Guidelines development Process Manual

Approved by the Resuscitation Council (UK) Executive Committee

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## Contents

**Contributors** .......................................................................................................................... 3

**Executive summary** .............................................................................................................. 4

1. **Introduction** ....................................................................................................................... 6
   1.1 About the Resuscitation Council (UK) ................................................................. 6
   1.2 Resuscitation Council (UK) Guidelines ............................................................... 6
   1.3 Quality standards for clinical practice and training ............................................. 7
   1.4 Structure of the Resuscitation Council (UK) ...................................................... 8

2. **Development process** ....................................................................................................... 8
   2.1 Topic selection ................................................................................................................... 8
   2.2 Establishing working groups ....................................................................................... 9
   2.3 Scope and purpose ......................................................................................................... 10
   2.4 Rigour of development ................................................................................................. 11

3. **Presentation** .................................................................................................................... 13

4. **Implementation** ............................................................................................................. 16

5. **Evaluation** ...................................................................................................................... 17

6. **Updating of guidance** ................................................................................................... 18

7. **Editorial independence** .................................................................................................. 19

**Appendices** .......................................................................................................................... 20

  - Appendix 1 - Organisational chart and statistics ......................................................... 20
  - Appendix 2 - Guidance on conflict of interest (COI) .................................................. 21
  - Appendix 3 - House style guide ..................................................................................... 23
  - Appendix 4 - Statement of editorial independence .................................................... 23
  - Appendix 5 - Step by step process for developing Resuscitation Council (UK) CPR Guidelines .................................................................................................................. 25
  - Appendix 6 - RC (UK) equality impact assessment tool ............................................. 30
  - Appendix 7 - Conflict of interest statements of manual authors ................................ 31
  - Appendix 8 - Guidance for co-authorship, endorsement and support of publications .................................................. 32
  - Appendix 9 - References ................................................................................................. 33
Contributors

Dr Jasmeet Soar,
Consultant in Anaesthesia and Intensive Care Medicine, Southmead Hospital, North Bristol NHS Trust, Bristol BS10 5NB
Chair, Resuscitation Council (UK) Guidelines 2015 Working Group
Chair, Resuscitation Council (UK) Standards Working Group
Chair, Resuscitation Council (UK) Anaphylaxis Working Group.

Sarah Mitchell,
Director, Resuscitation Council (UK)
5th Floor Tavistock House North, Tavistock Square, London WC1H 9HR.

Dr Carl Gwinnutt,
Emeritus Consultant
Salford Royal Hospital NHS Foundation Trust, Salford M6 8HD
Vice-Chairman, Resuscitation Council (UK).

Dr Ian Bullock,
Chief Operating Officer, National Clinical Guideline Centre,
Royal College of Physicians, St Andrews place, Regents Park, London NW1 4LE.

Viv Cummin,
Lay member, Resuscitation Council (UK) Patient Advisory Group.
Executive summary

1. This development process manual:
   - describes the process used by the Resuscitation Council (UK) [RC (UK)] to develop and update its guidelines and standards consistent with global evidence methods
   - provides details of the technical aspects of guideline development and the methods used
   - supports and directs all those who are tasked with developing or updating RC (UK) guidelines and standards
   - ensures that quality assurance is key to this process
   - ensures stakeholder engagement is at the heart of the process
   - ensures that transparency is illustrated in the process used by the RC (UK) to develop its guidelines and standards work programme.

2. All those involved in the production of RC (UK) guidelines, standards and statements will be required to follow the process described in this manual. The Process is summarised in Figure 1.

Figure 1. Summary of Resuscitation Council (UK) Development Process
1. Introduction

1.1 About the Resuscitation Council (UK)
The RC (UK) was formed in August 1981. The objective of the Council was, and still is, to facilitate education of both lay and healthcare professional members of the population in the most effective methods of resuscitation appropriate to their needs. The RC (UK) aims to achieve its objective by:

- encouraging research into methods of resuscitation to create new knowledge
- leading evidence synthesis of published research to guide contemporary practice
- studying resuscitation teaching techniques
- establishing appropriate guidelines for resuscitation procedures
- promoting the teaching of resuscitation using the established guidelines which remains a key implementation strategy of evidence-based guidelines
- establishing and maintaining standards for resuscitation
- fostering good working relations between all organisations involved in resuscitation
- producing and publishing training aids and other literature concerned with the organisation of resuscitation and its teaching.

The RC (UK) organisational chart and statistics are shown in Appendix 1.

1.2 Resuscitation Council (UK) Guidelines
The RC (UK) adheres to the definition and standards set out by the Institute of Medicine: Clinical practice guidelines are statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options.

RC (UK) guidelines are based on the best available evidence and are relevant to healthcare professionals, health service managers, patients, their families and carers, and lay persons involved in resuscitation. They provide source material for optimal implementation of evidence-based recommendations in shaping nationally recognised courses, focused on improving both the outcomes to care and an individual’s experience of care.
The RC (UK) has a long history of developing nationally accepted guidelines for cardiopulmonary resuscitation (CPR), including:

- Basic life support (BLS)
- Use of an automated external defibrillator (AED)
- Advanced life support (ALS)
- Paediatric life support (PLS)
- Newborn life support (NLS).

