

First aid training may improve first aid skills

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English

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Systematic review

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Magne Nylenna, Director
Authors: Hilde, Strømme (Project leader),
Elisabeth, Jeppesen, Researcher
Liv Merete Reinar, Head of unit
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Norwegian Knowledge Centre for the Health Services summarizes and disseminates evidence concerning the effect of treatments, methods, and interventions in health services, in addition to monitoring health service quality. Our goal is to support good decision making in order to provide patients in Norway with the best possible care. The Knowledge Centre is organized under The Norwegian Directorate of Health, but is scientifically and professionally independent. The Centre has no authority to develop health policy or responsibility to implement policies.

We would like to thank all contributors for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, November 2015

Key messages

Each year approximately half a million people in Norway suffer injury caused by accidents, violence or self inflicted injury and about 3,000 experience out of hospital cardiac arrest. Surveys have indicated that many Norwegians have limited first aid skills. The Norwegian Ministry of Health and Care Services have commissioned an overview of the effect of first aid training.

Evidence from five systematic reviews about first aid training for lay people shows that first aid training may have a positive effect on first aid skills.

Several of the systematic reviews found that the effect declines over time.

One of the systematic reviews referenced three studies showing that the majority of the people who had provided first aid described it as a positive experience. None of the systematic reviews included studies about survival and functional ability in persons who had received first aid.

The quality of the documentation is low or very low, which means that the results must be interpreted with caution. This does not mean that there is no effect; it means that it we are unsure about whether or not there is an effect.

Title:

First aid training may improve first aid skills

Type of publication:**Systematic review**

A review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies.

Doesn't answer everything:

- No systematic reviews outside the explicit inclusion criteria
- No single studies
- No economic evaluation
- No recommendations

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Siw Lilly Osmundsen, Chair,
Norwegian Firstaid Council
Håkon Kvåle Bakke, Physician,
Helgelandssykehuset,
Associate Professor, UiT The Arctic University of Norway

Executive summary (English)

Background

Each year about half a million people in Norway are injured due to accidents, violence or self inflicted injury and approximately 3,000 persons suffer from out of hospital cardiac arrest. In many cases lay people with no formal first aid training have to perform first aid.

Surveys have indicated that many Norwegians have poor first aid skills. The Norwegian Ministry of Health and Care Services has commissioned an overview to answer the question: What is the effect of first aid training in schools, workplaces, voluntary organisations and sports clubs?

Method

We performed systematic searches in seven bibliographic databases to identify systematic reviews of high or medium quality. The population was people who participate in first aid training in schools, workplaces, voluntary organisations or sports clubs. The intervention was first aid training compared to no intervention or different types of training. Outcomes we looked for were survival and functional ability in injured persons, response time (i.e. time before lay people intervene), correctly performed first aid or experiences of people providing first aid. The search strategies were developed by one librarian and peer reviewed by another.

Two persons independently selected and critically appraised relevant publications. One person extracted data and another person checked the extraction. Only systematic reviews of high or medium quality were included.

Because it was not possible to perform new metaanalyses, the results were described narratively. Where possible, we used «Grading of Recommendation Assessment, Development and Evaluation» (GRADE) to assess the quality of the documentation.

Results

We identified 1085 unique publications. After screening of titles and abstracts we found 21 possibly relevant publications. Full text of one of them could not be retrieved, the remaining 20 were read in full. Five of these met the inclusion criteria.

The systematic reviews described a great variety of different first aid training interventions. The training interventions and comparisons were short courses (the shortest one

only two minutes) and long courses (hours or days), video, e-learning, printed materials etc. Some training interventions were theoretical only, others practical and some with a combination of theory and practice. Various training interventions were compared to no intervention or to each other. Follow up time was not reported for all of the included studies, but in the cases where it was reported it varied from immediately to five years after the intervention. Shorter follow up times were more common. The majority of the studies showed a positive effect on the outcome measure first aid skills. However, the quality of the documentation was low or very low, and the results should be interpreted with caution. Two systematic reviews included results from two studies with helping behaviour as one of the outcomes. These showed that the participants who had received first aid training did not score better on helping behaviour than participants who had not received such training. However, participants who had received first aid training focusing on helping behaviour scored better on helping behaviour when compared to participants who had received first aid training only or no training. One of the systematic reviews included three studies in which people who had performed first aid described the experience as positive.

None of the systematic reviews included studies looking at survival and functional ability in persons who had received first aid.

The results must be interpreted with caution. Even though the methodological quality of the included systematic reviews is high or moderate, this does not mean that the quality of the primary studies included in the systematic reviews is high or moderate. Many of the included primary studies have a high or unclear risk of bias.

Discussion

The results from the systematic reviews we have included indicate that first aid training may have a positive effect on first aid knowledge and skills and that first aid that focuses on helping behaviour may increase helping rates. The countries where the included studies were performed are sufficiently similar to Norway to assume that the results are applicable to a Norwegian setting. Four Norwegian studies with participants in age groups from kindergarten to adults were included in one or two of the systematic reviews. All of these concluded that first aid training had some effect.

The methodological quality of the included systematic reviews was high or moderate, but the majority of the studies included in them had a high or unclear risk of bias. Therefore the results must be interpreted with caution. There are also many possible limitations to overviews like this one. Additional systematic reviews may have been published after we performed our searches and additional single studies may have been published after the searches for the included systematic reviews were performed.

There is a lack of high quality research in this area, especially because the studies are performed with different interventions and methods for measuring outcomes. More and larger high quality randomised controlled trials must be performed before we can draw a clear conclusion about the effect of first aid training for lay people.

Conclusion

All of the five systematic review included in this overview showed that training had a positive effect on lay people's first aid knowledge and skills, at least in the short run. Even though a total of more than 100 studies were included in the systematic reviews, there were only a few we could extract data from. Two studies showed no significant difference in helping behaviour between participants who had received first aid training and those who had not. One study showed that helping behaviour was better in recipients of first aid training focusing on helping behaviour compared to recipients of first aid training only or no training. Three studies showed that those who had performed first aid described it as a positive experience.

Due to the limitations of the documentation we cannot draw any clear conclusions about whether or not first aid training in schools, workplaces, voluntary organisations and sports clubs is effective.