Best Evidence Statement (BESt)

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Guided Imagery for Pediatric Post-Operative Pain

Clinical Question

P (population/problem) Among school-aged children and adolescents
I (intervention) does the use of guided imagery
C (comparison) versus no guided imagery
O (outcome) reduce post-operative pain?

Target Population

Children ages 7 to 12 years who have undergone surgery

Recommendation (See Table of Recommendation Strength following references)

It is strongly recommended to use guided imagery with school-aged children to reduce post-operative pain. (Huth, Broome, & Good, 2004 [level 2a]; Pölkki, Pietilä, Vehviläinen-Julkunen, Laukkala, & Kiviluoma, 2008 [level 2b]; Lambert, 1996 [level 2b]; Huth, Daraiseh, Henson, & McLeod, 2009 [level 4a], Pölkki, Pietilä, & Vehviläinen-Julkunen, 2003 [level 4a])

Relevant CCHMC policies/procedures

I-226 Pain Management

Discussion/summary of evidence

Research demonstrates that school-aged children's post-operative pain can be significantly reduced through the use of guided imagery (Huth, et al., 2004 [level 2a]; Pölkki, et al., 2008 [level 2b]; Lambert, 1996 [level 2b]; Huth, et al, 2009 [level 4a]). Children use guided imagery for post-operative pain relief even when little instruction is given to them by parents or nurses (Pölkki, et al., 2003 [level 4a]). The effects of guided imagery may be short lasting (< 1 hour) (Pölkki et al., 2008 [level 2b].

The grade for the body of evidence is moderate in this area. Additional research in this area is recommended.

Health Benefits, Side Effects and Risks

Health benefits: Guided imagery is shown to significantly reduce post-operative pain in school-aged children as described above. Guided imagery may also have the following benefits: reduced anxiety, improved sleep, improved relaxation and decreased length of stay (Huth, et al., 2004 [level 2a]; Pölkki, et al., 2003 [level 4a]; Lambert, 1996 [level 2b]).

Possible Side Effects: none known

Possible Risks: Children may recall unpleasant memories (Huth et al., 2004 [level 2a]).

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References/citations

Huth, M. M., Broome, M. E., & Good, M. (2004). Imagery reduces children's post-operative pain. Pain, 110(1-2), 439-448 [level 2a].

Huth, M. M., Daraiseh, N. M., Henson, M. A., & McLeod, S. M. (2009). Evaluation of the magic island: Relaxation for kids© compact disc. Pediatric Nursing, 35(5), 290-295 [level 4a].

Lambert, S. A. (1996). The effects of hypnosis/guided imagery on the postoperative course of children. Journal of Developmental & Behavioral Pediatrics, 17(5), 307-310 [level 2b].

Pölkki, T., Pietilä, A., & Vehviläinen-Julkunen, K. (2003). Hospitalized children's descriptions of their experiences with postsurgical pain relieving methods. International Journal of Nursing Studies, 40(1), 33-44 [level 4a].

Pölkki, T., Pietilä, A., Vehviläinen-Julkunen, K., Laukkala, H., & Kiviluoma, K. (2008). Imagery-induced relaxation in children's postoperative pain relief: A randomized pilot study. Journal of Pediatric Nursing, 23(3), 217-224 [level2b].

Note: Full tables of evidence grading system available in separate document:

- Table of Evidence Levels of Individual Studies by Domain, Study Design, & Quality (abbreviated table below)
- Grading a Body of Evidence to Answer a Clinical Question
- Judging the Strength of a Recommendation (abbreviated table below)

Table of Evidence Levels (see note above)

Quality level	***Definition***
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5	Other: General review, expert opinion, case report, consensus report, or guideline

†a = good quality study; b = lesser quality study

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Table of Recommendation Strength (see note above)

Strength	Definition
"Strongly recommended"	There is consensus that benefits clearly outweigh risks and burdens (or visa-versa for negative recommendations).
"Recommended"	There is consensus that benefits are closely balanced with risks and burdens.
No recommendation made	There is lack of consensus to direct development of a recommendation.

Dimensions: In determining the strength of a recommendation, the development group makes a considered judgment in a consensus process that incorporates critically appraised evidence, clinical experience, and other dimensions as listed below.

Grade of the Body of Evidence (see note above)
Safety / Harm
Health benefit to patient *(direct benefit)*
Burden to patient of adherence to recommendation (cost, hassle, discomfort, pain, motivation, ability to adhere, time)
Cost-effectiveness to healthcare system (balance of cost / savings of resources, staff time, and supplies based on published studies or onsite analysis)
Directness (the extent to which the body of evidence directly answers the clinical question [population/problem, intervention, comparison, outcome])
Impact on morbidity/mortality or quality of life

Supporting information

Introductory/background information

Pain management is a frequently encountered nursing problem. Nurses are the professionals who have the most frequent and closest contact with patients. This places nurses in a central position to advance pain management with children through nurse-initiated interventions and physician-initiated treatments. It is well established that pain should be treated with a combination of pharmacological and non-pharmacological techniques to manage children's pain. Adjuvant treatment with a non-pharmacological intervention like guided imagery in combination with analgesics may be of benefit for the management of children's postoperative pain.

Group/team members

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Other group/team members: Myra Martz Huth, PhD, RN, FAAN, Assistant Vice President, Center for Professional Excellence-Research and Evidence-Based Practice

Search strategy

Key words: guided imagery, relaxation, distraction, cognitive behavioral interventions, pain, post-operative pain, limited to school-aged children and adolescents
Databases searched: CINAHL, Medline, Pubmed
Other methods used: hand search
Publication date range: all included up to 2/2/2010
Filters: English language

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Applicability issues

Documentation of each intervention used to reduce pain, pre and post intervention pain scores and the child's response to the intervention are necessary.

Copies of this Best Evidence Statement (BESt) are available online and may be distributed by any organization for the global purpose of improving child health outcomes. Website address: http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/ev-based/default.htm
Examples of approved uses of the BESt include the following:

- copies may be provided to anyone involved in the organization's process for developing and implementing evidence based care;
- hyperlinks to the CCHMC website may be placed on the organization's website;
- the BESt may be adopted or adapted for use within the organization, provided that CCHMC receives appropriate attribution on written or electronic documents; and
- copies may be provided to patients and the clinicians who manage their care.

Notification of CCHMC at HPCEInfo@cchmc.org for any BESt adopted, adapted, implemented or hyperlinked by the organization is appreciated.

Additionally, for more information about CCHMC Best Evidence Statements and the development process, contact the Center for Professional Excellence/Research and Evidence-based Practice office at ***CPE-EBP-Group@chmcc.org*** for the contact information..

Note

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Reviewed against quality criteria by two independent reviewers.

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