



[ORIGINAL ARTICLE]

Changes in awareness before and after the BLS Course

Noriko SAKODA^{1)*}, Kazue NARA²⁾, Mami SASAO-TAKANO³⁾

School of Nursing & Rehabilitation, Tokyo Health Sciences University, Tama, Tokyo, Japan¹⁾

Yokohama ACLS, Yokohama, Kanagawa, Japan⁴⁾

Tsurumi University School of Dental Medicine, Department of Dental Anesthesiology, Yokohama, Kanagawa, Japan²⁾

ARTICLE INFO

Article history:

Received 07 June, 2018

Accepted 10 August, 2018

Key words:

Basic life support

Awareness change

Health care workers

ABSTRACT

A survey with written and short-answer questions was conducted and analyzed regarding changes in mindsets before and after attending the BLS course based on the profession of 112 healthcare providers (17 physicians, 52 dentists, 43 nurses) who took the course in the medical facilities. Many people chose, "I want to learn how to respond to a case of sudden changes," "I haven't been able to respond to a case of sudden changes," and "I want to gain confidence," as reasons for taking the course in all professions. More than 80% of all professions gave positive response to "the need for BLS in in-hospital training" and "utilizing BLS skills in clinical practice" before attending the BLS course. The BLS course was positively accepted after attending the course regardless of profession. Concerning "I want to take ACLS/PALS courses," more than 90% of physicians and nurses responded positively while 75% of dentists gave positive response, which revealed the difference between professions. To consider the delivery methods, contents and timing of the courses in order to provide many participating opportunities to prospect attendees is our future task.

1. Introduction

As an educational activity for cardiopulmonary resuscitation method (hereinafter referred to as "CPR"), Basic Life Support courses have been held as a part of training within and out of medical facilities. Although a reason to take the course varies with an individual, it has recently been incorporated into the educational programs within medical facilities. Also, the need for the course has been further acknowledged since its results¹⁻³⁾ were published. In this research, we aimed to clarify changes in awareness of participants before and after attending the BLS course as educational training within medical facilities.

2. Materials and Methods

1) Research Subjects

112 individuals who attended the AHA-BLS Healthcare Provider Course within the facilities.

2) Research Period

November 2010 to January 2011

3) Research Method

The survey with the written as well as short-answer questions was conducted before and after the training, and then the answers were analyzed.

4) Ethical Consideration

After obtaining the approval from the Ethics Committee, the purpose of the research was explained to the research participants orally as well as in writing. They agreed to participate by answering the questionnaire. In consideration of protecting the privacy of the research participants, their personal information was coded so that they could not be identified.

*Corresponding author. Tel. : +81-42-313-7106
E-mail : n-sakoda@u-ths.ac.jp

Table 1. Consciousness before and after attendance

		Before (%)			After (%)		
		Yes	Can't say either say	No	Yes	Can't say either say	No
Necessity of BLS	All profession	96	4	0	99	0	0
	Doctor/ Nurse Dentist	96 96	4 4	0 0	97 100	3 1	0 0
Clinical application	All profession	96	4	0	99	1	0
	Doctor/ Nurse Dentist	97 96	3 4	0 0	98 100	2 0	0 0
Personal attendance	All profession	74	24	2	84	15	1
	Doctor/ Nurse Dentist	74 72	26 22	0 6	84 83	15 15	1 2

3. Results

1) Overview of Study Subjects

There were 112 study subjects including 17 physicians, 52 dentists (junior residents), and 43 nurses (Fig. 1). 39 subjects had taken the BLS course before (35%). Types of training included AHA-BLS course (4 participants: 10%), Non-AHA course (2 participants: 5%), and the basic training (33 participants: 85%). The participants of the basic training were all dentists.

2) Reason for Participating

Regardless of profession, many people chose, "I want to learn how to respond to a case of sudden changes," "I haven't been able to respond to a case of sudden changes," and "I want to gain confidence." In addition, half of the dentists answered, "I have never responded to a case of sudden changes," or "I have never encountered a case of sudden changes."

3) Mindset Before the BLS Course

There was no difference in answers regardless of profession. Firstly, 96% of the subjects responded positively to "the need for BLS in in-hospital training" and "utilizing BLS skills in clinical practice." Further, 74% of the subjects responded positively to "I would still take a BLS course even in non-hospital training setting" while 2% of them responded negatively (Table 1).

4) Mindset After the BLS Course

The subjects responded positively to all questionnaire items after the course. 99% of the subjects gave positive response to "the need for BLS in in-hospital training" and "utilizing BLS skills in clinical practice." In addition, 84% of the subjects gave positive response

to "I would still take a BLS course even in non-hospital training setting." 97% of the subjects responded positively to "the need for continual BLS courses." 83% of the subjects responded positively to "I would like to take ACLS/PALS courses," regardless of profession. However, there were some differences in response depending on profession when 25% of dentists answered "Neither" while more than 90% of physicians and nurses answered positively (Table 1, 2).

