Evidence-based educational pathway for the integration of first aid training in school curricula

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INTRODUCTION & OBJECTIVES

Currently in Belgium (Flanders), “calling for help, performing first aid and providing Basic Life Support (BLS)” is part of the educational goals in secondary schools. However, for teachers it is not always clear at what age children can learn the different aspects of first aid. In addition, it is not clear what is part of “performing first aid” and we strongly advocate that the first aid curriculum is broader than BLS training alone. Our objective for this project was to develop evidence-based educational materials to enable the integration of first aid knowledge, skills and attitudes in every grade of primary and secondary school.

METHODS

We formulated the following PICO question: “Is first aid education (Intervention) an effective intervention in children (3-18 years) (Population) to improve first aid knowledge, first aid skills and first aid attitudes (Outcome) compared to no first aid training (Comparison)?” In addition, we searched for evidence about the helping behaviour of children.

Evidence-based materials were developed according to our methodological charter, adhering to the principles of AGREE II2-3. For every pillar of ‘Evidence-Based Practice’ the corresponding steps of guideline development are given below:

BEST AVAILABLE EVIDENCE

- We searched Medline (PubMed interface) and Embase (Embase.com):
  - In January 2012 for a first set of questions (emergency number, resuscitation, AED use, choking, Rautek, recovery position, and helping behaviour)
  - In March 2014 for a second set of questions (cuts and grazes, burns, bleeding, fainting, injuries to muscles/joints/bones and poisoning)
- The quality of the scientific evidence was determined using the GRADE methodology4.

PREFERENCES OF THE TARGET GROUP

- We composed a multidisciplinary expert panel of primary and secondary school teachers, educational advisers, experts in first aid education (including Red Cross employees and volunteers), an expert in health promotion, experts in Evidence-Based Practice, a medical doctor and a child psychologist.
- We held two consensus meetings (1/02/2012 and 6/05/2014) with the same expert panel.

PRACTICAL EXPERIENCE AND EXPERTISE OF EXPERTS IN THE FIELD

- We finally selected 30 studies, including 13 experimental and 17 observational studies.
- These were studies concerning emergency call (7 studies), cardiopulmonary resuscitation (18 studies), AED (Automated External Defibrillator) use (6 studies), recovery position (5 studies), choking (2 studies), injuries (5 studies) and poisoning (2 studies).
- Based on 7 studies we concluded that children from 6 to 16 years are capable of calling the emergency number (Level of evidence: low).
- The expert panel discussed that a child should be able to technically use a phone, to know and explain where he is oriented, and to alert the emergency services.
- It was decided to add to the educational pathway that:
  1. children of 7-8 years (1st grade primary school) should know the emergency number
  2. children of 9-10 years (2nd grade primary school) should be able to alert the emergency services correctly and to recognize the importance of alerting the emergency services
  3. children of 11-12 years (3rd grade primary school) should know the tasks of the emergency services and recognize the emergency services symbols

EXAMPLE 1: Emergency call

- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).
- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).
- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).
- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).

EXAMPLE 2: Choking

- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).
- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).
- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).
- In two studies increased knowledge about first aid for choking in children from 10 to 12 years, and increased skills in children of 11 to 16 years was shown after training (Level of evidence: low).

CONCLUSIONS

- Based on the available evidence and practice experience of a multidisciplinary expert panel, an educational pathway with educational goals concerning learning first aid for each age group was developed (see Table 3 in ref 3).
- This educational pathway can be used for the integration of first aid training in school curricula.

References: