

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

# Discharge Criteria for Procedural Sedation Patients: Guidelines

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## Research Questions

1. What are the evidence-based guidelines regarding when to safely discharge patients who have undergone procedural sedation in the emergency department?

## Key Findings

Two evidence-based guidelines were identified regarding when to safely discharge patients who have undergone procedural sedation in the emergency department. No relevant health technology assessments, systematic reviews or meta-analyses were identified.

## Methods

A limited literature search was conducted by an information specialist on key resources including Medline, Cumulative Index to Nursing and Allied Health Literature (CINAHL), 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 procedural or conscious sedation and patient discharge and. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between Jan 1, 2014 and Aug 27, 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**

<b>Population</b>	Adult patients receiving procedural sedation (e.g., procedure that could be short and painful) in the emergency room (e.g., procedures like cardioversion, broken bones and painful sutures that require sedation)
<b>Intervention</b>	Discharge checklists, scoring, or criteria (e.g., patients must meet all the criteria in order to be discharged) for the discharge of patients who have undergone procedural sedation
<b>Comparator</b>	Not applicable
<b>Outcomes</b>	Guidelines (e.g., recommendations of when to safely discharge patients who have undergone procedural sedation)
<b>Study Designs</b>	Health technology assessments, systematic reviews, meta-analyses, evidence-based guidelines

## Results

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

Two evidence-based guidelines<sup>1,2</sup> were identified regarding when to safely discharge patients who have undergone procedural sedation in the emergency department. No relevant health technology assessments, systematic reviews or meta-analyses were identified.

Additional references of potential interest are provided in the appendix.

## Overall Summary of Findings

The European Society of Anaesthesiology and European Board of Anaesthesiology guidelines<sup>1</sup> discuss criteria for the discharge of patients after procedural sedation and analgesia, suggesting that patients are ready for discharge once they have regained their neuromuscular and cognitive pre-procedure baseline. The guidelines state discharge criteria should be designed to minimize the risk of cardiorespiratory depression after patients are discharged. Overall, the guidelines give four basic criteria to determine patient suitability for discharge after procedural sedation and analgesia: 1) The procedure was low-risk with no need for postoperative monitoring of complications, 2) The patient has regained baseline mental status and physiological signs and the patient is able to take care of him or herself with minimal help, 3) Postoperative symptoms are well tolerated, and 4) A reliable person is present with patient for first hours after discharge.

Similarly, the American Society of Anesthesiologists Committee on Standards and Practice Parameters guidelines<sup>2</sup> state discharge criteria after moderate procedural sedation and analgesia should be designed to minimize the risk of cardiorespiratory and central nervous system depression after patients are discharged. The guidelines also suggest basic principles for creating discharge criteria including the patient should be alert and oriented, the patient's vital signs are stable and within acceptable limits, and outpatients should be discharged with an accompanying reliable adult.

## References Summarized

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-analyses

No literature identified.

### Guidelines and Recommendations

1. Hinkelbein J, Lamperti M, Akeson J, et al. European Society of Anaesthesiology and European Board of Anaesthesiology guidelines for procedural sedation and analgesia in adults. *Eur J Anaesthesiol*. 2018 01;35(1):6-24.  
[PubMed: PM28877145](#):
2. Practice Guidelines for Moderate Procedural Sedation and Analgesia 2018: A Report by the American Society of Anesthesiologists Task Force on Moderate Procedural Sedation and Analgesia, the American Association of Oral and Maxillofacial Surgeons, American College of Radiology, American Dental Association, American Society of Dentist Anesthesiologists, and Society of Interventional Radiology. *Anesthesiology*.

2018 Mar;128(3):437-479:

[https://anesthesiology.pubs.asahq.org/article.aspx?articleid=2670190&\\_ga=2.61288868.965828330.1542314834-2719544.1542314834](https://anesthesiology.pubs.asahq.org/article.aspx?articleid=2670190&_ga=2.61288868.965828330.1542314834-2719544.1542314834)

See: *Table 5 – Recovery and Discharge Criteria after Sedation and Analgesia*

## Appendix — Further Information

### Previous CADTH Reports

3. Moderate Procedural Sedation in Adult Patients: Guidelines. (*CADTH Rapid response report: summary of abstracts*). Ottawa (ON): CADTH; 2016:  
<https://www.cadth.ca/moderate-procedural-sedation-adult-patients-guidelines-0>