The RC (UK) is committed to improving the quality of care and outcomes for those individuals who need resuscitation, defined as starting with a ‘deteriorating patient, during cardiac arrest and post cardiac arrest’. This is achieved by the guidelines providing healthcare professionals and laypeople with evidence-based clinical pathways for all patient groups (adults, children, newborn) and all settings. These guidelines are the basis for resuscitation care throughout the UK.

The RC (UK) will also produce guidance in other subject areas related to resuscitation as and when the need arises (e.g. Cardiovascular Implanted Electronic Devices in people towards the End of Life, during Cardiopulmonary Resuscitation and after Death).

All RC (UK) guidelines are freely available at www.resus.org.uk

1.3 Quality standards for clinical practice and training

The RC (UK) also produces quality standards for clinical practice and training, the aim of which is to improve care and outcomes for patients who are deteriorating, or suffer cardiorespiratory arrest in a healthcare setting. There is a particular emphasis on simplification and standardisation to improve implementation and delivery of resuscitation care. Specifically they:

- aim to lead to improvements in patient care and local resuscitation services
- are derived from existing guidance from the RC (UK) and other bodies
- are written in collaboration with stakeholders
- have outcomes that can be measured either locally or as part of national audits.

The development of these standards should follow the same rigorous process as for guidelines produced by the RC (UK). All RC (UK) standards are freely available at www.resus.org.uk
1.4 Structure of the Resuscitation Council (UK)

The RC (UK) comprises:

- an Executive Committee; this consists of clinicians from a range of specialities, chairs of subcommittees, stakeholder representatives and lay persons
- Subcommittees
- Patient Advisory Group
- Working groups; these are tasked by the Executive Committee to produce guidelines and standards.

The organisational chart can be viewed at [http://www.resus.org.uk/pages/orgChart.pdf](http://www.resus.org.uk/pages/orgChart.pdf)

2. Development process

The objective of this development process manual is to clarify and delineate the methods, principles, and processes used by the RC (UK) to develop its guidelines and standards for use in the UK.

2.1 Topic selection

The RC (UK) will produce:

1. Cardiopulmonary resuscitation guidelines including basic life support (BLS), use of an automated external defibrillator (AED), advanced life support (ALS), paediatric life support (PLS) and neonatal life support (NLS). The principle aim of these guidelines is to improve the quality of patient care and outcomes from cardiac arrest. The RC (UK) guidelines provide healthcare professionals and laypeople with evidence-based clinical pathways for all patient groups (adults, children, newborn) and all settings. The scientific evidence supporting the RC (UK) guidelines is reviewed every 5 years (most recently in 2010).

2. Emergency treatment of anaphylaxis guidelines, updated every 5 years if necessary. The most recent version was published in 2008.


4. Guidance on specific topics relating to resuscitation (e.g. Cardiovascular Implanted Electronic Devices in people towards the End of Life, during Cardiopulmonary Resuscitation and after Death, Safer handling during resuscitation, Management of
cardiac arrest during neurosurgery in adults). Most topics are chosen based on emerging issues or following liaison with other organisations. The final decision rests with the RC (UK) Executive committee.

2.2 Establishing working groups
1. The RC (UK) Executive Committee will establish working groups to develop guidelines and standards.

2. All members of the working group must adhere to the RC (UK) conflict of interest (COI) policy. Members will not acquire any financial gain or facilitate financial gain to others by being a member of the working group.

3. The Chairperson of each working group will usually be a member of the Executive Committee, and appointed by the Executive Committee.

4. Other members of the working group will be appointed to ensure representation of all relevant stakeholder groups including:
   - subject experts
   - methodology experts
   - user groups
   - lay, patient or carer representative.

5. Where appropriate, the working group can appoint proxy membership from relevant specialist organisations, patient groups, Colleges, and professional associations.

6. Working group members from relevant stakeholders will be identified by the RC (UK) by consulting its committees and subcommittees, membership, other stakeholder organisations, and patient groups.

7. The lay, patient, or carer member will normally be from the RC (UK) Patient Advisory Group. These members have equal status with other members of the group.

8. The working group can add further individuals if gaps in the expertise of the working group are identified.

9. The RC (UK) will provide administrative support for the process.

10. The RC (UK) will cover reasonable travel costs for working group members.

11. Working group members will be expected to commit to the whole process, attend meetings and conference calls and respond to all email communications in a timely manner unless there are extenuating circumstances.

12. The working group chair is responsible for:
   a. working with RC (UK) staff to plan meetings
   b. ensuring all working group members contribute to the discussions and activities of the group
2.3 Scope and purpose

The working group will establish the scope of the guidance. The term guidance has been used generically to cover the range of guidelines and standards listed in section 2.1.

1. The scope must give an overview of what will, and will not be covered.

2. The scoping process should follow 4 stages:
   a. identifying key issues and first draft
   b. working with stakeholders to ensure key issues are not missed. Stakeholders can help identify what are the priority areas, and those areas where guidance already exists or is lacking
   c. consultation on the scope
   d. finalising the scope.

