

# SESLHD GUIDELINE COVER SHEET



<b>NAME OF DOCUMENT</b>	Cervical Collars for Suspected Cervical Spine Injury in the Emergency Department
<b>TYPE OF DOCUMENT</b>	GUIDELINE
<b>DOCUMENT NUMBER</b>	SESLHDGL/056
<b>DATE OF PUBLICATION</b>	October 2018
<b>RISK RATING</b>	Medium
<b>LEVEL OF EVIDENCE</b>	National Safety and Quality Health Service Standard: Standard 1- Governance for Safety and Quality in Health Service Organisations  Standard 9 - Recognising and Responding to Clinical Deterioration in Acute Health Care
<b>REVIEW DATE</b>	October 2021
<b>FORMER REFERENCE(S)</b>	N/A
<b>EXECUTIVE SPONSOR or EXECUTIVE CLINICAL SPONSOR</b>	Professor Gordian Fulde, SESLHD Clinical Stream Director - Emergency and Critical Care
<b>AUTHOR</b>	SESLHD Emergency Department CNCs and Nurse Educators
<b>POSITION RESPONSIBLE FOR DOCUMENT</b>	SESLHD Clinical Stream Nurse Manager Innovation and Improvement
<b>KEY TERMS</b>	Cervical Spine, Clearance, Trauma
<b>SUMMARY</b>	This document outlines the appropriate use and application of soft (foam) cervical collar for suspected spine injury in the emergency department.

**THIS DOCUMENT IS A GUIDE FOR BEST PRACTICE**

**This Guideline is intellectual property of South Eastern Sydney Local Health District.  
Guideline content cannot be duplicated.**

Feedback about this document can be sent to [SESLHD-ExecutiveServices@health.nsw.gov.au](mailto:SESLHD-ExecutiveServices@health.nsw.gov.au)

**Cervical Collars for Suspected Cervical Spine Injury in the Emergency  
Department**

Section 1 - Background ..... 3  
Section 2 - Principles ..... 4  
Section 3 - Definitions..... 5  
Section 4 – Indications and Management ..... 5  
Section 5 – Process..... 6  
Section 6 – References ..... 9  
Section 7- Revision and Approval History ..... 10

## Section 1 - Background

A **cervical collar** is an orthopaedic device that may be used to physically and consciously acknowledge the potential for c-spine injury. Although available devices may limit movement within the c-spine, no device has been shown to immobilise it completely. There is a lack of evidence for the efficacy of spinal immobilisation in the prevention of spinal cord injury (SCI). There is evidence however, that rigid collars can lead to significant complications and morbidity when used to immobilise the c-spine. These complications with rigid cervical collars include:

- patient discomfort
- pressure areas
- increased intracranial pressure
- increased neck pain
- causing/worsening SCI (e.g. in ankylosing spondylitis)
- impaired ventilation
- aspiration risk
- masking of neck/occipital injuries.

## Section 2 - Principles

Soft cervical collars mitigate some of the issues associated with the prolonged application of more rigid collars. The cervical soft collar is a disposable single use device made from soft, open-cell foam plastic with a cotton stockinette cover and touch tape closure.

The aim of the soft (foam) cervical collar is to act as a marker for staff to apply spinal care principles whilst minimising equipment related adverse events.

In children, padding under the torso (dependent on size and age) may optimise the neutral.

In adults, padding under the head (approximately 2cm) may optimise the neutral position.

If not contraindicated (e.g. pelvic, thoracolumbar spine fractures), the head of the bed should be elevated 30 degrees to aid comfort, swallowing and respiratory function.

## Section 3 - Definitions

- C-Spine - Cervical Spine
- ED - Emergency Departments
- ICU - Intensive Care Unit
- NEXUS - Criteria for C-Spine Imaging
- SCI - Spinal Cord Injury

## Section 4 – Indications and Management

Patient arrives via ambulance with **stiff neck collar**:

- transfer to ED bed
- apply padding under occiput
- expedite assessment and/or imaging
- ***if the patient is unlikely to undergo imaging +/- clearance within an hour, change to soft collar.***

**Unconscious** patient arrives via ambulance with **stiff neck collar**:

- transfer to ED bed
- apply padding under occiput
- if cervical bony injury on CT – apply Philadelphia collar
- if **no cervical bony injury** – apply soft collar and lateral support (sandbags).

Patient **presents to ED with no collar**:

- does not meet NEXUS / c-spine clearance criteria
- apply padding under occiput
- apply soft collar –position patient supine on bed.

Patient has **clear spinal cord injury** (limb weakness / deficit) or **bony injury** found on imaging:

- apply **Philadelphia collar**
- apply padding under occiput
- await spinal surgery advice- orthopaedic or neurosurgical

### EXCLUSIONS

**Surgical Airway**

**Penetrating neck trauma**

**Clinical indication of spinal cord injury (limb weakness/ deficit/priapism/neurogenic shock)**

**Radiological evidence of cervical spine bone injury**

## Section 5 – Process

### 5.1 Towel Padding Application



Figure 1



Figure 2

To optimise the neutral position a folded towel (height approximately 1-2 cm) can be placed underneath the adult patient's head (Fig.1) or the upper torso of the child patient (size and age dependent) (Fig 2).

- Explain procedure to patient, assess and document neurological status
- Maintaining spinal precautions, log roll patient into lateral position to allow sufficient space to position the folded towel
- Maintaining spinal precautions, log roll return the patient to supine position
- Ensure patient comfort and complete appropriate documentation.

## 5.2 Soft Collar Application

- explain procedure to patient, assess and document neurological status
- maintain c-spine precautions using two staff members ( One - maintaining C-spine precautions, two - applying the collar)
- remove stiff neck collar (pre-hospital) if required
- ensure region to be covered by collar is free of debris and fluid, wounds are covered appropriately, jewellery removed
- follow application of foam collar instruction below:

1. Gently align the patient's head to a neutral anatomical position or position of greatest comfort.

2. Measure the distance between the base of the chin and the suprasternal notch.



3. Select the appropriate size collar by comparing the patient's neck measurement to the width of soft collar's chin support.

4. Slide the collar under the patient's neck (right to left) until the adhesive Velcro strap is clearly visible.



6. Ensure the patient's chin rests on top of the collar and they are able to open their mouth

5. Mould the soft collar around patient's neck and secure the Velcro tabs.



**A patient with soft collar fitted should have mobility orders documented in the clinical notes by the treating team.**

**A soft collar should be removed and skin inspection attended every two hours to assess for pressure injuries.**

**Pressure Area Care is delivered according to:**

**[NSW Ministry of Health Policy 2014 007 - Pressure Injury Prevention and Management](#)**

**and**

**[St George and Sutherland Hospitals – Clinical Business Rule SGH Clin035 - Cervical Collar - Pressure Area Surveillance in a Patient with a \(SGH\)](#)**



## Section 6 – References

### [NSW Ministry of Health Policy 2014 007 - Pressure Injury Prevention and Management](#)

SGH/TSH CBR Clin035 Cervical Collar-Pressure Area surveillance in a patient with a:  
Kwan I, Bunn F. Effects of prehospital spinal immobilization: a systematic review of randomized trials on healthy subjects. *Prehospital and disaster medicine*. 2005;20(01):47-53.

Thumbikat P, Hariharan RP, Ravichandran G, McClelland MR, Mathew KM. Spinal cord injury in patients with ankylosing spondylitis: a 10-year review. *Spine*. 2007;32(26):2989-2995.

Quinn J, Enraght-Moony E. Spinal immobilisation: Evidence Review. Brisbane: Queensland Ambulance Service,; 2015:1-11.

[https://prehospitalandretreivalmedicine.files.wordpress.com/2015/05/spinal-immobilisation\\_evidence-review\\_170314\\_v3\\_eem.pdf](https://prehospitalandretreivalmedicine.files.wordpress.com/2015/05/spinal-immobilisation_evidence-review_170314_v3_eem.pdf)

Queensland Ambulance Service. Clinical Practice Procedures: Trauma/Cervical collar. Brisbane: Queensland Government; 2016.

Australian and New Zealand Committee on Resuscitation. ANZCOR Guideline 9.1.6 – Management of Suspected Spinal Injury. Australia 2016:1-6. <http://resus.org.au/wpfb-file/anzcor-guideline-9-1-6-spinal-jan16-pdf/>

Miller CP, Bible JE, Jegede KA, Whang PG, Grauer JN. Soft and rigid collars provide similar restriction in cervical range of motion during fifteen activities of daily living. *Spine*. 2010;35(13):1271-1278.

Sporer KA. Why we need to rethink C-spine immobilization: we need to reevaluate current practices and develop a saner cervical policy. *EMS world*. 2012;41(11).

Zideman DA, De Buck EDJ, Singletary EM, et al. European Resuscitation Council Guidelines for Resuscitation 2015 Section 9. First aid. *Resuscitation*.95:278-28.

## Section 7- Revision and Approval History

Date	Revision no:	Author and approval
22/06/17	Draft	Processed by Executive Services for progression to SESLHD Clinical and Quality Council.
July 2017	Draft	Approved by Clinical and Quality Council.
October 2018	1	Minor review. Pressure injury links added. Processed by Executive Services.