ARC SAC ADVISORY
Cervical Spine Motion Restriction

Overall Recommendation:

We reviewed the scientific literature for use of a cervical collar on a patient with a possible cervical spine injury. There continues to be no evidence showing benefit to the use of cervical spine immobilization, and mounting evidence demonstrating harm, such as pressure ulcers and increased pain from use of cervical collars. There is evidence that even with training, skilled medical providers frequently are unable to correctly apply a cervical collar. The available evidence from trained pre-hospital responder studies raises questions of the effectiveness of cervical collars in the context of possible harm from their use.

Due to possible harm, and the difficulty of correct application, we recommend against the use of a cervical collar by first aid providers and recommend the lay first aid provider instruct the patient not to move until advanced medical care arrives (self-immobilization), and/or gently support the head on either side to keep it from moving until advanced care arrives.

Recommendations and Strength (using table below):

Standards: None

Guidelines:

- We recommend against use of a cervical collar by first aid providers.

Options:

- We recommend against any manipulation of the neck.
- We recommend against first aid providers strapping the head or neck

Questions to be addressed:

The current standard of care with regard to cervical spine injury routinely consists of maintaining axial alignment and applying a rigid cervical immobilization device coupled with a long spine board. After recent research, EMS protocols are now moving towards selective immobilization depending on predefined assessment criteria. Accordingly, it is appropriate to review the utility and advisability regarding cervical spine immobilization by first responders.

Does the application of a rigid cervical immobilization device improve outcome following blunt injury in those with a cervical spine bony, soft tissue or spinal cord injury?

Introduction/Overview:

The current standard of care with regard to cervical spine injury routinely consists of maintaining axial alignment and applying a rigid cervical immobilization device coupled with a long spine board. EMS protocols are now moving towards selective immobilization depending on predefined assessment criteria and less use of a rigid cervical immobilization device coupled

with a long spine board. Accordingly, it is appropriate to review the utility and advisability of cervical collar use by first responders.

Summary of Scientific Foundation:

Use of cervical collars on potential cervical spine injuries has been a part of first aid for decades yet there is little to no scientific use on whether they can be applied correctly by lay first aid providers, whether they help and if they may actually harm the patient.

The most recent literature search by the ARC Scientific Advisory Council builds upon the 2015 Scientific review of the same question and screened 341 articles to fully review 10 deemed of sufficient quality upon which to base a review. While the evidence is not of high quality it suggests that adverse effects such as pressure ulcers and pain are relatively common with cervical collar use. At the same time there continues to be a lack of evidence that shows benefit from cervical collar use.

This review supports the SAC Advisory Council's recommendation that lay first aid providers avoid the use of cervical collars and instead use common sense practices of instructing the patient not to move until advanced medical care arrives (self-immobilization), and/or gently supporting the head on either side to keep it from moving until advanced care arrives.