Prehospital Evidence Based Protocols Database Project

Jensen JL, Cain E, Petrie DA

Dalhousie University Division of EMS, Emergency Health Services

Background - Emergency medical services (EMS) has been criticized for the lack of scientific evidence supporting prehospital treatment. Despite this (or because of this) criticism, research evaluating prehospital care is improving and evidence now exists to support some of the treatment and interventions provided in the prehospital environment. The Prehospital Evidence Based Protocols Database project is a repository of appraised evidence for prehospital practice.

Objectives – The primary objective of the project is to maintain a database of research evaluating prehospital interventions, which is organized according to typical paramedic protocols and is continuously updated.

This database is an evidence based practice resource for paramedics and a tool for decision-making and protocol development for EMS medical oversight physicians. It may also help identify gaps in Prehospital evidence/research for particular interventions.

Level of Evidence	
I	Evidence obtained from at least one properly randomized controlled trial Evidence obtained from a well designed cohort or case-control study, usually from more than one center or research group
II	Evidence obtained from a well designed controlled trail but without randomization Dramatic results from uncontrolled experiments
III	Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees

Table 1. Levels of Evidence

Methods – A coordinator for the project, two senior editors and EMS physicians from across Canada (Section Editors), monitor the literature (Figure 1).

Any study published in a peer reviewed journal of a prehospital intervention or medication is reviewed by a Section Editor and given a Level of Evidence (LOE) rating (Table 1).

All articles and their LOE are then evaluated, and the intervention is assigned a Class of Recommendation (COR) rating (Table 2).

As reviewed articles on a specific intervention in a protocol continue to be added to the database, the Class of Recommendation (COR) is updated.

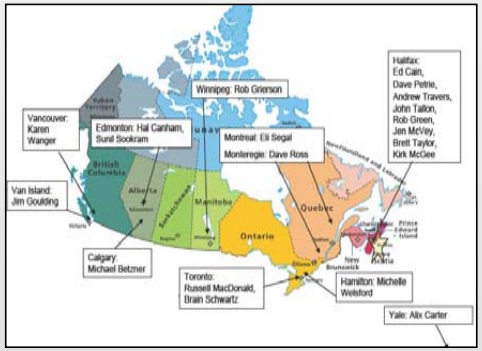

Figure 1. Section Editors from across Canada

Class of Recommendation	
A	There is good evidence to support procedure or treatment
B	There is fair evidence to support procedure or treatment
C	There is poor evidence to support procedure or treatment
D	There is evidence to support that the procedure or treatment should not be used
I	Indeterminate

Table 2. Classes of Recommendation

The protocols, interventions, and citations with LOE and COR are available for public viewing on a website which is updated regularly (Figure 2).

The project coordinator is a paramedic, and paramedics are encouraged to submit citations they find pertinent to their practice.

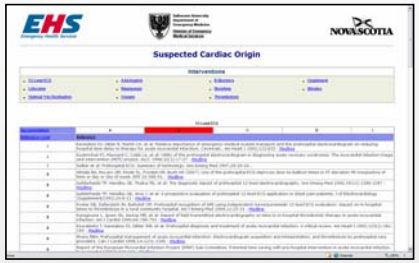

Figure 2. Website

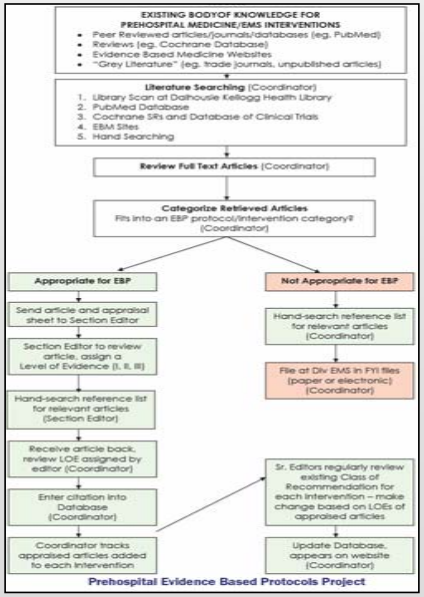

Figure 3. Evidence Based Protocols Process Flowchart

Results – There are 19 Emergency Physicians serving as Section Editors who practice in 7 Canadian Provinces. There are 103 Prehospital Medical Protocols and 182 individual interventions, with some interventions appearing in multiple protocols.

There are 1,987 articles cited in the database: 9.8% LOE I; 14.3% LOE II, 70.9% LOE III and 5.0% currently out for review (Table 3). There are: 3.5% COR A; 13.4% COR B; 68.9% COR C; 7.5% COR D; and 6.7% COR I. A single intervention may appear in multiple protocols, and is assigned a COR based on the context of the protocol (Table 4).

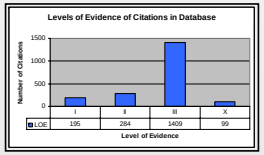

Table 3. Level of Recommendations of citations in EBP (as of: Feb 14, 2008)

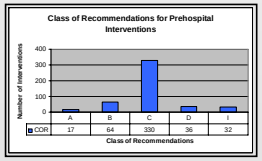

Table 4. Class of Recommendations of Interventions in EBP (as of: Feb 14, 2008)

Conclusions – The Prehospital Evidence Based Protocol Database will be a valuable tool for EMS physicians to formulate protocols that are supported by high quality evidence from research, a source of evidence for paramedics and a reference for EMS researchers.

(http://emergency.medicine.dal.ca/ehsprotocols/protocols/toc.cfm)

References

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