3. The final scope must state:
   a. the overall objective of the guidance
   b. the clinical, healthcare or social questions covered by the guidance
   c. the population and/or target audience to whom the guidance applies, (e.g. the 2008 anaphylaxis guidelines clearly state the intended users are healthcare staff)
   d. the healthcare settings any guidance applies to
   e. the methods that will be used to evaluate the available evidence, (e.g. systematic review process)
   f. the likely timescale for development and consultation
   g. any equality issues that are identified

4. The working group should establish the timeline for comments on the scope, (e.g. stakeholders in advance of writing the guidance agreed the date of 2014 in the Cardiovascular Implanted Electronic Devices in people towards the End of Life, during Cardiopulmonary Resuscitation and after Death document scope).

5. The working group should update the scope based on comments received during the consultation.
6. The scoping process may identify additional stakeholder groups. In such circumstance, the working group membership may be updated based on this.

7. The final scope and purpose should include a proposed timeline for the development process that informs a work plan.

2.4 Rigour of development

1. The methods used to develop the guidance should be clearly stated in a methods section.

2. A systematic method to search for evidence and search strategy should be included for development of clinical guidelines. Standards will normally be based on existing guidelines from the RC (UK) or other national bodies (e.g. NICE). There are some topics that stakeholders ask the RC (UK) to produce guidance on where a systematic review identifies little or no available scientific evidence, or no existing guidance e.g. Safer handling during resuscitation. In these cases the working group may decide the guidance can be based on expert opinion and the available ‘grey literature’ (see point 10 below).

3. The methods used to search for and evaluate the available evidence need to be clearly stated. For example, both the RC (UK) CPR and anaphylaxis guidelines follow the process of the ‘Grading of Recommendations Assessment, Development and Evaluation’ (GRADE) working group. ([http://www.gradeworkinggroup.org/index.htm](http://www.gradeworkinggroup.org/index.htm)). This system was developed by an international working group to rate the quality of evidence across outcomes in systematic reviews and guidelines that examine alternative management strategies or interventions; these may include no intervention or current best management. It can also be used to grade the strength of recommendations in guidelines. The key difference from other assessment systems is that GRADE rates the quality of evidence for a particular outcome across studies and does not rate the quality of individual studies.

4. In order to apply GRADE, the evidence must clearly specify the relevant setting; population, intervention, comparator(s) and outcomes (PICO format). Review questions for systematic review will be developed from the scope. Questions can be about interventions, diagnosis and prognosis, based on the PICO format and will inform a protocol that determines evidence synthesis approach (e.g. outcome data extracted).
5. Details and dates of the search strategy including search terms, date of search, databases searched, and numbers of studies included and excluded should be included as an appendix to the guidance.

6. The working group will use existing systematic reviews or those from other organisations where these exist (e.g. the 2008 anaphylaxis guidelines used up to date Cochrane reviews, and the lead author of these systematic reviews was a member of the Anaphylaxis working group). When systematic reviews from other organisations are used, ensure they are conducted and reported according to AMSTAR (Assessing the methodological quality of systematic reviews http://amstar.ca/index.php) and PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses http://www.prisma-statement.org/index.htm) recommendations, are in the public domain and have been peer reviewed.

7. Specifically the RC (UK) CPR guidelines are based on an international process coordinated by ILCOR (International Liaison Committee on Resuscitation) and the European Resuscitation Council. See Appendix 5 for further details of the ILCOR Consensus on Science and Treatment Recommendations (CoSTR) process.

8. Criteria and reasons for inclusion or exclusion of evidence identified by the evidence review should be clearly stated.

9. The strengths and limitations of the body of evidence, and acknowledgement of any areas of uncertainty, should be clearly stated.

10. The working group will ask stakeholders and its members to submit any evidence they are aware of, so that any ‘grey’ literature is part of its review. The ‘grey’ literature includes reports that are not formally published or have limited distribution, and may not be identified by a systematic review.

11. The method used to arrive at recommendations is based on review and discussion of the evidence by the working group until consensus is achieved. In most cases, this will be through a process of informal consensus. The Chair must ensure that each individual on the working group can present and debate their views, and that discussions are open and constructive. All members of the group need to agree to endorse any recommendations. If the group cannot come to consensus, this should be made clear in the final wording of the recommendation.

12. When evidence is limited, recommendations may be based on formal consensus methods. When this occurs a nominal group method will be used (i.e. the available treatment options are discussed and then ranked by the group). This allows the views of all the members of the group to be taken into account. The specific technique used is outlined in: Jones J, Hunter D. Consensus methods for medical and health services research. BMJ 1995;311:376-80. A common issue for
disagreement is whether there is a good enough reason to change existing guidance, especially where there are important implementation issues (e.g. additional cost of equipment, training needs).

13. Cost impact and ease of implementation should be considered when making recommendations (e.g. the use of atropine was no longer recommended in the 2010 CPR guidelines based on no supporting evidence for or against its use in cardiac arrest).

