



AUSTRALIAN RESUSCITATION COUNCIL



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Resuscitation Council
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ANZCOR guideline review: the ILCOR process

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ILCOR: International Liaison Committee on Resuscitation



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The International Liaison Committee on Resuscitation (ILCOR) was formed in 1992 to provide a forum for liaison between principal resuscitation organisations worldwide



ILCOR



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Timeline

- Nov 2011 Ilcor meeting Orlando
- Oct 2012 Ilcor meeting Vienna
- 18-20 Apr 2013 Spark Of Life Conference Melbourne
- 21-22 Apr 2013 Ilcor meeting Melbourne
- 23 Apr 2013 Utstein meeting Melbourne
- 29-30 Apr 2014 ILCOR meeting Canada
- 2-5 Feb 2015 International Consensus Conference
- 15 Oct 2015 ILCOR CoSTR and Guidelines published

2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care with Treatment Recommendations

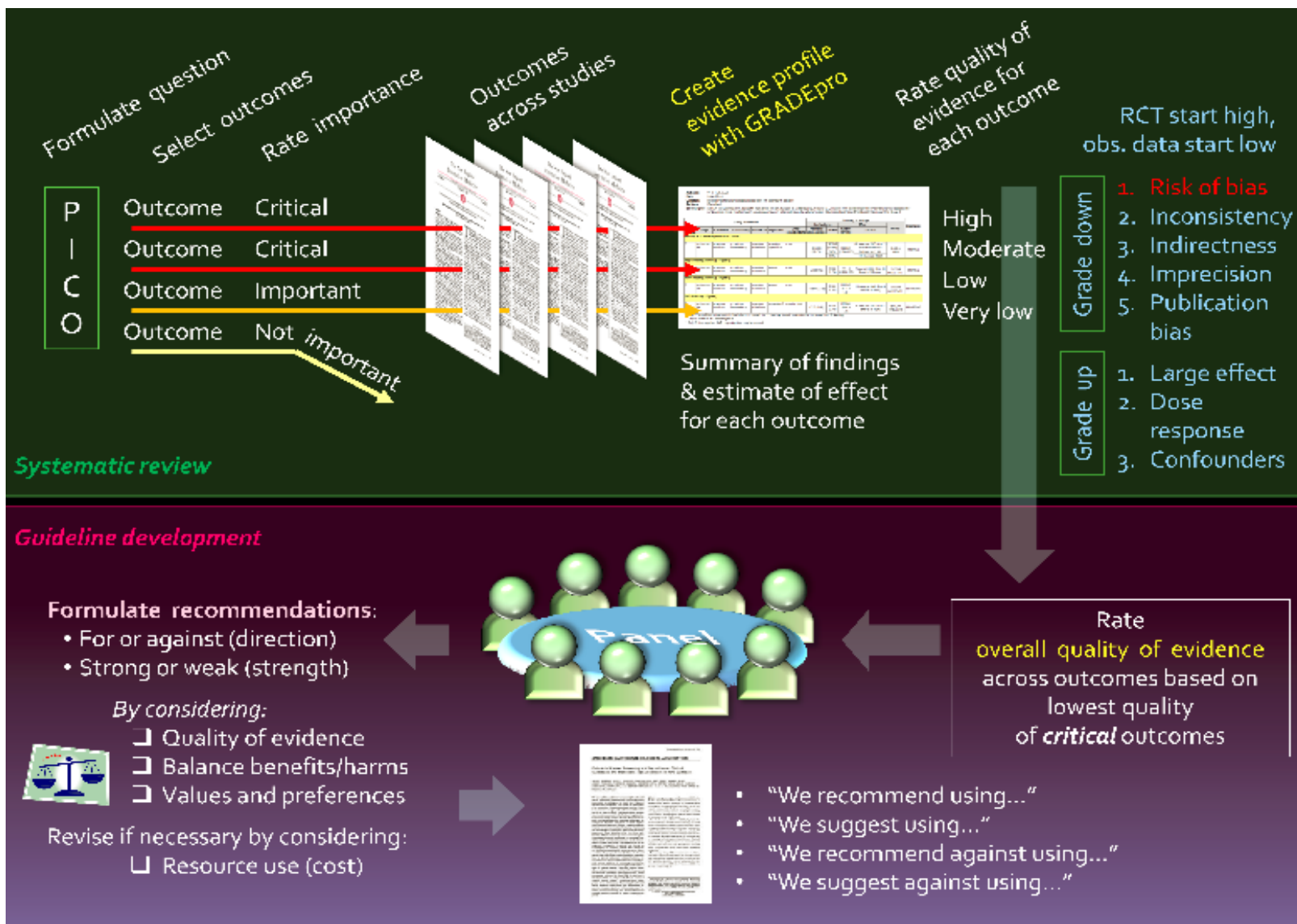
- published on October 15, 2015.
- over 230 doctors, nurses, public health professionals, scientists and researchers representing 39 countries
- thousands of hours of work
- evaluated ~150,000 medical and scientific articles to answer 152 PICO questions relating to resuscitation, first aid and education/implementation
- informed ANZCOR guideline revisions published in January 2016

