Strengths and weaknesses of chest compression training: a preliminary retrospective study

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BACKGROUND
High quality chest compression is one of the key factors in successful resuscitation. A high standard of training is therefore decisive. We aimed to investigate the strengths and weaknesses of teaching chest compression in a study designed to highlight where targeted improvements in the quality of our chest compression training can and must be made.

METHODS
Retrospective analysis of prospectively documented data with 234 participants, and recording and analysis of chest compression variables before and after a BLS training course.

RESULTS
The results after the course were good for compression depth (94% correct), moderate for compression frequency (83% correct) and decompression (82% correct), unsatisfactory for hand positioning (74% correct) and poor for the compression/decompression ratio (32% correct). Practical instruction brought about improvements of between 9% and 48%. The greatest improvement was seen for hand positioning (48%), followed by compression depth (32%), compression rate (32%), and the compression/decompression ratio (20%). Training had only a slight effect on the degree of decompression (9%). Significant deteriorations were also noted after the course, for compression rate (11%) and the compression/decompression ratio (12%).

CONCLUSIONS
Chest compression training showed weakness for four out of five variables. Only the end results for compression depth were satisfactory. The deficits observed in the training on chest compression were relevant and must be remedied. One possibility would be initial step-by-step training and assessment of each component of chest compression, concentrating in particular on hand positioning and compression/decompression ratio.