14. The final draft of any guidance will be subject to stakeholder consultation. The duration of this consultation period is determined by the working group and agreed by the Executive Committee. The working group must actively ensure stakeholders are aware of the consultation through the working group members, stakeholders, the RC (UK) Newsletter, website, and members of the Executive Committee (includes laypeople, clinicians).

15. Comments from stakeholders will be reviewed by the working group. Changes to the guidance will be based on feedback using the same consensus process as for when making initial recommendations (point 11 above). All feedback must be reviewed and the reasons for acting or not acting on the feedback recorded.

16. The final guidance will be peer reviewed and quality assured by the RC (UK) Executive Committee, which comprises 25 individuals including lay individuals and representatives of key stakeholder groups.

3. Presentation

1. The layout, presentation and style should follow the ‘RC (UK) house style guide’.

Appendix 3

2. The presentation will include:
   a. title page
   b. summary
   c. summary algorithm(s) when appropriate
   d. when the guideline is an update, summary details of what has been updated
   e. list the authors and their affiliations
   f. the methodology and process
   g. a description of how stakeholders, the public and others were able to view and comment on the document
h. the objectives of the guidelines including scope and purpose, target audience and target population are described
i. evidence statements
j. recommendations
k. links to supporting evidence (e.g. systematic reviews)
l. references
m. measurable outcome when appropriate (e.g. the National Cardiac Arrest Audit (NCAA) for in-hospital cardiac arrest)
n. links to related guidance and other supporting materials
o. statement of editorial independence Appendix 4
p. declaration of COI. The form is shown in Appendix 2
q. acknowledgements to those who have supported the development of the document
r. contact details for queries and feedback.

3. As most RC (UK) guidelines will be used in emergencies where efficient, timely action is critical, they should include clear, succinct recommendations with easily understood algorithms. Considerable care should be taken to ensure that the guidelines are written in plain English and unambiguously; this includes review by non-medical individuals prior to publication. The implementation of the guidelines in support of new evidence benefits from multiple approaches. This can include updating training course curricula, manuals and other materials by RC (UK). Specifically:

a. Each section is clearly identifying the question being answered, with the key recommendations highlighted (e.g. the BLS guidelines clearly state ‘Give 2 ventilation breaths after every 30 chest compressions’).

b. The certainty of the underlying evidence for any recommendation will be clearly identified, and articulated in the form of evidence to recommendation discussions. For example RC (UK) Guidelines 2010 for Paediatric Basic Life Support state ‘Changes in paediatric life support guidelines have been made partly in response to new scientific evidence, and partly to simplify them in order to assist teaching and retention. As in the past, there remains a paucity of good-quality evidence specifically on paediatric resuscitation, and some conclusions have had to be drawn from experimental work or extrapolated from adult data.’

c. Recommendations will demonstrate analysis and discussion of the health benefits, side effects and risks (e.g. to survival or quality of life).

d. Key priority recommendations will be emphasised, with targeted implementation, including the use of algorithms.
e. Recommendations that an intervention ‘must’ or ‘must not’ be used are solely included if there is a legal duty to apply this (e.g. adverse events that would be supported by statutory regulation).

4. It is clear if this is new guidance or updated guidance. For updated guidance previous versions should be referenced (e.g. the 2013 standards documents clearly lists in the introduction which documents it is replacing).

5. The different options for management of the condition or options for intervention are clearly presented (e.g. use of an automated external defibrillator is recommended for use by all rescuers, whilst only those rescuers who are confident and experienced in emergency interpretation of ECG rhythms can use manual defibrillators).

6. The purpose of the guidelines is to provide evidence-based interventions that are most likely to be successful (e.g. increase the chances of successful resuscitation from cardiac arrest with full neurological recovery). Equality issues should be integral to the interpretation of evidence and translation of this into national clinical guidelines is consideration of equality issues. See Appendix 6 for the Equality Impact Assessment Tool used.

7. The date of search, the date of publication or last update and the proposed date for review are clearly stated.

8. The content and style of the guidance is suitable for the specified target audience. Members of the user groups should be involved in reviewing the final document. Use of everyday language for patients, their family and carers, and the wider public.

9. RC (UK) guidance aims to be practical and user friendly. Detailed supporting evidence will usually be linked or referenced, rather than included in the main text of any guidance.
4. Implementation

The working group will produce an implementation plan:

1. Ensuring stakeholders are aware there will be new CPR guidelines (e.g. all NHS). All NHS bodies and voluntary groups with an interest in CPR were informed that there would be new CPR guidelines in 2010.

2. Have a timeline for implementation (e.g. The RC (UK) worked with the National Patient Safety Agency to ensure there was an agreed timeline for implementation of Guidelines 2010).

3. Ensure any implementation issues such as resource and cost issues have been raised with relevant stakeholders and individuals, and solutions identified to ensure there are no delays in the release of updated training and implementation materials. For example, the voluntary aid organisations (St John Ambulance, Red Cross, British Heart Foundation) who run first aid courses were informed of key changes to CPR guidelines in advance of the final publication to enable them to update their teaching materials in a timely and coordinated manner.