GRADE: Quality of evidence

Starting point

| Study design | Quality of evidence | Lower if... | Higher if... |
|-------------------------|---------------------|--|---|
| RCTs → | High | Study limitations (design and execution) | Large effect (e.g., RR 0.5) Very large effect (e.g., RR 0.2) |
| | Moderate | Inconsistency | Evidence of dose-response gradient |
| Observational studies → | Low | Indirectness | All plausible confounding... ...would reduce a demonstrated effect ...would suggest a spurious effect when results show no effect |
| | Very low | Imprecision | |
| | | Publication bias | |

GRADE



Enables

- downgrading of RCTs
- upgrading of well designed observational studies
- quality of evidence rating by outcome

Guideline development

- quality of evidence
- balance of benefit / harm
- values & preferences
 - including resource use & cost

Cervical Spine Motion Restriction

- **Formulate question using PICO**
 - **Population:**
 - adults & children with suspected traumatic cervical spine injury
 - **Intervention:**
 - Does spinal motion restriction
 - **Comparison:**
 - compared with no spinal motion restriction
 - **Outcomes:**
 - Change neurological injury
 - Complications
 - Overall mortality
 - Pain/comfort
 - Movement on the spine
 - Hospital length of stay
- **Develop search strategy**
- **Run search**
 - yielded a total of 1589 studies, 29 included for analysis

Consensus on Science Findings

- **Semi-rigid collar vs no collar**
 - no difference in neurological injury
 - increased intracranial pressure
 - evidence of cervical spine movement restriction in healthy volunteers or cadavers
 - one low quality study of 26 volunteers showing no difference in comfort
- **Soft collar vs no collar**
 - evidence of limited flexion and axial rotation in volunteers/cadavers
 - no restriction of extension or lateral bending
- **Sandbags and tape vs no motion restriction**
 - low quality evidence in volunteers of motion restriction
 - no evidence to address other outcomes

ILCOR CoS Treatment Recommendation



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- **We suggest against the use of cervical collars by first aid providers**
 - Weak recommendation
 - Very low quality evidence
- **Values and Preferences**
 - Consistent with the first aid principle of preventing further harm
 - The potential benefits of the collar application does not outweigh the risks such as increased intracranial pressure and the consequences of unnecessary neck movement
 - The potential value of manual stabilization in certain circumstances was not evaluated
- **Knowledge Gaps**
 - Evidence needed on manual stabilization
 - Evidence needed on true trauma victims in the pre-hospital setting
 - Further review of adverse effects
 - Further review of effects following change of practice

Questions? Comments?



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A photograph of a medical professional wearing purple gloves performing a procedure on a patient. The professional is holding a large, clear plastic container and pouring liquid into a clear plastic bag. The patient is lying on a table, and the professional is standing over them. The background is a clinical setting.

2017 Spark of Life Conference
"Saving Lives - Improving Survival"



4-6 May 2017
Adelaide Hilton Hotel
233 Victoria Square, Adelaide
South Australia, Australia



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Spinal Immobilisation Changes

A/Prof Doug Johnson
LSV Clinical Committee

Major areas of change



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- **Spinal care**
- **Collars**
- **Boards and straps**
- **Spinal patients who can move themselves**

Spinal Care

- **The basic principles still apply**
 - Minimise excess movement and keep the spine straight
 - Airway concerns trump spinal concerns
 - Anyone who has an impact in the water is at risk of a spinal injury
- **The Lifesaver holding the head should do this and only this**

Spinal Care

- **The best immobilisation is the technique with at least three points of reference**
 - Usually the Trapezius grip, though this is not always possible
 - Patient's head
 - Patient's body / shoulders
 - Ground or another point

 - Try to avoid free-floating hands and arms - the patient is probably better immobilising their spine than the Lifesaver in that situation!

Manual Immobilisation

- Approach from in front of victim to minimise movement
- Communicate with the victim
- Spread your fingers across the victims head
- Maintain neutral alignment of the spine



Alternative Methods

- **Vice Grip:**
 - From the Side
 - Squeeze forearms together

- **Trapezius Grip:**
 - Squeeze forearms together
 - Rest elbows for support



Collars



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- No evidence of benefit
- Possible harms
- May still be used by the ambulance service to facilitate transport
- **Key message: a Lifesaver's hands provide better and safer restriction of neck movement than a plastic collar**

Terje Sundstrøm JOURNAL OF NEUROTRAUMA 31:531–540

(March 15, 2014)

Natalie Hood Spinal immobilisation in pre-hospital and emergency care: A systematic review of the literature. Australasian Emerg

Nursing Journal. 2015 Aug;18(3):118-37.

Collars

- **Increased movement in the upper parts of the neck compared to no collar.**
- **Increased ICP because of decreased venous return due venous compression of the neck.**
- **Complicates airway management.**
- **Increased risk of aspiration.**
- **Increased extrication time and delay to definitive treatment.**
- **Increase in mortality in patients with penetrating trauma in those immobilised.**

Boards and straps

- No evidence of benefit
- Possible harms
- May still be used by the ambulance service to facilitate transport
- **Key message: a board doesn't restrict spine movement very well, and can cause pressure sores. Avoid using boards if possible.**
- **When to still use them:**
 - To extract people from pools
 - To facilitate safe movement of people with obvious spinal injuries

Walk-up spinal / patients who can move themselves



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- The patient probably better protects their neck when they move themselves
- Ask the patient to gently lie down and then use the trapezius grip
- **Key message:** a patient who is awake and can walk can protect their own neck more efficiently than lowering them to the ground using a board.

Questions



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- **Resources**
 - Spinal Management Learner Guide SLSA July 2016