EVIDENCE-BASED INDIAN FIRST AID GUIDELINES

EMMY DE BUCK[1], HANS VAN REMOORTEL[1], HUGO GEUVENS[1], AXEL VANDE VEEGAETE[1], PHILIPPE VANDEKERCKHOVE[1,2], SATYA PAUL AGARWAL[3]

[1] BELGIAN RED CROSS-FLANDERS, MECHELEN, BELGIUM
[2] DEPARTMENT OF PUBLIC HEALTH AND PRIMARY CARE, CATHOLIC UNIVERSITY OF LEUVEN, LEUVEN, BELGIUM
[3] INDIAN RED CROSS SOCIETY, NEW DELHI, INDIA

INTRODUCTION & OBJECTIVES

Training first medical responders in India has been considered a very cost-effective intervention for frequently occurring diseases and injuries[1]. In 2013, the Belgian Red Cross-Flanders together with the Indian Red Cross launched a project to develop evidence-based first aid guidelines and prevention advice specifically adapted to the Indian context. As a basis for these guidelines, scientific evidence was searched to decide which first aid and preventive interventions are effective.

METHODS

- Evidence-based guidelines were developed according to our methodological charter, adhering to the principles of AGREE II[2,3].
- The selection of topics was based on published injury and disease statistics for South Asia[4]: fever (malaria/pneumonia), diarrhoea, head injuries ...
- For every pillar of 'evidence-based practice' the corresponding steps of guideline development are given below:

BEST AVAILABLE EVIDENCE
- Evidence identified in previous evidence-based first aid guidelines[5,6] was used as a basis.
- We searched Medline (PubMed interface):
  - ✓ from the date of inception until December 2013
  - ✓ for evidence on effectiveness, safety, and feasibility of various first aid and preventive procedures from Indian studies (making use of an in-house developed "India filter")
  - ✓ for evidence supporting alternative interventions that are being used by Indian lay people (without using a specific geographic search filter)
- The quality of the scientific evidence was determined according to the GRADE methodology[7].

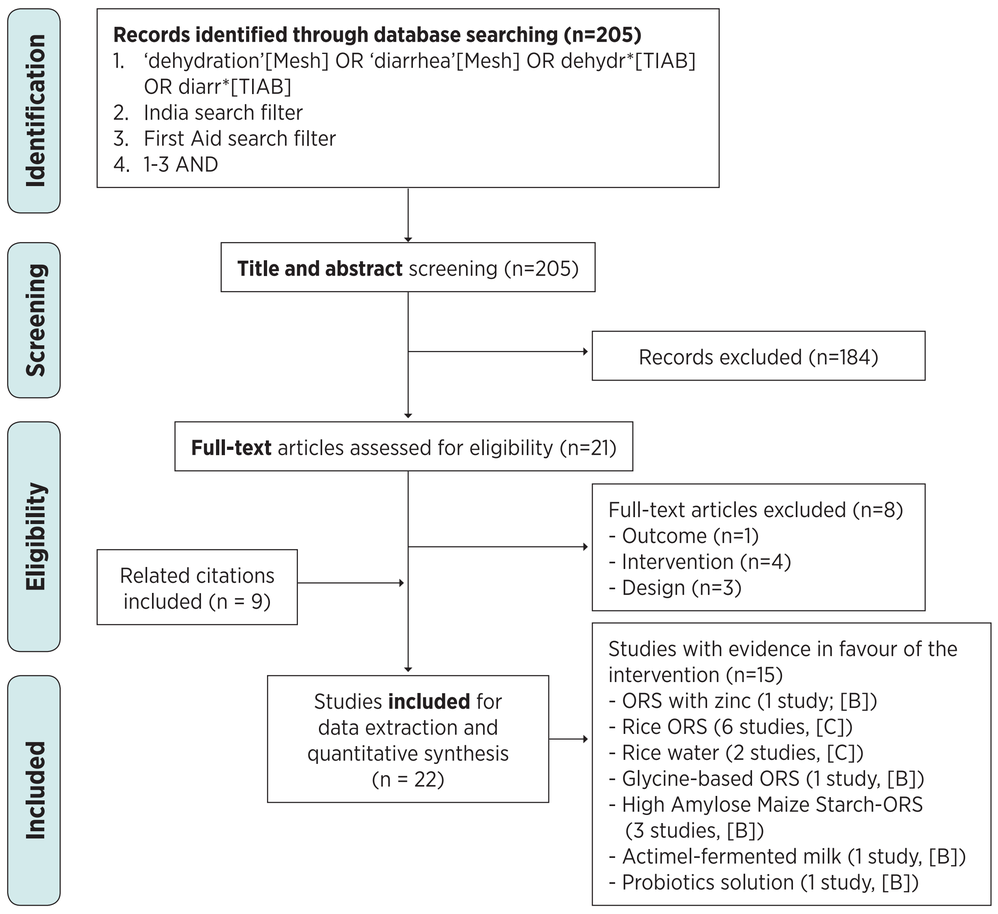
PREFERENCES OF THE TARGET GROUP
- References describing surveys, interviews and focus group discussions performed in India were collected to find information on (perceived) causes or mechanisms of interventions, treatment-seeking behaviour, beliefs or traditions, sociocultural factors, knowledge, attitude and behaviour (same search in Medline as for Indian studies).
- A pilot implementation phase, in which the draft guidelines will be tested for their clarity, is planned in different states of India in January-March 2015.