4. Implementation is assessed (e.g. the RC (UK) has collaborated with the Intensive Care National Audit & Research Centre to establish the National Cardiac Arrest Audit (https://ncaa.icnarc.org/Home) for in-hospital cardiac arrest). It has also established an Out-of-hospital cardiac arrest outcomes project in partnership with Warwick University, the British Heart Foundation, and the Ambulance Service. These registries enable RC (UK) to evaluate impact of the guidance and develop time series measurements relating to patient outcome, epidemiology and trends in cardiac arrest.

5. Use a press officer to publicise guidance.

6. Provide free supporting tools:
   a. free access on RC (UK) website www.resus.org.uk
   b. posters (e.g. algorithm posters) freely available on RC (UK) website
   c. applications on web, DVD, and commonly available smart phones (iPhone, Android devices) and tablet devices (e.g. www.life-saver.org.uk)
   d. podcasts (e.g. anaphylaxis podcasts) https://www.resus.org.uk/pages/anaPcast.htm
   e. animations and DVDs – available on the website and on YouTube http://www.youtube.com/user/ResusCouncilUK
   f. use of PowerPoint™ presentations(e.g. anaphylaxis)
   g. social media on Facebook and https://en-gb.facebook.com/ResuscitationCouncilUK and Twitter https://twitter.com/resuscouncilUK
h. work with stakeholders to establish implementation tools (e.g. the RC (UK) advised and supported the British Heart Foundation for its highly successful Hands-only CPR campaign featuring Vinnie Jones).

7. Include on the programme for RC (UK) symposium and liaison with stakeholder group to present at other national meetings.

8. Teaching and relevant course material will be developed to support new guidelines where appropriate.

9. In addition, for its CPR guidelines the RC (UK) will develop updated teaching and course materials. The RC (UK) currently has over 10,500 volunteer instructors and each year over 125,000 healthcare staff attend one or more of the following RC (UK) courses:
   - Advanced Life Support (ALS) course
   - European Paediatric Support (EPLS) course
   - Immediate Life Support (ILS) course
   - Paediatric Immediate Life Support (PILS) course
   - Newborn Life Support (NLS) course
   - Generic Instructor course (GIC)
   - Focused Echocardiography in Emergency Life support (FEEL) course
   - Advanced Resuscitation of the Newborn Infant (ARNI) course.

All RC (UK) courses are quality assured, and taught and assessed by trained instructors.

5. Evaluation

Evaluation on the effectiveness of the guidance is collected by:

1. ensuring guidance includes RC (UK) contact information for feedback
2. developing a common frequently asked questions (FAQ) section with guidance if necessary
3. collect feedback from stakeholders and its instructors
4. assessment of data from national registries and audits such as the National Cardiac Arrest Audit
5. working with the National Reporting and Learning System to assess patient safety incidents related to resuscitation.
6. Updating of guidance

1. The RC (UK) CPR guidelines are updated every 5 years in line with the release of ILCOR CoSTR and ERC Guidelines. ILCOR convenes to generate CoSTR on a five-yearly cycle, and RC (UK) guidance runs in parallel with updates every 5 years. The next update will be in 2015. See Appendix 5 for further details of this process.

2. Unscheduled (interim) updates occur only if there is new evidence for an interim statement. This is usually when a study shows a significant treatment benefit or harm (e.g. the beneficial effects of therapeutic hypothermia were published in 2002 and ILCOR made an advisory statement in early 2003). This is assessed by the ILCOR task forces, and follows the same evidence evaluation and guideline process as for the 5-yearly updates.

3. Other RC (UK) guideline and standards will be reviewed at the review date which is usually at 5 years, unless there is new information or new implementation issues arise, as for CPR guidelines. Identification of new information or new issues should continue through the working group members, stakeholders, and end users.

4. The RC (UK) will reconvene a working group to review guidance when an update is due.

5. For the RC (UK) CPR guidelines the working group will be formed and base its decisions on the ILCOR, CoSTR and ERC Guidelines process. See Appendix 5 for details.

6. For its other guidance the working group will revisit the scope of the original document, and through consultation with stakeholders, and a further systematic review will identify if there is any new evidence. This may lead to revision of the whole or part of the previous guidance. If the initial systematic review was produced by another organisation, and an updated review is not available, the RC (UK) will conduct its own systematic review.

7. Decisions to update a guideline must balance the need to reflect changes in the evidence against the need for stability, because frequent changes to guideline recommendations would make implementation difficult.
7. Editorial independence

1. The RC (UK) is a charity. Its income is derived from training and education activity. It is completely independent from any commercial organisation. It is solely responsible for the content of the RC (UK) guidelines and standards.

2. The RC (UK) guidance on COI is applied to all new development activity (see Appendix 2). Specifically:
   a. all working group members will need to complete a COI form before joining the group;
   b. COI declarations of working group members will be shared with the rest of the group at the beginning of every meeting, and updated if necessary;
   c. COI declarations will be tabled in the final document.

