Clinical question.

(What is the best monitoring and the best evaluation of progress and performance for first aid)

**FA-2102:** In First Aid Training, which techniques of monitoring and evaluation of progress and performance is able to show the improvement of the participant skills?

Is this question addressing an intervention/therapy, prognosis or diagnosis? INTERVENTION

State if this is a proposed new topic or revision of existing worksheet: NEW TOPIC

Conflict of interest specific to this question

Do any of the authors listed above have conflict of interest disclosures relevant to this worksheet?

**NO INDUSTRIAL CONFLICT OF INTEREST**

**POTENTIAL INTELLECTUAL CONFLICT OF INTEREST:** Coordinator of the European Reference Centre for First Aid Education, National Medical Advisor of the French Red Cross, Member of the board of the French Resuscitation Council, Co-chair of the BLS-AED working group of ERC.

Search strategy (including electronic databases searched).

Articles published in the last 10 years (1998 – 2008): clinical trials, meta-analysis, practice guidelines, randomized controlled trial, in English – Spanish – French

Pub med: MESH words “First Aid” & “Educational measurement”, [MESH], (36)

Pub med: MESH words “First Aid Evaluation” and “First Aid assessment” [MESH] (0)

Pub med: MESH words “First Aid” & “Needs assessment” [MESH], (2)

Pub med: MESH words “CPR” & “Educational measurement” [MESH], (289)

And hand search (6)

Google Scholar search with same keywords

Cochrane Library search with same keywords

EMBASE search with same keywords

State inclusion and exclusion criteria

Studies about evaluation, during or after training have been considered. As just one study is available in the field of first aid we have considered evaluation studies in the field of BLS and ALS.

Total Number of articles analyzed: 333

Articles have been excluded in case of expert opinion based, if it is a review article or if it is out topic.

328 excluded articles:
- Expert Opinion based;
- Same study and same population of another study;
- Review article;
- No Group Control;
- Out topic

Number of articles/sources meeting criteria for further review:

5
# Summary of evidence

## Evidence Supporting Clinical Question

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1. (Ringsted, Lippert et al. 2007, B; Spooner, Fallaha et al. 2007, A; Sutton, Donoghue et al. 2007, A; Dine, Gersh et al. 2008, A)
2. Capone, Lane et al. 2000, A

### Outcomes
- Please define outcomes for this question, place them after letters below and use letters to identify studies which evaluate this outcome
- A = Improvement of technical skills
- B = Improvement of competences

## Evidence Neutral to Clinical question

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### Outcomes
- Please use the same outcomes as defined for the Evidence Supporting table above
## Evidence Opposing Clinical Question

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Outcomes – Please use the same outcomes as defined for the Evidence Supporting table above

**REVIEWER’S FINAL COMMENTS AND ASSESSMENT OF BENEFIT / RISK:** (please include implementation considerations including at a minimum training, environment and availability:

Valid and reliable evaluation methods are needed for assessment and comparison of first aid training outcomes. A wide variety of assessment methods are used in the studies with methodological shortcomings but unfortunately they are implemented during resuscitation training and not first aid training. Conclusion is difficult because most studies have compared participants among themselves, and not with a standard group. Currently, a variety of written and practical tests (Ringsted, Lippert et al. 2007) are used to assess participant’s knowledge and skills in resuscitation course (BLS & ALS).

Many different methods for evaluation have been devised and evaluated. However, the content and style of this evaluation lack of standardization. The video (Dine, Gersh et al. 2008) allows the viewer to pause and rewind the tape to practice or clarify content, and facilitate self evaluation. Although this was rarely used during resuscitation and first aid trainings.

New teaching technologies which improve reliance of instructors and ensure better skills acquisition and retention, give the possibility for self evaluation or combined evaluation (participant and instructor). These include staged instruction, video self-instruction including TV program (Capone, Lane et al. 2000), and audible feedback system (Spooner, Fallaha et al. 2007; Sutton, Donoghue et al. 2007).

First aid training is a complex issue. The literature puts forward many suggestions to improve learning and performance of skills and to evaluate these performances. They are implemented in resuscitation training which is probably easier than first aid training.

Acknowledgements

LOE: 2
Quality: Fair
Direction of support: Supporting
Comments: It is the only study which is in the field of first aid which demonstrates the interest of evaluation during simulation.


LOE: 1
Quality: Fair
Direction of support: Supporting
Comments: This study demonstrates the interest of self-evaluation during CPR which is emphasized by the debriefing.


LOE: 1
Quality: Fair
Direction of support: Supporting
Comments: This study demonstrates the interest of evaluation by MCQ and also CASTest which is equivalent of case studies in first aid.


LOE: 1
Quality: Fair
Direction of support: Supporting
Comments: This study demonstrates that retention is better when continuous feedback is done by the manikins compared with the evaluation done by an instructor. At six months the difference seems the same but decreased after six months.


LOE: 1
Quality: Fair
Direction of support: Supporting
Comments: This study demonstrates, for PLS, that retention is better when continuous feedback is done by the manikins compared with the evaluation done by an instructor.