

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Management of Spinal Cord Injury Patients: Guidelines

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Research Questions

1. What are the evidence-based guidelines regarding bladder care or bowel management for spinal cord injury patients undergoing rehabilitative care in a hospital setting?
2. What are the evidence-based guidelines regarding skin management for spinal cord injury patients undergoing rehabilitative care in a hospital setting?
3. What are the evidence-based guidelines regarding autonomic dysreflexia management for spinal cord injury patients undergoing rehabilitative care in a hospital setting?

Key Findings

One evidence-based guideline was identified regarding skin management for spinal cord injury patients undergoing rehabilitative care in a hospital setting.

Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were bowel management, bladder care, skincare management, autonomic dysreflexia management, and spinal cord injury. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, network meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2014 and September 12, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Spinal cord injury patients undergoing rehabilitative care in a hospital setting
Intervention	Q1: Bowel management (e.g., the need for catheterization, steps for bowel assessment) and/or bladder care (e.g., no bladder control and require assistance) Q2: Skincare management (e.g., pressure injury or ulcer prevention management) Q3: Autonomic dysreflexia management (i.e., syndrome in which there is a sudden onset of excessively high blood pressure)

Comparator	Not applicable
Outcomes	Guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses and evidence-based guidelines

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessments, systematic reviews, and meta-analyses are presented first, followed by evidence-based guidelines.

One evidence-based guideline¹ was identified regarding skin management for spinal cord injury patients undergoing rehabilitative care in a hospital setting.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

A guideline from the Consortium of Spinal Cord Medicine¹ was identified regarding skin management for spinal cord injury (SCI) patients including those undergoing rehabilitative care. The guideline recommends strategies to prevent pressure ulcers in SCI patients through pressure redistribution; daily visual and tactile skin inspections; turning or repositioning every two hours for patients in acute rehabilitation; evaluating support surfaces to prevent moisture build up and promote pressure redistribution at the support surface interface; providing an individually prescribed seating system designed to redistribute pressure; promoting exercise to prevent contractures and pressure ulcers; and assessing nutrition to uncover malnutrition and other deficiencies.¹ The guideline also lists several risk assessment tools to predict and prevent pressure ulcer injuries, as well as treatment recommendations once a pressure ulcer has formed.¹

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Guidelines and Recommendations

1. Pressure ulcer prevention and treatment following spinal cord injury: a clinical practice guideline for health-care professionals (2nd ed.). Washington (DC): Paralyzed Veterans of America, Consortium for Spinal Cord Medicine; 2014 Aug: https://pva-cdnendpoint.azureedge.net/prod/libraries/media/pva/library/publications/cpg_pressure-ulcer.pdf

Accessed 2019 Sep 26.

See: *Prevention Strategies Across the Continuum of Care, p17-27; Assessment and Reassessment Following Pressure Ulcer Onset, p29.*

Appendix — Further Information

Previous CADTH Reports

2. Young C, Argáez C. Digital stimulation and manual disimpaction for stimulation of the gastrocolic reflex or fecal impaction: clinical effectiveness and guidelines (*CADTH rapid response report: summary of abstracts*) Ottawa (ON): CADTH; 2018 May: <https://www.cadth.ca/sites/default/files/pdf/htis/2018/RB1218%20Digital%20Stimulation%20Final.pdf>
Accessed 2019 Sep 26.
3. CADTH. Emerging technologies for the prevention of pressure ulcers in acute care settings: a review of clinical and cost-effectiveness and guidelines. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2016 Sep.
[PubMed: PM27831664](#)

Systematic Reviews and Meta-analyses

4. Groah SL, Schladen M, Pineda CG, Hsieh CH. Prevention of pressure ulcers among people with spinal cord injury: a systematic review. *PM R*. 2015 Jun;7(6):613-636.
[PubMed: PM25529614](#)
5. Liu N, Zhou M, Biering-Sorensen F, Krassioukov AV. Iatrogenic urological triggers of autonomic dysreflexia: a systematic review. *Spinal Cord*. 2015 Jul;53(7):500-509.
[PubMed: PM25800696](#)

Alternative Setting

6. Baron JS, Sullivan KJ, Swaine JM, et al. Self-management interventions for skin care in people with a spinal cord injury: part 1—a systematic review of intervention content and effectiveness. *Spinal Cord*. 2018 Sep;56(9):823-836.
[PubMed: PM29802393](#)

Evidence-Based Guidelines – Methods Not Specified

7. Krassioukov A, Blackmer J, Teasell RW, Eng JJ. Autonomic dysreflexia following spinal cord injury. In: Eng JJ, Teasell RW, Miller WC, Wolfe DL, Townson AF, Hsieh JTC, Connolly SJ, Noonan VK, Loh E, Sproule S, McIntyre A, Querée M, editors. Spinal cord injury rehabilitation evidence. Vancouver (BC): Spinal Cord Injury Rehabilitation Evidence; 2018: <https://scireproject.com/evidence/rehabilitation-evidence/autonomic-dysreflexia/>
Accessed 2019 Sep 26.
8. Coggrave M, Mills P, Willms R, Eng JJ. Bowel dysfunction and management following spinal cord injury. In: Eng JJ, Teasell RW, Miller WC, Wolfe DL, Townson AF, Hsieh JTC, Connolly SJ, Noonan VK, Loh E, McIntyre A, editors. Spinal cord injury rehabilitation evidence. Vancouver (BC): Spinal Cord Injury Rehabilitation Evidence; 2014: <https://scireproject.com/evidence/rehabilitation-evidence/bowel-dysfunction-and-management/>
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9. Hsieh J, McIntyre A, Iruthayarajah J, et al. Bladder management following spinal cord injury. In: Eng JJ, Teasell RW, Miller WC, Wolfe DL, Townson AF, Hsieh JTC, Connolly SJ, Noonan VK, Loh E, McIntyre A, editors. Spinal cord injury rehabilitation evidence. Vancouver (BC): Spinal Cord Injury Rehabilitation Evidence; 2014: <https://scireproject.com/evidence/rehabilitation-evidence/bladder-management/>
Accessed 2019 Sep 26.

Review Articles

10. Kessler TM, Traini LR, Welk B, Schneider MP, Thavaseelan J, Curt A. Early neurological care of patients with spinal cord injury. *World J Urol.* 2018 Oct;36(10):1529-1536.
[PubMed: PM29808302](#)
11. Kreydin E, Welk B, Chung D, et al. Surveillance and management of urologic complications after spinal cord injury. *World J Urol.* 2018 Oct;36(10):1545-1553.
[PubMed: PM29845320](#)
12. Przydacz M, Chłosta P, Corcos J. Recommendations for urological follow-up of patients with neurogenic bladder secondary to spinal cord injury. *Int Urol Nephrol.* 2018 Jun;50(6):1005-1016.
[PubMed: PM29569211](#)
13. Schurch B, Iacovelli V, Averbek MA, Stefano C, Altaweel W, Finazzi Agro E. Urodynamics in patients with spinal cord injury: a clinical review and best practice paper by a working group of The International Continence Society Urodynamics Committee. *Neurourol Urodyn.* 2018 Feb;37(2):581-591.
[PubMed: PM28762566](#)