3. The COI guidance states a 'member may still participate in discussions that relate to this topic, but should not be involved in decisions. In some circumstances, and at the discretion of the Chairman of the relevant committee, if there is a major COI for a given topic, it may be appropriate to exclude that individual from the whole discussion. A COI will expire after one year after the COI no longer exists. If the Council discovers that an individual has a COI that has not been declared, this will be reviewed by the COI panel (i.e. the Officers). Failure to declare an interest may result in expulsion of the individual from his or her role(s) in the Council'.
Appendices

Appendix 1 - Organisational chart and statistics

Appendix 2 - Guidance on conflict of interest (COI)

Scope

This guidance is for the Officers, Trading Company Secretary, members of the Resuscitation Council (UK) Executive Committee, members of the Subcommittees, members of Working Groups set up by the Resuscitation Council (UK), and other individuals appointed to represent the Resuscitation Council (UK).

What constitutes conflict of interest?

The following provides examples of conditions in which a member should declare an interest that might conflict, or be perceived to conflict, with their responsibilities to the Council:

- **Boards or consultancies (paid or not), honoraria, payment for lectures:** if directly related to the areas under discussion, these must be declared.

- **Equity, ownership:** if directly related to the areas under discussion, these must be declared. If you have an investment fund (e.g., pension, ISA) over which you have no control in how the fund is managed, this does not need to be declared.

- **Business relationship with a company:** if the company’s business can be affected by outcome in areas under consideration, this must be declared.

- **Industry funding of research grant:** this must be declared unless all of the following criteria are met: there is no salary support, data are controlled by the investigator, and there are no restrictions on publication.

- **Charitable funding of research grants:** this must be declared unless all of the following criteria are met: there is no salary support, data are controlled by the investigator, and there are no restrictions on publication.

- **Anything else** that a member believes their participation in discussions and decisions may be perceived by the public or colleagues to be a COI.

A total income of more than £1,000 from a single source is a COI and must be declared. Only the source of the income and the nature of the interest are required; the amount of any payment or grant etc. does not need to be disclosed. Having declared a potential COI, at the discretion of the Chairman of the relevant committee, a member may still participate in discussions that relate to this topic, but should not be involved in decisions. In some circumstances, and at the discretion of the Chairman of the relevant committee, if there is a major COI for a given topic, it may be appropriate to exclude that individual from the whole discussion. A COI will expire after one year after the COI no longer exists. If the Council discovers that an individual has a COI that has not been declared, this will be reviewed by
the COI panel (i.e., the Officers). Failure to declare an interest may result in expulsion of the individual from his or her role(s) in the Council.

**When should interests be declared?**
A COI form should be made on appointment and then annually. All of the individuals listed at the beginning of this document will complete a COI each year. If the individual has no potential conflicts this must be declared on the form. At each meeting throughout the rest of the year the Chairman of a Committee/Subcommittee will ask if there have been any change of circumstance and this will be recorded in the minutes.

**Record of interests and their publication**
The Resuscitation Council will keep a COI record for all these individuals. Information about any interests declared will be made publicly available in the form of a statement of annual declarations, through the minutes of meetings or in guidance publications.

**June 2008**
**Amended March 2011**

### Declaration of Conflict of Interest

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committee / Subcommittee</td>
</tr>
<tr>
<td>Relevant conflict of interest (Consulting fees, honoraria, grants, positions)</td>
</tr>
<tr>
<td>If none – please state ‘NONE’</td>
</tr>
<tr>
<td>Signature</td>
</tr>
<tr>
<td>Date</td>
</tr>
</tbody>
</table>
Appendix 3 - House style guide

http://resus.org.uk/pages/RCUK_StyleGuide.html
Appendix 4 - Statement of editorial independence

The Resuscitation Council (UK) is a charity. Its income is derived mainly from life support courses. It has no financial relationships with the industry, and is completely independent from any commercial organisation. It is solely responsible for the content of the RC (UK).
Appendix 5 - Step by step process for developing Resuscitation Council (UK) CPR Guidelines

Guideline Development Process RC (UK) CPR Guidelines

1. Set the questions
2. Evaluate the evidence
3. Consensus on science
4. Treatment recommendations
5. ERC guidelines
6. RC (UK) guidelines
7. Implementation
1. The International Liaison Committee on Resuscitation (ILCOR) establishes the scientific evidence base that underpins the guidance and creates treatment recommendations. The detailed process used by ILCOR for the 2010 Guidelines is published in the peer reviewed literature and forms the basis of the previous RC (UK) Resuscitation Guidelines, Guidelines Process Manual (2012).

2. ILCOR has a website for this process that includes tools and guides for all participants involved in the evidence evaluation process. The ILCOR Scientific Evidence Evaluation and Review System can be found at: www.ilcor.org/SEERS

3. Approximately 3 years before the publication date of CoSTR, ILCOR convenes its science task forces (ALS, BLS, PLS, NLS, Acute Coronary Syndromes (ACS), and Education, Implementation and Teams (EIT)). Membership of these task forces is determined by identification of expertise in the related area. The task forces are responsible for generating the questions for all the systematic reviews. They are helped in this process by national Resuscitation Councils from around the world (ILCOR has representation from all regions of the world, see www.ilcor.org) and stakeholder groups.

