

CADTH Reference List

Acute Pain and Function Assessment Tools for Patients Undergoing Surgery

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Key Message

- No relevant studies were identified regarding the clinical utility of assessment tools for acute pain and function in patients undergoing surgery.

Research Question

- What is the clinical utility of assessment tools for acute pain and function in patients undergoing surgery?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Database of Systematic Reviews, the international HTA database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were pain assessment and perioperative pain. CADTH-developed search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses; and randomized controlled trials, controlled clinical trials, or any other type of clinical trial. Where possible, retrieval was limited to the human population. The search was also limited to English-language documents published between January 1, 2014 and May 28, 2021. Internet links were provided, where available.

Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications.

Results

No relevant health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified regarding the clinical utility of assessment tools for acute pain and function in patients undergoing surgery.

References of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

Table 1: Selection Criteria

Criteria	Description
Population	Surgical patients at any age
Intervention	Perioperative (i.e., preoperative, intraoperative, and post-operative) use of assessment tools for evaluating acute pain and function (also known as the biopsychosocial impacts of pain) Exclude: American Pain Society Patient Outcome Questionnaire, Oswestry Disability Index, Roland-Morris Disability Questionnaire, Indiana Polyclinic Combined Pain Scale, McGill Pain Questionnaire
Comparator	Usual assessment tools measuring only acute pain (e.g., numerical rating scales, visual analogue scale, verbal descriptor scale, Bieri Faces Pain Scale), other assessments tools measuring acute pain and function, no assessment
Outcomes	Clinical benefits and harms of screening (e.g., rates of surgical complications, return of previous function, reduction in length of hospital stay, reduction in post-operative opioid usage or misuse, overdose and overdose-related harms, emergency room visits, rehospitalization)
Study designs	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies

Overall Summary of Findings

No relevant literature was found regarding the clinical utility of assessment tools for acute pain and function in patients undergoing surgery; therefore, no summary can be provided.

References

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Appendix 1: References of Potential Interest

Previous CADTH Reports

1. Wells C, McCormack S. Screening Tools for Chronic Postsurgical Pain: A Review of Clinical Utility. *Can J Health Technol.* 2021;1(1). <https://cadth.ca/sites/default/files/pdf/htis/2021/RC1329%20CPSP%20v.8.0.pdf> Accessed 2021 Jun 6.
2. Transitional Pain Services for Patients Undergoing Surgery. (*CADTH Rapid response report: summary of abstracts*). Ottawa (ON): CADTH; 2021: <https://cadth.ca/sites/default/files/rr/2021/RB1569%20TPS%20Final.pdf> Accessed 2021 Jun 6.

Systematic Reviews and Meta-analyses – Unclear Comparator

3. Crellin DJ, Harrison D, Santamaria N, Babl FE. Systematic review of the Face, Legs, Activity, Cry and Consolability scale for assessing pain in infants and children: is it reliable, valid, and feasible for use? *Pain.* 2015 Nov;156(11):2132-2151. [PubMed](#)

Non-Randomized Studies

Alternative Outcomes – Reliability and Validity

4. Pereira-Morales S, Arroyo-Novoa CM, Wysocki A, Sanzero Eller L. Acute Pain Assessment in Sedated Patients in the Postanesthesia Care Unit. *Clin J Pain.* 2018 Aug;34(8):700-706. [PubMed](#)
5. Garcia R, Horovitz RN, Torricelli AA, Mukai A, Bechara SJ. Improved Evaluation of Postoperative Pain After Photorefractive Keratectomy. *Cornea.* 2016 Feb;35(2):205-209. [PubMed](#)
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10. Suraseranivongse S, Yuvapoositanont P, Srisakrapikoo P, Pommul R, Phaka W, Itthimathin P. A Comparison of Pain Scales in Patients with Disorders of Consciousness Following Craniotomy. *J Med Assoc Thai.* 2015 Jul;98(7):684-692. [PubMed](#)
11. Thee C, Iliès C, Gruenewald M, Kleinschmidt A, Steinfath M, Bein B. Reliability of the surgical Pleth index for assessment of postoperative pain: a pilot study. *Eur J Anaesthesiol.* 2015 Jan;32(1):44-48. [PubMed](#)
12. Torres-Lacomba M, Sanchez-Sanchez B, Prieto-Gomez V, et al. Spanish cultural adaptation and validation of the shoulder pain and disability index, and the oxford shoulder score after breast cancer surgery. *Health Qual Life Outcomes.* 2015 May;13:63. [PubMed](#)

No Comparator

13. Redmann AJ, Wang Y, Furstein J, Myer CM, 3rd, de Alarcon A. The use of the FLACC pain scale in pediatric patients undergoing adenotonsillectomy. *Int J Pediatr Otorhinolaryngol.* 2017 Jan;92:115-118. [PubMed](#)

Review Articles

14. Zieliński J, Morawska-Kochman M, Zatoński T. Pain assessment and management in children in the postoperative period: A review of the most commonly used postoperative pain assessment tools, new diagnostic methods and the latest guidelines for postoperative pain therapy in children. *Adv Clin Exp Med.* 2020 Mar;29(3):365-374. [PubMed](#)
15. Joestlien L. Pain, Pain, Go Away! Evidence-Based Review of Developmentally Appropriate Pain Assessment for Children in a Postoperative Setting. *J Orthop Nurs.* 2015;34(5):252-259. <https://alliedhealth.ceconnection.com/files/PainPainGoAwayEvidenceBasedReviewofDevelopmentallyAppropriatePainAssessmentforChildreninaPostOperativeSetting-1487882484640.pdf;jsessionid=B98C4EA8859A6036A1D066EB2064DE80> Accessed 2021 Jun 6. [PubMed](#)