PRACTICAL EXPERIENCE AND EXPERTISE OF EXPERTS IN THE FIELD
- Two meetings with a multidisciplinary panel of 12 Indian experts, including experienced first aiders, took place in New Delhi. The panel formulated the final recommendations, assigned the grades of recommendation and formulated Good Practice Points.
- Peer reviewers with additional expertise have provided feedback on the final draft.

RESULTS

Box 1: Study selection flowchart for alternative first aid interventions for diarrhoea, identified in Indian studies

(B: level of evidence moderate; C: level of evidence low)



- 175 references identified in previous evidence-based first aid guidelines were included in the evidence base[5,6].
- 48 additional studies were selected that were in favour of 10 different first aid interventions (for diarrhoea and chest discomfort) and 16 different preventive interventions (for malaria, pneumonia, diarrhoea, road traffic injuries and safe pregnancy), relevant for India.
- See Box 1 and 2 for a detailed example about alternative first aid interventions for diarrhoea (in case no Oral Rehydration Solution (ORS) is available).

Box 2: Evidence and corresponding recommendation for rice water as a first aid treatment for diarrhoea

Evidence	LOE	Recommendation	GOR
There is limited evidence from 2 experimental studies in favour of rice water[8,9]: it was shown that rice resulted in a statistically significant decrease of duration of purging, stool frequency on day 2 to 4 and stool volume on day 4 compared to using standard ORS.	low	Let the sick person drink a rice water solution if no Oral Rehydration Solution is available. 	weak

LOE: level of evidence
GOR: grade of recommendation

CONCLUSION

- Evidence-based first aid guidelines adapted to the Indian context were developed based on the collection of scientific evidence, the preferences of the target group and the expertise of Indian experts.
- In a next step, didactical materials based on these contextualized guidelines will be developed, taking the preferences of the Indian lay people into account, and tested in a pilot implementation phase in different states of India.

Realized by the centre for EVIDENCE-BASED PRACTICE of the Belgian Red Cross-Flanders

References: [1] Laxminarayan R et al. Lancet 2006, 367(9517):1193-1208; [2] Brouwers MC et al. CMAJ 2010, 182(18):E839-E842; [3] De Buck E et al. Int J Evid Based Healthc 2014, 12(1):39-49; [4] Lopez et al. 2006. Global burden of disease and risk factors. Oxford University Press, New York; [5] Van de Velde S et al. PLoS Med 2011, 8(7):e1001059; [6] Pauwels NS et al. Cochrane Colloquium 2011; [7] Atkins D et al. BMJ 2004, 328: 1490; [8] Mehta MN and Subramaniam S. Lancet 1986, 1(8485):843-5; [9] Fakhir S and Ahmad SH. Indian J Pediatr 1990, 57(1):81-87.

Budget and funding: The IFAG (Indian First Aid Guidelines)-project was financed by Belgian Red Cross-Flanders with co-funding from the Belgian Directorate-General for Development Cooperation (DGD).