CGP216

Use of Feedback Devices in Resuscitation Training Courses

1. Introduction

The purpose of this policy is to provide information to instructors, instructor trainers, educators, program administrators, medical directors or others involved in the planning or organization of NA Education Department courses, on required and recommended use of instrumented directive feedback devices (feedback devices) during resuscitation training courses. This document includes important information that may impact our current training practice

2. Scientific Background

The 2015 Guidelines Update for CPR and ECC highlighted research showing the benefits of feedback devices that provide learners with real-time, audio-visual corrective feedback on aspects of CPR like chest compression rate, depth, and recoil. As stated in the 2015 Guidelines for CPR and ECC:

Mastery learning requires accurate assessment of CPR skills and feedback to help learners improve subsequent performance. Inadequate performance of CPR is common yet challenging for providers and instructors to detect, thereby making it difficult to appropriately focus feedback and improve future performance.

When comparing learners who used corrective feedback devices in CPR training and those who did not, corrective feedback devices improved compression rate, depth, and recoil by learners. Studies show that feedback devices help students achieve mastery of critical CPR skills and shorten the time from demonstration to competence.

The guideline recommendation to use feedback devices in resuscitation training was identified as Class IIa LOE A. Class IIa LOE A means the recommendation is supported by high-quality evidence and considered a reasonable practice.

Additional information on the science can be found in “Part 14: Education, CPR Feedback/Prompt Devices in Training” of the 2015 Guidelines Update for CPR and ECC.

2.1 Definition & Descriptions: Instrumented Directive Feedback Devices:

Instrumented directive feedback devices measure and provide readings on various factors of resuscitation performance, such as:

- compression rate
- compression depth
- recoil

Importantly, devices provide real-time visual or audio feedback (or both) on these critical components of CPR. This audio or visual information allows users, such as students, to self-assess, recognize and correct their skills in real-time.

Many types of instrumented directive feedback devices can be used in training courses, including:

- Those that can be added to and used with existing mannequins
- Those that are integrated into (built-in) mannequins
- Monitors or defibrillators used with mannequins

3. Requirements

3.1. Feedback Devices for all Course Levels:

The feedback device in all AHA courses that include skills testing in adult, child or infant CPR, excluding Hands-only CPR programs.

This new policy requirement will impact the following courses taught:

- All First Aid Courses
- Basic Life Support (BLS)
- Advanced Cardiovascular Life Support (ACLS)
- ACLS for Experienced Providers (ACLS EP)

3.2. Required minimum specifications

Specifically, for this policy requirement, an instrumented directive feedback device must:

1. Be corrective in nature, meaning it:

- Must provide corrective feedback for the learner to clearly identify their performance on chest compression rate, depth and recoil
- Must present the data in real-time

2. Align with the latest Heart & Stroke Guidelines for high-quality CPR, measuring:

- Correct rate – 100-120 compressions per minute
- Correct depth - Adult and Adolescent 5-6 cm; Infant 4 cm
- Full chest wall recoil (also referred to as full chest release)

3.3 Required Advanced Specifications:

For advanced level courses, an instrumented directive feedback device must meet the required minimum specifications and have the following additional functions:

1. Provide feedback on chest compression fraction (CCF) % aligned with the most recent Guidelines Update for CPR and ECC.
2. Provide a summary of overall performance detailing the rate, depth and recoil to review once the practice or testing is complete.
3. Provide real-time feedback, which is easily visible to participants, instructors, team leaders and/or CPR coaches during the practice and testing.

Strong Recommendation: In addition to the required minimum and advanced requirements, it is strongly recommended in advanced courses, to bring the integration of feedback devices that provide feedback on ventilation rates aligned with the most recent Guidelines Update for CPR and ECC. This is not a requirement at this time; however, it may become mandatory soon.

4. Summary

The use of feedback devices in resuscitation training has been classified in the 2015 Guidelines Update for CPR and ECC as having a reasonable benefit and is supported by high-quality evidence (Class IIa LOE A).

	Provides corrective feedback in real-time for learner			CCF %	Overall performance summary (rate, depth, recoil)	Real-time feedback visible to participant, instructor, team leader and/or CPR coach	Ventilation rate
	Depth	Rate	Recoil				
Minimum requirement	■	■	■	R	R	R	R
Advanced requirement	■	■	■	■	■	■	SR
■ = Mandatory R = Recommended SR = Strongly Recommended							

DOCUMENT CONFIGURATIONS CONTROL DATE

A review and update of this document will take place as necessary, when changes occur that identify the need to revise this Policy such as changes in roles and responsibilities, release of new legislative or technical guidance, or identification of a new policy area.

This document ownership for editing is identified as:

- Clinical Services / Education

Change Brief

Version No.	Date	Changes
1	November 2020	New Policy

Review & Approval:

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(Enter final approver title here)