4. Discussion

Based on the results of this research, it has become clear that the need for BLS courses is affirmatively acknowledged both before and after the course regardless of profession. Since timely BLS is a key to return of spontaneous circulation for a patient with cardiopulmonary arrest^{4,5}, it is reflected in their reason to take the course. In addition, regarding "the need for BLS in in-hospital training" and "utilizing BLS skills in clinical practice," it can be considered that they have taken the course for the purpose of using it in clinical setting since more people acknowledged its need after the course. Therefore, the awareness was further improved after taking the course. Moreover, the positive response to "I would still take a BLS course even in non-hospital training setting" has increased to 84% after the course from 74% before the course. Maintaining BLS skills is said to require continual education and a support system⁶; however, reasons and initiation to take the course are often left to individuals⁷. Based on such present conditions, it is believed that the mindset of "the need

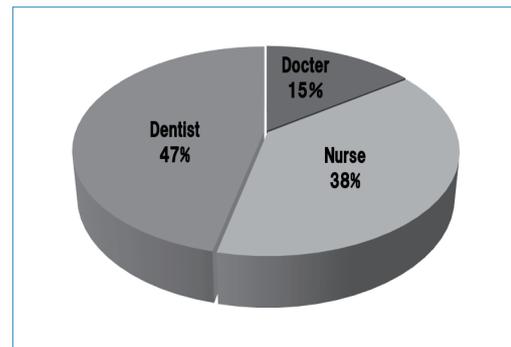
Table 2. Consciousness after attendance

		Yes	Can't say either say	No
Necessity of BLS	All profession	97	2	1
	Doctor/ Nurse Dentist	98 96	2 4	1 0
ACLS/PALS training hope	All profession	83	17	0
	Doctor/ Nurse Dentist	91 75	9 25	0 0

for continual BLS courses” has been raised by obtaining opportunities to attend the courses held in medical facilities. However, as for the difference in response caused by profession, the difference in the mindset between physicians/nurses and dentists for “I would like to take ACLS/PALS courses” has become obvious after the course. Physicians and nurses are more likely to encounter cardiopulmonary arrest patients in their daily clinical setting, and they can easily acknowledge the need for BLS as well as ACLS/PALS. Dentists are also required to provide reliable initial response to possible complications of vasovagal reflex and hyperventilation syndromes in addition to anaphylactic shock during dental treatment⁸⁾. Therefore, acquiring the BLS skills is essential. However, ACLS and PALS are considered to be influenced by the environment, detail and scope of work at the medical facilities they belong to. Furthermore, it is sometimes recognized as a prerequisite for certification examinations of physicians as well as safety management within the facilities, so the need for BLS course regardless of profession has been made clear at this time. It is a future issue to consider course contents, course delivery method and timing, etc.

5. Conclusions

The need for BLS courses within medical facilities was positively acknowledged regardless of whether it was before or after the course or the subject's profession. The future task is to consider the delivery methods, contents and timing of the courses in order to offer many participating opportunities.

**Fig.1 Breakdown of profession**

References

- 1) Takahashi H, Tajima K, Mizutani T, et al. Examination concerned with skills of basic life support. *Anesthesia and Resuscitation*. 2003; 39: 1-5.
- 2) Inoue T, Takada M, Yokoyama H, et al. Change of the lifesaving awareness of the hospital personnel by the cardiopulmonary resuscitation class enforcement. *Journal of Japanese Society for Emergency Medicine*. 2012; 15: 401-407
- 3) Tago M, Kawamoto K, Oda Y, et al. Effect of the practical Basic Life Support (BLS) training at the Yuaikai Oda Regional Medical Center. *Japan Society for Health Care Management*. 2016; 17: 163-167.
- 4) American Heart Association (2016): Part 1: General concepts, BLS Provider Manual. Japanese trans. Tokyo: Synergy International, 1-12
- 5) Japan Resuscitation Council, eds. (2016): Part 1: Basic life support: JRC 2015 Guidelines on Resuscitation. Tokyo: Igaku-Shoin, 14-17
- 6) Sakoda N, Ikeda H, Kosuge H, et al. Changes in objectively assessed chest compression quality after a basic life support course: the third report. *Journal of Clinical Simulation Research* 2017;7:15 - 18
- 7) Sakoda N, Ikeda H. In-hospital education focused on cardiopulmonary resuscitation in an acute phase ward. *Kanto J Acute Med* 2015; 36:179-181
- 8) Kurata S, Ayuse T. Introduction and assessment of active learning in dental anesthesiology: Consistent training in basic life support before and after graduation from Nagasaki University's School of Dentistry. *J Jpn Dent Ed Assoc* 2013; 29:199-204

要 旨

BLS コース受講前後の意識変化について

迫田 典子¹⁾, 奈良 和恵²⁾, 笹尾 真美³⁾

東京医療学院大学 保健医療学部 看護学科¹⁾
一般社団法人 横浜 ACLS²⁾
鶴見大学 歯学部 歯学科 歯科麻酔学³⁾

医療施設内で BLS コースを受講した医療従事者 112 名（医師 17 名，歯科医師 52 名，看護師 43 名）の職種別に受講前後の意識変化について短答式・記述式調査を実施し分析した。受講動機は，全職種で「急変事への対応を学びたい」，「今まで急変事に対応が出来なかった」，「自信を持ちたい」の回答が多かった。BLS 受講前の意識は，「院内研修での BLS の必要性」と「BLS スキルの臨床への活用」と全職種の 8 割以上が回答した。受講後の意識では，職種問わず BLS コースを肯定的に捉えていた。「ACLS・PALS コースの受講希望」は，医師・看護師 90%以上，歯科医師 75%が肯定的に回答し職種で差が生じていた。今後は，受講方法・内容・時期を検討し，多くの受講機会を受講者に提供することが課題である。

キーワード：一次救命処置，意識変化，医療従事者

J Clin Simul Res 2018; 8; 3 - 6