4. The ILCOR SEERS website allows any individual to propose questions for evidence evaluation.

5. Each question is formatted into a population, intervention, comparator and outcome (PICO) format and categorised as a therapeutic, diagnostic or prognostic question.

6. PICO questions are then checked and approved by two evidence evaluation experts appointed by ILCOR.

7. PICO questions are discussed and prioritized by the relevant ILCOR Task Force and assigned a Question Owner.

8. The systematic review and any subsequent meta-analysis used by ILCOR follows the Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group process (http://www.gradeworkinggroup.org/index.htm).

9. The Task Force Question Owner works with an Information Specialist to develop a search strategy and conduct a systematic review. For the 2015 ILCOR process, all searches will be done by Information Specialists from the Li Ka Shing International Education Centre, St. Michael’s Hospital, Toronto, Canada.

10. Multiple databases are searched including the Cochrane database for systematic reviews and the Central Register of Controlled Trials, MEDLINE, EMBASE, CINAHL and a master reference library collated by the American Heart Association (AHA) during previous guideline processes.

11. PICO questions and search strategies are posted for public comment.

12. Identified studies are independently reviewed by 2 evidence reviewers. All reviewers complete a detailed conflict of interest disclosure form and systematic review authors are
screened by a panel and selected to avoid significant conflicts. Authors also list specific potential conflicts of interest on the individual systematic reviews, thus ensuring transparency of the review process.

13. Reviewers review the titles and abstracts of all articles identified by preliminary searches and quality assure and assess the relevance of the articles to the question being asked.

14. Once this process is completed, the included original studies are retrieved for critical appraisal. Studies are included or excluded based on their relevance to the PICO question being addressed in the systematic review.

15. Relevant studies are included in a summary of findings table.

16. Studies are assessed according to GRADE criteria for quality and bias.

17. A decision is made by the relevant Task Force and evidence evaluation experts as to whether there is sufficient data to warrant a meta-analysis at this stage.

18. Once there is a systematic review and meta-analysis, the process for drafting a consensus on science and treatment recommendations is based on GRADE methods. All proposed treatment recommendations are agreed based on an electronic voting process. Only those without a conflict of interest are allowed to vote.

19. This process includes periods for stakeholder input and public comment. When the systematic review is finalized, it is posted on the Internet for public comment and stakeholder consultation – this includes industry and healthcare professionals. The RC (UK) ensures this information is widely disseminated to its members, instructors and stakeholders to maximise active engagement at every development stage.

20. The final ILCOR manuscript undergoes full peer review by 2-3 reviewers for each section. The editorial staff of the journal Circulation handles this peer review process independently from ILCOR.

21. Once CoSTR is created, it is disseminated to the five continents for context specific translation by a collaborative of National Resuscitation Councils. The European Resuscitation Council (ERC) uses these recommendations to develop the ERC guidelines. The ERC Guidelines are written by members of the ERC ALS, BLS, PLS and ACS Working Groups.

22. Members of the RC (UK) Executive, Guidelines Working Group (GPG) and the RC (UK) guideline authors sit on the ILCOR and ERC processes to ensure a smooth evidence translation process and to ensure that the knowledge and experience of the RC (UK) plays an active role in these processes.

23. Thus, the RC (UK) derives its guidelines by taking the ILCOR source statements that inform ERC guidelines and then translates this evidence base into treatment and practice recommendations that are relevant for UK clinical practice. Reasons for differences in guidelines between countries are mainly due to differing availability of
certain drugs and also differences in how healthcare is delivered (e.g. doctor versus paramedic staffed ambulance services). Where there is lack of consensus the RC (UK) GPG uses a nominal group method for decision-making, i.e. the available treatment options are discussed and then ranked by the group. Conflicts between ILCOR and ERC guidance and that from UK bodies (e.g. NICE) are avoided by ensuring any relevant UK guidance and the supporting evidence for it is included in the ILCOR guidelines process. The RC (UK) ensures its guidance is in accordance with NICE guidelines; furthermore the RC (UK) ensures it is a stakeholder for relevant NICE guidance so that its views are taken into account.

24. Simultaneously with the ILCOR and ERC processes the RC (UK) convenes its CPR Guidelines Working Group. This will convene at least 18 months before new guidelines are published. The Chairman will be chosen from the Executive Committee and should be involved in the ILCOR process.

25. The RC (UK) Patient Advisory Group represents patients’ views. ILCOR processes actively encourage patient groups through stakeholder engagement, with opportunity to comment on systematic reviews and their clinical interpretation once posted on the Internet. For RC (UK) CPR guidelines, patient/carer representation is achieved through lay representation on the group and RC (UK) Executive Committee. A sub-group of the Executive is responsible for supporting patient participation and reviewing the terms of reference supporting their involvement to ensure they have equity and a voice within RC (UK). UK Patient Groups will be alerted to the publication of the ILCOR consultation period to allow them the opportunity to feed into the process at an early stage, and the RC (UK) has established audit trails in addressing and responding to comments provided.

