Relationship between knowledge of cardiopulmonary resuscitation guidelines and performance.

OBJECTIVE: Despite widespread training with CPR guidelines, CPR is often poorly performed. We explore relationships between knowledge of CPR guidelines and performance (compression rate, compression depth, compression to ventilation ratio, and ventilation volume).

METHODS: Sixty professional EMTs were sampled at 26 randomly ordered EMS response stations from an urban system of 31 stations. A recording manikin and video model were used to assess performance in a standardized scenario, and a survey was used to assess guideline knowledge. Survey and performance outcomes were categorized prospectively as correct or incorrect based on the International CPR Guidelines from 2000. Relationships were modeled with logistic regression. Covariates included years of work experience, frequency of CPR performance, and ALS versus BLS EMT level.

RESULTS: Compression rate was between 80 and 120 min(-1) in 56% (33/59) of trials. Compression depth was 1.5-2 in. in 39% (23/59), compression to ventilation ratio approximated to 15:2 in 42% (25/59), and ventilation volume was 800-1,200 cm(3) in 13% (8/60). Accurate knowledge of the CPR guidelines was associated with better performance of chest compression rate and compression to ventilation ratio. Adjusted OR (95% CI) were 4.6 (1.2-18.1) for compression rate, 1.7 (0.4-6.5) for compression depth, 4.5 (1.1-18.5) for compression to ventilation ratio, and 9.0 (0.2-351) for ventilation volume.
Relationship between knowledge of cardiopulmonary resuscitation guidelines and performance.

Published on UAB School of Public Health (http://www.soph.uab.edu)

CONCLUSIONS: Although accurate knowledge of guidelines is associated with increased odds of correct performance of some aspects of CPR, overall performance remains poor.

DOI 10.1016/j.resuscitation.2005.08.019
Alternate Journal Resuscitation
PubMed ID 16563601
Grant List N01-LM-3-3513 / LM / NLM NIH HHS / United States