EVIDENCE-BASED AFRICAN FIRST AID GUIDELINES AND TRAINING MATERIALS

Belgian Red Cross Flanders

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INTRODUCTION

In Sub-Saharan Africa, 40% of the burden of disease and injury can potentially be addressed by emergency care. Adequate pre-hospital care is vital, but often unavailable in Sub-Saharan Africa. Initial help and emergency transport often depends on basic first responders. The World Bank identified first aid training as cost-effective way to save lives in Sub-Saharan Africa. Although well-intentioned, first aid training in Sub-Saharan Africa often depends on didactical materials from other continents which are not adapted to the African context. This may lead to misdirected, inadequate or even harmful training instructions.

METHODS

Two authors searched 8 databases (including MEDLINE, EMBASE, The Cochrane Library, AFRICAN INDEX MEDICUS) to identify relevant evidence on the effectiveness, safety, and feasibility of various first aid procedures. A separate search was done for studies on African cultural remedies and preferences. A multidisciplinary panel of eleven African experts discussed each recommendation until they reached agreement. The quality of evidence and strength of recommendations were determined according to GRADE. Four peer reviewers revised the guidelines. To implement the guidelines we developed a flexible didactic materials kit and an implementation guide. Between June and December 2010 we piloted the training materials and implementation guide in Uganda and Swaziland.

OBJECTIVES

To produce and implement evidence-based guidelines on how to train basic first responders to manage emergency situations in an African context.

RESULTS [1]

The selection of topics was based on published injury and disease statistics for Sub-Saharan Africa (see Box 1).

Overall we screened 24,000 references and selected 143 publications for the guideline. The complete guidelines include a narrative synthesis of the results of the systematic reviews and recommendations for each included topic and can be downloaded from: http://www.afam.redcross.be.

Box 1: Content of AFAM

Basic principles to handle an emergency

Sudden illness: stroke; chest discomfort; choking; unconsciousness; no breathing; fever; fits; diarrhoea; rash

Injuries: severe bleeding; wounds with bullets or objects; snake, scorpion or spider bite; burns; injury to head, neck of back; broken or dislocated limbs; injury to muscles or joints; eye injury; bite wounds; nose bleed; cuts and grazes; bee or wasp stings

Poisoning

Emergency childbirth

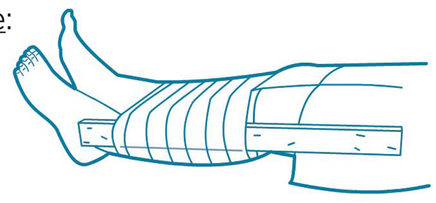
Each condition is linked to the evidence that forms the basis for the recommendation (see Table 1 for an example about snake bites).

We performed a specific search for African studies or studies performed in low and middle income countries. In this way AFAM integrates succesful African remedies that make the best of limited resources (see Box 2).

Box 2: Examples of succesful African remedies

- ✓ boiled and cooled water for wound cleansing [8]
- ✓ application of honey or Aloe Vera for burns [9,10]
- ✓ fever measurement by touch [11]
- ✓ tepid sponging for fever [12]
- ✓ ash for hand washing [13,14]
- ✓ homemade oral rehydration solutions for diarrhoea based on maize flour [15]

TABLE 1 ▶ EVIDENCE WITH CORRESPONDING LEVELS OF EVIDENCE (LOE) AND RECOMMENDATIONS WITH CORRESPONDING GRADES OF RECOMMENDATION (GOR) CONCERNING FIRST AID FOR SNAKE BITES

EVIDENCE	LOE	RECOMMENDATION	GOR
Two intervention studies show that it is difficult to apply the elastic bandage at the correct pressure [2,3].	Low	Because elastic bandages and the firm cloth pad are difficult to apply adequately and may harm the injured person, the panel decided to limit the recommendation to immobilisation of the limb only.	
One intervention study shows that the elastic bandage should be applied tightly, but applying it too tightly or not tightly enough is ineffective and may worsen the injured person's condition [4].	Very low	<u>Recommendation based on the evidence</u>: If the bite is in the leg: immobilise the leg by bandaging it to the other leg. 	Weak
Two intervention studies show that applying an elastic bandage has a lower efficacy than applying an elastic bandage over a firm cloth pad [5,6]. However, using a firm cloth pad runs the risk of creating an arterial tourniquet.	Low		
One intervention study indicates that immobilisation can be taught to basic first responders [3]. However, an observational field study indicates that after receiving the instruction to immobilise limbs with snake bites, this was only done properly in a minority of cases [7].	Very low	<u>Additional recommendations based on good practice points</u>: stop the bitten person from moving, calm the person, take off any rings, watches, or tight clothing that may cut off blood flow because of swelling, and take actions to obtain medical help.	GPP

PILOT

The pilots included focus group discussions on whether it was tested if:

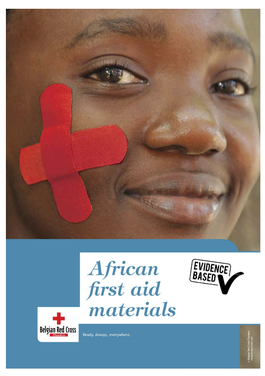
- ✓ the instructions and illustrations were clear and if more complex instructions were performable
- ✓ the AFAM didactical materials kit was sufficiently flexible to allow adaptation to the local context, customs, and local didactic needs

The experience and lessons learned were integrated in the guidelines and in the implementation guide.

IMPLEMENTATION

Eight African Red Cross National Societies are planning to use AFAM during the next three years.

Belgian Red Cross-Flanders will be financially supporting these National Societies in developing new AFAM-based didactic tools.



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