First aid education for children

Encourage children to develop their first aid knowledge and skills and become lifelong learners.

First aid education refers to developing first aid knowledge and skills in children. This topic explores how to develop first aid abilities in children of different ages and the methods to help them retain their knowledge, skills and attitudes in both high and low resource settings.

Guidelines

- First aid programme designers should refer to the educational pathway provided by the Centre for Evidence-Based Practice (CEBaP) to create contextually relevant educational programmes according to children’s intellectual, social and behavioural abilities. **
- When combined with a secondary method (e.g., educational songs), hands-on training may help children to retain knowledge and skills as well as increase their confidence and willingness to act. *
- Training teachers to facilitate first aid education may be more productive, time-efficient and relevant than bringing in medical facilitators. *

Good practice points

- Relevant, engaging scenarios that encourage children to apply their life experiences should be used to support learning.
- Repetition of learning can help children to develop and retain knowledge (although the optimum frequency is not known. See Refresh and Retrain.)
- When access to care is difficult:
  > Though the educational pathway recommends teaching children how to access medical care at ages seven to eight, we recommend waiting until they

are ages nine to ten. Repeat this knowledge until they are 18 years old.
> Due to the presence of infectious diseases, facilitators should teach children to wash their hands before and after providing first aid. Repeat this skill until they are 18 years old.
> Children may be taught to recognise their role in a first aid emergency with age-appropriate activities such as assessing the scene and calling for help. This approach will also encourage them to learn about the importance of scene management.

Guideline classifications explained

Education considerations

Context considerations

• Always align children’s first aid programmes with your own organisation’s and any partnering organisations’ (e.g., schools) child protection policies.

Facilitation tips

• Keep messages short, clear and focused on the first aid outcomes.
• Avoid using over-medicalised terms or high-level language to describe illnesses and injuries. Language should be appropriate to the age and experiences of the children.
• Start by asking young learners what they know about how the body works and why providing first aid is important.
• Facilitate a preliminary discussion on learners’ experiences with emergencies or illnesses; doing so can help to avoid trauma that a child may have experienced (e.g., death of a family member or an accident).
• Support the development of first aid clubs where children and youth can teach and learn from each other. Children and youth are often influenced by their peers and older children.
• Encourage children to share first aid knowledge and skills with their families.
• Build on children’s interest to learn first aid by incorporating first aid education into different subjects and activities, such as biology class or sports.

Facilitation tools

- Create relevant, engaging scenarios (such as role-play or simulations) where children can draw from life experiences to support their learning. You may do any of the following:
  > use scripted and age-appropriate role-plays
  > carry out simulations of different injuries or illnesses
  > engage children to come up with their own scenarios
  > practise providing first aid in challenging spaces, such as in a car, instead of in a classroom setting. Be sure to follow the latest child protection policies.
- Use games, quizzes, online apps and online content to engage children.
- Short webinars or videos with tips may help to encourage and support teachers who lack the confidence to teach first aid (Ellis et al., 2020).

Scientific foundation

The educational pathway

The educational pathway is evidenced in two systematic reviews by CEBaP. The pathway focuses on the re-emphasis of knowledge and skills through an “encourage, know, repeat” approach. The pathway systemises the repetition of topics and identifies the expected outcomes at the end of each learning stage. The “encourage” and “repeat” stages are aimed at the facilitator, while the “know” stage is aimed at the learner.

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>Encourage (E)</th>
<th>Know/know how (K)</th>
<th>Repeat (R)</th>
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<tbody>
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<td>Focus on a specific learning objective.</td>
<td>Repeat and emphasise the learning objective with children.</td>
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During the repeat stage, the facilitator has two objectives:

1. Repeat the learning outcome for the children who have already achieved it.
2. Continue to try and reach the children who have not yet mastered it.

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NOTE

The pathway has been adapted for an African context and is available for free in the additional files of the scientific paper by De Buck et al. (2020).

Two systematic reviews from CEBaP looked at three questions regarding first aid for children. The first review from 2015 included 30 studies to identify how first aid education impacts learning knowledge, skills and attitudes for children in different age groups. The second review from 2019 contained an update of the first review resulting in 58 studies in total and also contained an additional research question about the effectiveness of educational interventions in low and middle-income countries. The latter part of the review resulted in 2 systematic reviews, together including 36 individual studies.

Based on the evidence, we drew general conclusions about children developing knowledge and skills in the following first aid topics.

- Bleeding
- Burns
• Choking
• Diarrhoea
• Epilepsy
• Fever
• Injuries to bones, muscles or joints
• Poisoning
• Resuscitation
• Skin wounds
• Stings and bites

NOTE

Refer to the education pathway for specific suggestions on which topics to teach to each age group.

Evidence indicated that children as young as six could learn how to provide basic first aid. Evidence also showed that alternative teaching strategies, such as problem-solving, guided questions or cooperative instruction, significantly increased learning and successful testing outcomes. However, the certainty of the evidence was rated as low.

As part of this study, an expert panel consisting of first aid practitioners, academic educational experts and clinicians reviewed the available evidence and considered how it might affect education for children in lower resource settings. For example, in some African contexts, medical care is less accessible. The experts decided to postpone the topic of accessing medical care for African children until the ages of nine to ten. Learners then repeat this topic until they are 18 years old. A second example looked at handwashing before and after providing first aid. Because there is a higher prevalence of infectious diseases in some African contexts, the panel proposed to repeatedly teach this skill to children until they are 18 years old.

In some instances, the panel extended the application of one topic’s evidence to...
another that was lacking in evidence. For example, they took evidence of burns knowledge, which showed that children ages six to seven could learn how to apply first aid correctly and applied it to bleeding and skin wounds as these topics lacked evidence for children under the age of 11. The panel concluded that children should have basic first aid knowledge of burns, bleeding and skin wounds by the ages of seven to eight. Children should attain more advanced education at the ages of 11 to 12 (e.g., understanding the link between skin wounds and tetanus) or at the ages of 13 to 14 (e.g., knowing how to identify different types of burns). Skill competencies were set according to knowledge outcomes. A complete overview of the available evidence can be found in the additional files of the scientific paper by De Buck et al. (2020).

School-based first aid education

In addition to the reviews described above, we also considered a systematic review of school-based first aid education that supported mixed methods of delivery including practical and presentational components (Reveruzzi et al., 2016). We also identified additional studies that demonstrated the effectiveness of teachers delivering first aid education (Bohn et al., 2012; Ellis et al., 2020).

Alternative learning methods

Other studies showed some low-quality evidence for alternative learning methods and their effect on retention rates. Evidence showed that incorporating hands-on components supported higher knowledge retention and increased children’s confidence and willingness to help in an emergency (Lucas et al., 2016; Wingen et al., 2018). One study found that integrating songs improved children’s retention of the CPR sequence (Fonseca Del Pozo et al., 2016). There is also evidence that children can retain broader skills, such as scene management and the associated age-appropriate behaviours (e.g., calling for help) (Frederick et al., 2000; Wilks et al., 2016). This is also the case in younger children, ages four to five (Bollig et al., 2011). Conversely, there is limited evidence that the use of video supports knowledge or skill retention (Nord et al., 2016).

Due to a lack of comparison between studies, there is no substantial evidence to suggest that a specific length of learning or amount of repetition influences
retention.

References


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**Online learning for children**

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First aid

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First aid education

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About the guidelines

Here you can find out about the process for developing these Guidelines, and access some tools to help you implement them locally.