CPR feedback devices: length of use does not affect CPR quality

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Purpose

CPR feedback devices improve CPR Quality, but the amount of time they need to be used is not known. The aim of our study is to compare the results of using CPR feedback devices for 2-mins and 20-mins.

Methods

We evaluated 1-min compression-only CPR using a Resusci Anne Wireless SkillReporter manikin at the end of two different 5-hour BLS-D courses for lay-rescuers (ILCOR 2010 Guidelines). Course A included 20-minutes training with real-time visual feedback by Resusci Anne Wireless SkillReporter software per person, whilst Course B included only 2-minutes per person. The measured parameters were Total CPR Score (a comprehensive scoring algorithm developed by Laerdal and members of the AHA ECC Subcommittees), number of compressions, percentage of correctly released compressions, compression mean depth and percentage of compressions with correct hand position.

Results

Course A comprised 87 people (70.1% males; mean age 37.5 ± 11 years), whilst Course B comprised 113 people (50.4% females; mean age 31.3 ± 12.5 years). Sex, weight, height and BMI were not significantly related to Total CPR Score. There was no statistically significant difference between Course A and Course B in Total CPR Score (95 % (95%CI, 92-96.1) vs 95 % (95%CI, 94-97), p=0.7), number of compressions (119 (95%CI, 116-121) vs 118 (95%CI, 117-120), p=0.84), percentage of correctly released compressions (97 % (95%CI, 93,9-99 vs 98 % (95%CI, 95-99), p=0.63), compression mean depth (54 mm (95%CI, 52-54.1) vs 54 mm (95%CI, 53-56), p=0.38) and percentage of compressions with correct hand position (100 % (95%CI, 100-100) vs 100 % (95%CI, 100-100), p=0.59).
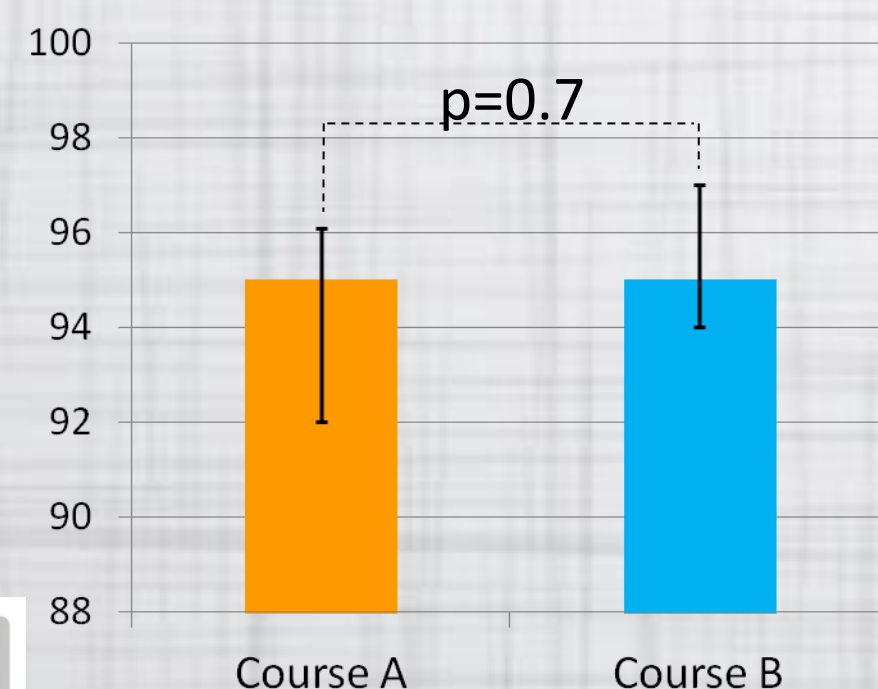
Population characteristic

Characteristic	Course A	Course B
Number	87	113
Males (%)	70.1	49.6
Age	37.5 ± 11	31.3 ± 12.5

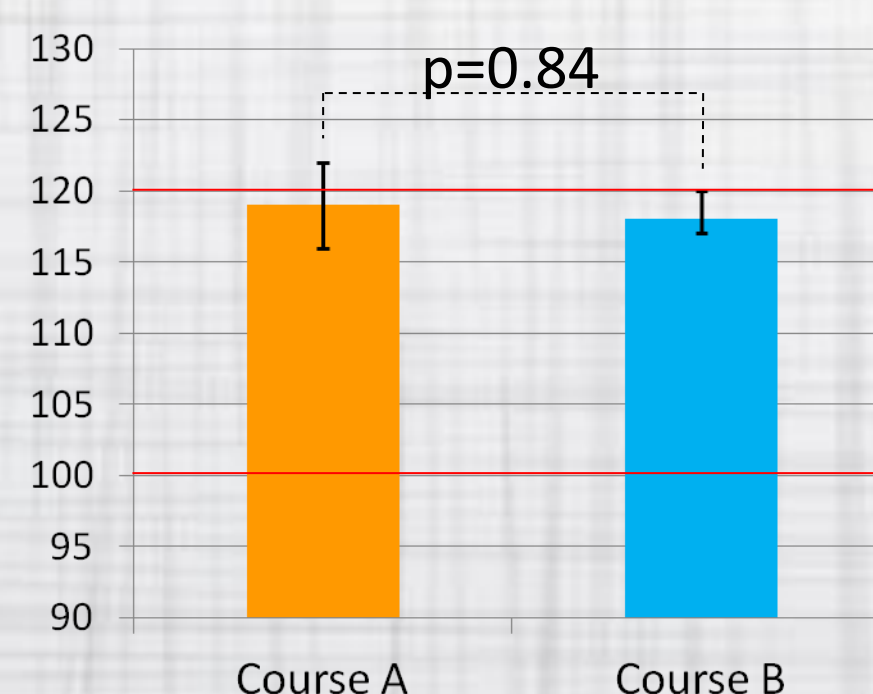Sex, weight, height and BMI were not significantly related to Total CPR Score

Conclusions

20-minutes visual feedback does not improve CPR quality more than 2-minutes. The improvement in CPR quality seems to be due to the use of the feedback device itself, not how long it is used for.
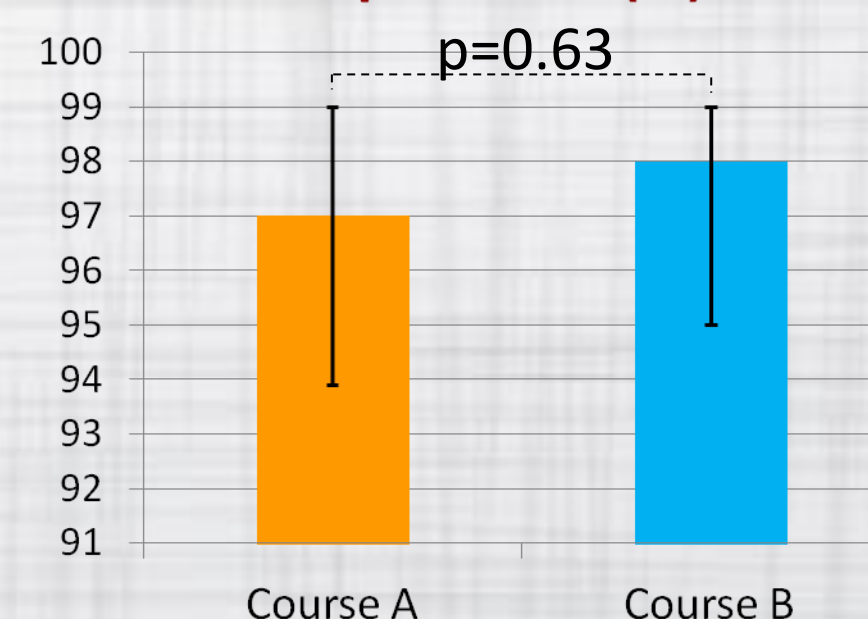

Total CPR Score — p=0.7 — Course A, Course B

Number of compressions — p=0.84 — Course A, Course B

Correctly released compressions (%) — p=0.63 — Course A, Course B

Compression mean depth (mm) — p=0.38 — Course A, Course B

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All Authors report no disclosure