### Systematic Reviews

#### *Unclear Population*

4. Hawker RJ, McKillop A, Jacobs S. Postanesthesia Scoring Methods: An Integrative Review of the Literature. *J Perianesth Nurs*. 2017 Dec;32(6):557-572.  
[PubMed: PM29157762](#)

### Clinical Practice Guidelines

#### *Alternative Population – Pediatric Patients*

5. Cote CJ, Wilson S. Guidelines for Monitoring and Management of Pediatric Patients Before, During, and After Sedation for Diagnostic and Therapeutic Procedures. *Pediatrics*. 2019 Jun;143(6):  
<https://pediatrics.aappublications.org/content/143/6/e20191000>  
*See: Appendix 1 – Recommended Discharge Criteria*
6. Procedural Sedation. (Evidence-based Guideline). Houston (TX): Texas Children's Hospital, Evidence-based Outcomes Center; 2014:  
<https://www.texaschildrens.org/sites/default/files/uploads/documents/outcomes/standards/Procedural%20Sedation.pdf>  
*See: Discharge*
7. National Institute for Health and Care Excellence. Sedation in under 19s: using sedation for diagnostic and therapeutic procedures. (*NICE clinical guideline CG112*); 2010: <https://www.nice.org.uk/guidance/cg112>  
*See: Section 1.5 – Discharge Criteria*

#### *Institutional Guidelines*

8. Agency for Clinical Innovation. Paediatric Procedural Sedation - Guide for Emergency Departments, Wards, Clinics and Imaging (*Guideline*). North Sydney (AU): NSW Ministry of Health; 2018:  
[https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2018\\_011.pdf](https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2018_011.pdf)  
*See: 5.3.2 – Discharge*
9. Procedural Sedation-Guidelines for Sedation and Analgesia, 24353. Weston (WI): Ascension St. Clare's Hospital. 2017: <https://healthcare.ascension.org/-/media/Healthcare/Markets/Wisconsin/locations/Ministry-Saint-Clares-Hospital/Procedural-Sedation-Policy.pdf?la=en&hash=B98A3B43E4E9B17EFFB9148DCBBDE2E6909F9A85>  
*See: Criteria for Outpatient Discharge Home*
10. Procedural Sedation: pediatric and neonatal. Seattle (WA): Swedish Medical Center. 2017:  
<https://www.swedish.org/-/media/Images/Swedish/CME1/OnlineCourses/PedSedation/>

[PediatricSedationswed\\_014284.pdf](#)

See: *Post procedure*

11. Adult Procedural Sedation (Administrative Policy Manual). Kingston (ON): Kingston General Hospital; 2015: <https://www.corhealthontario.ca/Adult-Procedural-Sedation-Policy.pdf>  
See: *Post procedure*
12. Procedural Sedation. Edmonton (AB): Alberta Health Services. 2016: <https://extranet.ahsnet.ca/teams/policydocuments/1/clp-procedural-sedation-procedure.pdf>  
See: *Recovery and Discharge of Patients Following Procedural Sedation*
13. Emergency Department Guideline Procedural Sedation and Analgesia Policy for the Registered Nurse. Minneapolis (MN): University of Minnesota Masonic Children's Hospital. 2014: <https://www.pediatrics.umn.edu/sites/pediatrics.umn.edu/files/procedural-sedation-analgesia-policy-registered-nurses.pdf>  
See: *Discharge, Modified Aldrete Score*

## Review Articles

14. Ramalho CE, Bretas PMC, Schwartsman C, Reis AG. Sedation and analgesia for procedures in the pediatric emergency room. *J Pediatr (Rio J)*. 2017 Nov - Dec;93 Suppl 1:2-18.  
[PubMed: PM28945987](#)
15. Upadhyay SP, Singh AK, Varma M, Rao MB and Mallick NP. Procedural Sedation and Analgesia in Emergency Department: A Review and Update. *Pain Relief*, 2016;5:270: <https://www.omicsonline.org/open-access/procedural-sedation-and-analgesia-in-emergency-department-a-review-andupdate-2167-0846-1000270.php?aid=80708>

## Position Statements

16. Dobson G, Chong MA, Chow L, et al. Procedural sedation: a position paper of the Canadian Anesthesiologists' Society. *Can J Anesth*. 2018;65(12):1372-1384: [https://www.cas.ca/CASAssets/Documents/Practice-Resources/97\\_Appendix\\_Six.pdf](https://www.cas.ca/CASAssets/Documents/Practice-Resources/97_Appendix_Six.pdf)  
See: *Recovery and Discharge*