needs to be given to this machine so that like in many parts of Europe and particularly Japan one day we can see the presence of AED in all the places that attract huge crowds (*Jonathan Anderson, AHA Guidelines 2011*). A whopping 32.3% did not want to stop CPR when AED arrives at a scene of collapsed victim which in turn reflects ignorance of the new sequence in BLS 2010 AHA guidelines.

Measures:

After emergency dispatchers in Australia started giving simplified, hands-only CPR instructions, cardiac arrest survival inched up, a new study finds. In Melbourne, cardiac arrest victims were more likely to receive CPR from a bystander after the change in dispatchers instructions. More importantly the study found that survival improved from 9.5% to 12.5% over all. This new study in part by AHA 2010 shows how the new simplified sequence has helped improved the survival rate (*Jonathan Anderson, AHA Guidelines 2011*).

Changing views, raising awareness and clarifying responsibilities of the nurses, paramedics and doctors in CPR are required. In some developed countries and regions, social emergency of first aid has achieved. HCPs as professionals, need to practice CPR in the first aid to save life with full responsibility and obligation.

Professionals should shoulder the mission of first aid and popularization of practice of CPR and its knowledge to public and HCPs (*Chen Xiu-zhen et al 2008*).

Administrative intervention and community support are required to build long term mechanism for continuing education of HCPs and public. Paramedics are an important constituent of pre hospital emergency team. Accurate and effective CPR at the time of need is essential for the cardiac arrest and it depends dominantly on those qualified nurses and paramedics.

To realize the goal and to guarantee the stability and continuous running of a standardized training mode, administrative intervention should be conducted by relevant departments of the government, medical schools and hospitals (*Eckstein M, 2008*).

Finally, the glaring need for CPR and much improved easy sequence of BLS needs to be taught more aggressively to public and HCP of our health care system.

REFERENCE

- Chen Xiu-zhen, Zhang Rui-Lian, Fu Yan-mei, Wang Tao, 2008, PRC, Survey of Knowledge of CPR among nurses, *Alameen J Med Sci*, Vol. 1 (2) pp93-98
- Eckstein M. 2008, Impact of CPR from out of hospital CA. American College of Emergency Physicians Scientific assembly.
- Jonathan Anderson, (Reviewer- Eric Yang) *Medcape emergency medicine, AHA 2010 guidelines, 2011*
- Judith E Tintinalli, O John Ma 2010, *Essentials in emergency Medicine*, McGraw Hill, NY.
- Sirley Ooi, Peter Manning 2004, *Guide to the essentials in Emergency Medicine*, National University Hospital, Singapore. McGraw Hill.