**WORKSHEET for Evidence-Based Review of Science for Emergency Cardiac Care**

**Worksheet author(s)**

| Mary Ann Peberdy | Maaret Castren | Date Submitted for review: | Oct 2, 2009 |

**Clinical question.**

In patients with ROSC after cardiac arrest (prehospital or in-hospital) (P), does the use of comprehensive treatment protocol (I) as opposed to standard care (C), improve outcome (O) (eg. survival)?

**Is this question addressing an intervention/therapy, prognosis or diagnosis?** Intervention

**State if this is a proposed new topic or revision of existing worksheet:** New topic

**Conflict of interest specific to this question**

Do any of the authors listed above have conflict of interest disclosures relevant to this worksheet? No

**Search strategy (including electronic databases searched).**

Cochrane, PubMed and Embase:

"Cardiopulmonary Resuscitation"[Mesh] AND "Heart Arrest"[Mesh] N=3183 and protocol N=79, postresuscitation N=598, "Outcome Assessment (Health Care)"[Mesh] N=377121, CA and outcome and postresuscitation together N=42 (only 4 ok), and + protocol N=4.

Three studies included

- **State inclusion and exclusion criteria**

**Inclusion:**

- prospective and retrospective studies involving adult and/or pediatric patients successfully resuscitated from CA, prehospital or in-hospital
- patients have been treated with a comprehensive post-resuscitation care protocol
- an outcome has been stated

**Exclusion:**

- non-human studies, editorials
- studies where only one part of the post-resuscitation care has been implemented as a protocol (ie- hypothermia alone)

**Number of articles/sources meeting criteria for further review:**

Three articles, one LOE 2, two LOE 3
### Summary of evidence

#### Evidence Supporting Clinical Question

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A = Return of spontaneous circulation  
B = Survival of event  
C = Survival to hospital discharge  
D = Intact neurological survival  
E = Other endpoint  
*Italics = Animal studies*
## Evidence Neutral to Clinical question

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### Level of evidence

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## Evidence Opposing Clinical Question

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A = Return of spontaneous circulation  
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* Italics = Animal studies
REVIEWER’S FINAL COMMENTS AND ASSESSMENT OF BENEFIT / RISK:

Only 3 articles were found that described a comprehensive protocol for post arrest care. Two studies described in-hospital protocols and one described an out of hospital protocol. Some of the evaluated studies introduced hypothermia along with a comprehensive strategy so it is uncertain if the outcomes were affected by hypothermia alone or by the entire protocol.

The evaluation of a complete protocol (vs no complete protocol) is extremely difficult to assess scientifically and no LOE 1 studies were found.

Acknowledgements:

Citation List

Included in the final analysis:


COMMENTS: Post arrest protocol implemented for care of OOH-CA patients. Historical controls. The use of a protocol in addition to hypothermia reduced the mortality by 28%.

The result was not statistically significant because of the small amount of patients. LOE 3, FAIR; POSITIVE.


COMMENTS: Retrospective study involving only OHH-CA patients in a prehospital postresuscitation care intervention bundle. Patient outcomes were evaluated as compared between fully using or not using the protocol. Using the protocol fully was associated with a stronger association with survival.

LOE 2, FAIR, POSITIVE.


COMMENTS: Comprehensive post resuscitation care strategy for in-hospital care of OOH-CA patients. Survival increased from 31% to 56% with the use of a standardized protocol. LOE 3, GOOD, POSITIVE.
Excluded from the final analysis since these studies only reported on one aspect of post resuscitation care and not a comprehensive protocol:


