Clinical Practice Guidelines: Medical/Spinal emergencies

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Purpose	To ensure consistent management of patients with spinal emergencies.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
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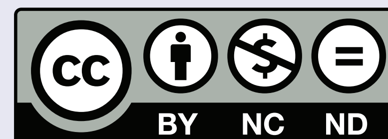

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Spinal emergencies

Back pain is a common symptom often associated with transient or chronic non-emergent disorders. However, without urgent intervention spinal emergencies can occur resulting in permanent sensory and motor deficits, loss of sphincter control and sexual function.[1] A sound understanding of the various emergent spinal conditions is important and maintaining a high level of suspicion is essential when assessing and managing patients presenting with back pain.

This CPG deals with non-traumatic causes of spinal emergencies; for trauma related spinal injuries please refer to ***CPG: Spinal cord injury***.

Cauda equina and conus medullaris syndromes: Caused by lumbar or thoracic disc protrusion or extrusion, trauma, tumours, infections, spinal stenosis or epidural haematomas. Management requires surgical decompression and if undertaken > 48 hrs after presentation it is rarely successful. Cauda equina syndrome presentations vary and can occur acutely over several hours, as a subacute onset in a patient with long history of chronic back pain or slowly and insidiously progressing to sphincter dysfunction.[2,3]

Epidural abscess: Infection of the epidural space that can lead to damage of the spinal cord by direct infection, compression or vascular compromise. Definitive treatment includes surgical decompression and antibiotic therapy.[1,3,4]

Vertebral osteomyelitis or discitis: Infection of the bones of the spine or inflammation of the vertebral disc space respectively that can lead to significant neurological compromise if misdiagnosed or left untreated.[1,3,4]

Tumours: Benign or malignant tumours of the spine can present with back pain with or without neurological symptoms, resulting from compression of the spinal cord or cauda equina.[1,2]

Clinical features

Concerning clinical signs and risk factors [1–4]

- Diaphoresis, hunger, tingling
- Body temperature < 36°C or > 38°C
- Age < 20 years or > 50 years
- Recent onset of pain without trauma or lifting
- Severe pain at rest or progressively worsening pain
- Bilateral sciatic nerve pain
- Obvious structural deformity
- Urinary retention AND/OR incontinence
- Bowel incontinence
- Lower extremity neurological deficit
- History of cancer
- Fever, chills, night sweats or recent weight loss
- Recent infection or immunosuppression
- Perineal, perianal or saddle sensory loss
- IV drug use or recent steroid therapy

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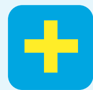
Risk Assessment

- New onset, pre-existing or chronic back pain patients can all develop spinal emergencies, therefore a current diagnosis regarding back pain does not rule out a spinal emergency.[1]



Additional information

- The assessment of back pain is complex and requires multi-modal investigation. **ALL patients with back pain should be transported for further medical assessment.**
- When assessing the patient with back pain, it is important to gather a full medical history including progression of symptoms and any changes in symptom presentation from pre-existing or chronic conditions.

CPG: Clinician safety
CPG: Standard cares

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Consider:

- **IV access**
- **Antiemetic**
- **Analgesia**

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Transport to hospital
Pre-notify as appropriate

Note: *Clinicians are only to perform procedures for which they have received specific training and authorisation by the QAS.*

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