



## Part 2: Evidence evaluation and management of conflicts of interest 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations ☆,☆☆



Peter T. Morley\*, Eddy Lang, Richard Aickin, John E. Billi, Brian Eigel, Jose Maria Ferrer, Judith C. Finn, Lana M. Gent, Russell E. Griffin, Mary Fran Hazinski, Ian K. Maconochie, William H. Montgomery, Laurie J. Morrison, Vinay M. Nadkarni, Nikolaos I. Nikolaou, Jerry P. Nolan, Gavin D. Perkins, Michael R. Sayre, Andrew H. Travers, Jonathan Wyllie, David A. Zideman

### ARTICLE INFO

#### Keywords:

Cardiac arrest  
Conflict of interest  
Evidence evaluation  
Resuscitation

Facts are stubborn things; and whatever may be our wishes, our inclinations, or the dictates of our passions, they cannot alter the state of facts and evidence.—John Adams, second President of the United States

### Introduction

The international resuscitation community, under the guidance of the International Liaison Committee on Resuscitation (ILCOR), has continued its process to identify and summarize the published resuscitation science in the documents known as the ILCOR Consensus on Science with Treatment Recommendations (CoSTR). The accompanying articles represent the culmination of many years work, where a total of 250 evidence reviewers from 39 countries

completed 165 systematic reviews on resuscitation related questions.

### Process before 2015

The processes previously used by ILCOR in the development of their CoSTR were specifically tailored to the complex needs of resuscitation science. At the time that the evidence evaluation was undertaken for the 2010 publication, there were still no other processes which could deal with the complexity of literature that we need to evaluate: from randomized controlled trials to case series, and from mathematical models to animal studies. The 2010 evidence evaluation process required completion of an electronic worksheet,<sup>1</sup> that included a table, summarizing the evidence addressing individual questions. It included 3 options for the direction of support (supportive, neutral and opposing), 5 Levels of Evidence, and a quality assessment of the individual studies (good, fair or poor).<sup>2,3</sup>

### Improvements for the 2015 process

When developing the process to be adopted for the 2015 CoSTR, ILCOR made a commitment to use the best available methodological tools to conduct its evaluation of the published resuscitation literature. To this end, ILCOR agreed to perform systematic reviews based on the recommendations of the Institute of Medicine of the

☆ The European Resuscitation Council requests that this document be cited as follows: Peter T. Morley, Eddy Lang, Richard Aickin, John E. Billi, Brian Eigel, Jose Maria E. Ferrer, Judith C. Finn, Lana M. Gent, Russell E. Griffin, Mary Fran Hazinski, Ian K. Maconochie, William H. Montgomery, Laurie J. Morrison, Vinay M. Nadkarni, Nikolaos I. Nikolaou, Jerry P. Nolan, Gavin D. Perkins, Michael R. Sayre, Andrew H. Travers, Jonathan Wyllie, David A. Zideman. Part 2: Evidence evaluation and management of conflicts of interest. 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. Resuscitation 2015;95:e33–e41.

☆☆ This article has been copublished in "Circulation".

\* Corresponding author.

E-mail address: [peter.morley@mh.org.au](mailto:peter.morley@mh.org.au) (P.T. Morley).

National Academies,<sup>4</sup> and to use the methodological approach proposed by the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) Working Group.<sup>5</sup>

In addition, ILCOR leveraged technologic innovations, with the support of science and technology specialists at the American Heart Association, to build a Web-based information system that would support the creation of scientific statements and recommendations that adhere to the GRADE methodology. An online platform known as the Scientific Evaluation and Evidence Review System (SEERS: [www.ilcor.org/seers](http://www.ilcor.org/seers)) was developed to guide the taskforces and their individual evidence reviewers, and enabled those responsible for tasks to better monitor progress in real time and receive assignments as indicated by the progression in work flow. One key feature of the SEERS system is the ability to open all components of the process to the public for comments and suggestions. SEERS functions as the repository of all the information and reviews processed since 2012 by the task forces, and Evidence Reviewers and discussions at the C2015 Conference. It remains the home for the 15 GRADE tutorials and 13 GRADE “ask the expert” seminars, as well as housing the training videos produced by AHA staff.

## The GRADE process

### *Why introduce the GRADE process?*

The methodological approach proposed by the GRADE Working Group has been developed over the past decade by key health professionals, researchers, and guideline developers in an attempt to provide a consistent and transparent process for use in guideline development.<sup>6</sup> It provides guidance for the rating of quality of evidence and the grading of strength of recommendations in health care. It is now widely used in the guideline development processes throughout the world including by organizations such as the Cochrane Collaboration, the World Health Organization, the National Institute for Health and Care Excellence (NICE), the Scottish Intercollegiate Guidelines Network (SIGN), and the American Thoracic Society.<sup>7</sup> The GRADE approach has been refined to the point that it is now able to incorporate the variety of studies that make up the body of resuscitation science.

