



Letter to the Editor

Reply to Letter: Letter in Response to: European Resuscitation Council's guidelines for resuscitation 2015



Sir,

We would wish to thank the journal for allowing us to respond to the letter from Walsh, Styles and Dheansa (Resuscitation, available online on 12 December 2015). In answering this letter we must, with due respect, refer the writers back to the development procedures for these guidelines as described in the International Liaison Committee On Resuscitation (ILCOR) Consensus on Science (COS) and Treatment Recommendations.^{1,2} The evidence evaluation was carried out on a series of selected PICO questions using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system.^{3,4} The PICO questions were worded to analyse a designated population in relation to a stated intervention with a comparator looking for a series of specific outcomes. The article selection process specifically excludes articles of expert opinion, statements, guidelines or reviews. GRADE favours human over animal studies (the latter only being included if there is a lack of human data) and randomised controlled studies (RCT) over other forms of investigation.

The authors of the letter have included a number of points that relate to three separate PICOs.

1. Cooling of Burns (FA770) Among adults and children with thermal injuries (P), does active cooling of burns (I), compared with passive cooling (C), change pain, complications, wound healing, need for advanced medical care, patient satisfaction, rates of fasciotomy, depth or breadth of burn (O)? In developing the Consensus on Science 126 papers were reviewed of which 6 were selected. These were all human studies and included 1 single blind RCT and 5 observational studies. The resulting Treatment Recommendation was that we recommend that first aid providers actively cool thermal burns – a strong recommendation based on low-quality evidence. One observational study⁵ described adequate cooling as a minimum of 10 min and this timing was reflected in the values and preferences statement and subsequently in the guideline.

We only reviewed the management of thermal burns.

2. Eye chemical injury: irrigation (FA 540) Among adults and children who have a chemical or other unknown substance enter the conjunctival sac (P), does irrigation with isotonic saline, balanced salt solution, or other commercial eye irrigation solutions (I), compared with irrigation with water (C), change tissue healing, functional recovery, pain, complications, time to resumption

of usual activity, restoration to the pre-exposure condition, time to resolution of symptoms (O)? In developing the Consensus on Science 1076 papers were reviewed of which 1 was selected. The study selection and analysis were complicated by water being the comparator and resulted in a single study selected that was an observational animal study. However, considering the seriousness of the injury and the difficulty in obtaining human data, and after careful review of the evidence, the task force decided to suggest continuous irrigation with water – a weak recommendation based on very low quality evidence – valuing the preservation of vision.

We did not review the management of chemical burns other than for eye injury.

3. Wet compared with dry burn dressings (FA 771) Among adults and children with thermal injuries (P), does the use of a wet dressing (I), compared with dry dressing (C), change complications, pain, tissue healing, need for advanced medical care, patient satisfaction, rates of fasciotomy (O)? In developing the Consensus on Science 2038 papers were reviewed of which 3 was selected of which two were RCTs. The wording of the PICO restricted the width of analysis of burn dressings as it was difficult to define a wet or dry dressing. Plastic wrap (Clingfilm) was included in the review and defined as a dry dressing but there were no comparison studies of this product with a wet dressing. No treatment recommendation was made by the Task Force due to the lack of evidence, and the first aid guideline left the decision as to which dressing to recommend to national and local burn management practice. The 2015 guideline statement of 'Subsequent to cooling, burns should be dressed according to current practice with a loose sterile dressing' was made as a good practice point rather than an evidence based statement.

No recommendations were made on stopping the burning process or avoiding hypothermia as these were beyond the remit of the evidence based process.

Because of the methodological rigour of the GRADE process the First Aid Task Force was only able to work on a limited number of PICO questions, therefore not supporting a full practical guideline. The ERC guideline should be seen as containing individual instructions for specific aspects of first aid management, and not as a full guideline supporting comprehensive first aid management of trauma and medical emergencies. However, it is hoped that the ILCOR First Aid Task Force will continue to develop its evidence evaluation of First Aid practice in the future.

Conflict of interest statement

None of the authors of this response have any relevant conflicts of interest.

DOI of original article: <http://dx.doi.org/10.1016/j.resuscitation.2015.11.020>.

<http://dx.doi.org/10.1016/j.resuscitation.2015.11.021>

0300-9572/© 2015 Elsevier Ireland Ltd. All rights reserved.

References

1. Zideman D, Singletary EM, De Buck EDJ, et al. Part 9: first aid: 2015 international consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations. *Resuscitation* 2015;95:e229–65.
2. Morley PT, Lang E, Aickin R, et al. Part 2: evidence evaluation and management of conflicts of interest: first aid: 2015 international consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations. *Resuscitation* 2015;95:e33–41.
3. Schünemann H, Brožek J, Guyatt G, Oxman A. GRADE handbook; 2013 <http://www.guidelinedevelopment.org/handbook/> [accessed 06.05.15].
4. Guyatt G, Oxman AD, Akl EA, et al. GRADE guidelines: 1. Introduction – GRADE evidence profiles and summary of finding tables. *J Clin Epidemiol* 2011;64:383–94.
5. Sunder S, Bharat R. Industrial burns in Jamshedpur, India: epidemiology, prevention and first aid. *Burns* 1998;24:444–7.

David A. Zideman*
Imperial College Healthcare NHS Trust, London, UK

Eunice M. Singletary
Department of Emergency Medicine, University of Virginia, Charlottesville, VA, USA

Emmy D.J. De Buck
Centre for Evidence-Based Practice, Belgian Red Cross-Flanders, Mechelen, Belgium

Natalie A. Hood
Monash Medical Centre, Melbourne, Victoria, Australia

* Corresponding author.

30 November 2015