26. The final RC (UK) Guidelines are published at the same time as the ILCOR Consensus on Science with Treatment Recommendations (CoSTR) and the ERC guidelines. The ILCOR CoSTR and ERC guidelines are published in the journal Resuscitation. Instructors, members, and stakeholder organisations are advised of this date.

27. ILCOR convenes to generate CoSTR on a five-yearly cycle, and RC (UK) guidance runs in parallel with updates every 5 years. Unscheduled updates occur only if there is new evidence for an interim statement. This is usually when a study shows a significant treatment benefit or harm (e.g. the beneficial effects of therapeutic hypothermia were published in 2002 and ILCOR made an advisory statement in early 2003). This is assessed by the ILCOR task forces, and follows the same evidence evaluation and guideline process as for the 5-yearly updates.

28. The final guidelines are posted on the RC (UK) website with free access. Within the document, where applicable, live links to relevant evidence, references or documents are provided. All RC (UK) instructors and members, and stakeholder organisations are
notified by email, and other means. The American and European guidelines are published in the journals Circulation and Resuscitation respectively and are also available free of charge.

29. Release of the guidelines also includes planned press releases to both the medical and lay press to ensure wide dissemination. Stakeholders are also provided with advance copies of the guidance to enable implementation on the release date.
Appendix 6 - RC (UK) equality impact assessment tool

The RC (UK) is committed to promoting equality, eliminating unlawful discrimination and actively considering the implications of its guidance for human rights. It aims to comply fully with the Equality Act (2010)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the guidance affect one group less or more favourably than another on the basis of:</td>
<td></td>
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<tr>
<td>• Race</td>
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<td>• Ethnic origins (including gypsies and travellers)</td>
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<tr>
<td>• Nationality</td>
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<tr>
<td>• Gender</td>
<td></td>
<td></td>
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<tr>
<td>• Culture</td>
<td></td>
<td></td>
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<tr>
<td>• Religion or belief</td>
<td></td>
<td></td>
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<tr>
<td>• Sexual orientation including lesbian, gay and bisexual people</td>
<td></td>
<td></td>
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<tr>
<td>• Age</td>
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<td></td>
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<tr>
<td>• Disability – learning disabilities, physical disability, sensory impairment and mental health problems</td>
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<td></td>
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<tr>
<td>2. Is there any evidence that some groups are affected differently?</td>
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<td>3. If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?</td>
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<td>4. Is the impact of the policy/guidance likely to be negative?</td>
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<td>5. If so can the impact be avoided?</td>
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<tr>
<td>6. What alternatives are there to achieving the policy/guidance without the impact?</td>
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<tr>
<td>7. Can we reduce the impact by taking different action?</td>
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<td></td>
</tr>
</tbody>
</table>
### Appendix 7 - Conflict of interest statements of manual authors

<table>
<thead>
<tr>
<th>Name</th>
<th>Conflict of interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Jasmeet Soar</td>
<td>• Employer – North Bristol NHS Trust</td>
</tr>
<tr>
<td></td>
<td>• Editor, Resuscitation (paid honorarium)</td>
</tr>
<tr>
<td></td>
<td>• ERC Executive ALS working group chair (unpaid)</td>
</tr>
<tr>
<td></td>
<td>• ILCOR Taskforce co-chair (unpaid)</td>
</tr>
<tr>
<td>Sarah Mitchell</td>
<td>None</td>
</tr>
<tr>
<td>Dr Carl Gwinnutt</td>
<td>Reviewer for Journal Resuscitation</td>
</tr>
<tr>
<td>Dr Ian Bullock</td>
<td>None</td>
</tr>
<tr>
<td>Viv Cummin</td>
<td>None</td>
</tr>
</tbody>
</table>
Appendix 8 - Guidance for co-authorship, endorsement and support of publications

The Resuscitation Council (UK) is often invited by other organisations to participate as an author of a joint publication or statement, or to endorse or support a publication or statement. This document provides guidance on such requests and is proposed for both printed and electronic publications. It does not apply to commercial organisations or industry.

The following classification is proposed:

**Joint Authorship (Co-authorship)**
The RC (UK) has been involved from an early stage (usually from the start) of the project and is represented as co-author throughout the publication. A service level agreement may be in place. The RC (UK) has had the opportunity to comment on the final draft of the document and recommend changes. The final document has been approved by the RC (UK) and will bear the RC (UK) logo.

**Endorsement**
The RC (UK) is asked to review a finished or near-finished document, usually with little or no opportunity to influence/change it. The RC (UK) believes that the document is valuable and has no significant reservations regarding its content. The final document will state it has been endorsed by the RC (UK) but will not usually bear the RC (UK) logo.

**Supported**
The RC (UK) is asked to review a finished document, without any opportunity to influence or change it. The RC (UK) believes that the general principles are of value, but may have some reservations, for example about aspects of the scope or relevance of the document, or of the method used. The final document will state it is supported by the RC (UK) but will not bear the RC (UK) logo.

**Not supported**
The RC (UK) is asked to review a finished document but does not agree with one or more of its scope, relevance, method or recommendations. The document is not supported by the RC (UK).

18 October 2012
Appendix 9 - References