### *What is different about the GRADE process?*

The GRADE process outlines a systematic and explicit consideration of study design, study quality, consistency, and directness of evidence to be used in judgments about the quality of evidence for each outcome of each specific question. The GRADE process is, therefore, much more outcome-centric than our previous processes. GRADE considers evidence as a function of the totality of data that informs a prioritized outcome across studies, as opposed to information evaluated at the level of the individual study. The GRADE approach facilitates appropriate consideration of each outcome when grading overall quality of evidence and strength of recommendations, and it reduces the likelihood of mislabeling the overall quality of evidence when evidence for a critical outcome is lacking.<sup>6</sup>

## The 2015 ILCOR evidence evaluation process

The 2015 ILCOR evidence evaluation followed a complex but systematic process. In general, the steps followed are consistent with those outlined by the Institute of Medicine.<sup>4</sup> During the development of this process, a transition was made to a more complete online process, using a combination of existing and newly developed tools. The steps in the evidence review process are outlined in [Table 1](#).

**Table 1**

Summary outline of the evidence evaluation process for the ILCOR 2015 CoSTR.

- Task forces select, prioritize, and refine questions (using PICO format)
- Task forces allocate level of importance to individual outcomes.
- Task forces allocate PICO question to task force question owner and 2 evidence reviewers
- Task force works with information specialists to develop and fine-tune search strategies (for PubMed, Embase, and Cochrane)
- Public invited to comment on PICO question wording, as well as the proposed search strategies
- Revised search strategies used to search databases (PubMed, Embase, and Cochrane)
- The articles identified by the search are screened by the evidence reviewers using inclusion and exclusion criteria
- Evidence reviewers agree on final list of studies to include
- Evidence reviewers agree on assessment of bias for individual studies
- GRADE evidence profile table created
- Draft consensus on science statements and treatment recommendations created
- Public invited to comment on draft consensus on science and treatment recommendations
- Detailed iterative review of consensus on science and treatment recommendations to create final version
- Peer review of final CoSTR document

CoSTR indicates Consensus on Science with Treatment Recommendations; GRADE, Grading of Recommendations, Assessment, Development, and Evaluation; ILCOR, International Liaison Committee on Resuscitation; and PICO, Population, Intervention, Comparator, Outcome.

### *Task forces, task force question owners, evidence reviewers, evidence evaluation specialist/GRADE/methodology experts*

Seven task forces evaluated the resuscitation literature: Acute Coronary Syndromes; Advanced Life Support; Basic Life Support; Education, Implementation, and Teams; First Aid; Neonatal Resuscitation; and Pediatric Life Support. Each task force appoints Task Force Question Owners and Evidence Reviewers to oversee the evidence evaluation process for each question. The task forces were supported by online resources<sup>5,8</sup> as well as telephone, face-to-face, and Web-based educational sessions provided by a GRADE methodologist and an evidence evaluation expert, with advice from a specifically formed ILCOR Methods Group.

### *Components of the 2015 ILCOR systematic reviews*

The evidence evaluation follows a standard format. The key components of this format are described in detail below.

#### *Agree on PICO-formatted question and prioritizing outcomes*

Each task force identified the potential questions to be addressed on the basis of known knowledge gaps, priorities as part of previous recommendations, current issues raised by individual resuscitation councils, the known published literature, and areas of controversy. The task forces were then required to prioritize these questions for formal review, and to develop agreed-upon wording by using the PICO (population, intervention, comparator, outcome) format.<sup>9</sup>

As part of the PICO question development, the GRADE process required designation of up to 7 key outcomes for each PICO question. The task force then allocated a score for each outcome on a scale from 1 to 9.<sup>10</sup> Critical outcomes were scored 7 to 9, important outcomes were scored 4 to 6, and those of limited importance were scored 1 to 3. The types of outcomes used (and their possible relevant importance score) included neurologically intact survival (e.g., critical 9), discharge from hospital alive (eg, critical 8), and return of spontaneous circulation (e.g., important 6).

The explicit preference of this process was that if evidence was lacking for a key outcome, this was acknowledged rather than excluding that outcome.

Download English Version:

<https://daneshyari.com/en/article/3007974>

Download Persian Version:

<https://daneshyari.com/article/3007974>

[Daneshyari.com](https://daneshyari.com)