

Guideline for Care of the Patient Receiving Local-Only Anesthesia Evidence Review and PRISMA 2020

EVIDENCE REVIEW

The Guideline for Care of the Patient Receiving Local-Only Anesthesia was approved by the AORN Guidelines Advisory Board and became effective January 15, 2026.

A medical librarian with a perioperative background conducted a systematic search of the databases Ovid MEDLINE®, Ovid Embase®, EBSCO CINAHL®, and the Cochrane Database of Systematic Reviews. The search was limited to literature published in English from November, 2019 through November, 2024. At the time of the initial search, weekly alerts were created on the topics included in that search. Results from these alerts were provided to the lead author until April, 2025. The lead author requested additional articles that either did not fit the original search criteria or were discovered during the evidence appraisal process. The lead author and the medical librarian also identified relevant guidelines from government agencies, professional organizations, and standards-setting bodies.

Included were research and non-research literature in English, complete publications, and publications with dates within the time restriction when available. Historical studies were also included. Excluded were non-peer-reviewed publications and older evidence within the time restriction when more recent evidence was available. Editorials, news items, and other brief items were excluded. Low-quality evidence was excluded when higher-quality evidence was available, and literature outside the time restriction was excluded when literature within the time restriction was available. Articles identified in the search were provided to the project team for evaluation. The team consisted of the lead author and one evidence appraiser. The lead author and the evidence appraiser reviewed and critically appraised each article using the AORN Research or Non-Research Evidence Appraisal Tools as appropriate. A third appraiser was consulted if there was a disagreement between the lead author and the primary evidence appraiser. The literature was independently evaluated and appraised according to the strength and quality of the evidence. Each article was then assigned an appraisal score. The appraisal score is noted in brackets after each reference as applicable. Each recommendation rating is based on a synthesis of the collective evidence, a benefit-harm assessment, and consideration of resource use. The strength of the recommendation was determined using the AORN Evidence Rating Model and the quality and consistency of the evidence supporting a recommendation. The recommendation strength rating is noted in brackets after each recommendation. See the PRISMA 2020 flow diagram ([Figure 1](#)) below for more information about the systematic review and nature of included studies and resources.

Figure 1: PRISMA 2020 Flow Diagram

On December 3, 2024, a medical librarian with a perioperative background conducted searches for relevant publications on websites of organizations selected by the author (including government departments). Full details of these supplementary searches is included in the Supplementary Content on the aorn.org web site. These results were also screened by two screeners: the medical librarian, and then the lead author.

On November 22, 2024, a medical librarian with a perioperative background conducted a systematic search of 18 health science databases, the names and date coverage of which are given in Table 1. These results were screened by the medical librarian, and then the lead author.

Table 1: Databases searched and coverage

Database	Coverage
AORN Full Text Journals@Ovid	
Books@Ovid	November 25, 2024
JBI EBP Database	Current to November 13, 2024
EBM Reviews: ACP Journal Club	1991 to November 2024
EBM Reviews: Cochrane Central Register of Controlled Trials	October 2024
EBM Reviews: Cochrane Database of Systematic Reviews	2005 to November 27, 2024
EBM Reviews: Cochrane Clinical Answers	November 2024
EBM Reviews: Cochrane Methodology Register	3rd Quarter 2012

EBM Reviews: Database of Abstracts of Reviews of Effects	1st Quarter 2016
EBM Reviews: Health Technology Assessment	4th Quarter 2016
EBM Reviews: NHS Economic Evaluation Database	1st Quarter 2016
AMED (Allied and Complementary Medicine)	1985 to October 2024
Embase	1974 to 2024 November 27
Health and Psychosocial Instruments	1985 to October 2024
Ovid Healthstar	1999 to October 2024
Ovid MEDLINE(R) ALL	1946 to November 27, 2024
Ovid Nursing Database	1946 to November Week 4 2024
CINAHL Complete via EBSCOhost	1937 to Current

Search strategy development process: The medical librarian referred to a search strategy used for the previous Guideline. A draft search strategy was developed using terms listed in the previous strategy and additional search terms identified from a meeting with the lead author. Using the MeSH Subject Headings database, additional search terms were identified and added to the search strategy. The strategy was limited following the constraints in the eligibility criteria outlined by the lead author.

Editor's note: MEDLINE is a registered trademark of the US National Library of Medicine's Medical Literature Analysis and Retrieval System, Bethesda, MD. Embase is a registered trademark of Elsevier B.V., Amsterdam, The Netherlands. CINAHL, Cumulative Index to Nursing and Allied Health Literature, is a registered trademark of EBSCO Industries, Birmingham, AL.

Search Strategies

Ovid (Medline, Cochrane, and Embase)

1	pain/ge, dt, pa, pp or "pain measurement"/mt, sn or "pain threshold"/eh	121642
2	(racism or "attitude of health personnel").de,sh,hw. or "healthcare disparities"/eh or "Health Disparate, Minority and Vulnerable Populations"/sn	337637
3	"white people"/eh or "black or african american"/eh or "black people"/eh or "asian people"/eh or "hispanic or latino"/eh or (ethnicity or "racial groups").de,sh,hw. or "minority health"/eh, sn or ethnicity/sn or DNA/ge or "hair color"/ge, ph	300801
4	1 or 2	458060
5	3 and 4	7093
6	hypersensitivity.de,sh,hw. or ("drug hypersensitivity" or allergy or "allergic reaction" or "anaphylactic reaction" or anaphylaxis or "physical reaction").ti,ab,kw.	595935
7	"risk assessment"/mt, st or "blood pressure determination"/is, mt, nu or "heart rate determination"/is, mt or "monitoring, physiologic"/is, mt, nu or ("vital signs" or "blood pressure" or pulse or "heart rate" or "physical examination").de,sh,hw.	1007935
8	("physiologic monitoring" or "LAST assessment" or "patient monitoring" or "ASA classification" or "lidocaine toxicity" or Intralipid or "local anesthetic systemic toxicity" or methemoglobinemia or (lipid and (emulsion or rescue or resuscitation))).ti,ab,kw.	70510
9	6 or 7 or 8	1668138
10	(lidocaine or bupivacaine or epinephrine or "sodium bicarbonate").de,sh,hw.	320706
11	(xylocaine or "lidocaine with epinephrine" or marcaine or sensorcaine or "liposomal bupivacaine" or exparel).ti,ab,kw.	10635

12	10 or 11	324091
13	("nurse's role" or "perioperative nursing").de,sh,hw,ab.	164775
14	("nurse's scope of practice" or "surgical nursing" or "advanced cardiac life support" or (ACLS adj1 certifi\$)).ti,ab,kw	8368
15	13 or 14	172002
16	5 or 9 or 12 or 15	2133611
17	("surgical procedures, operative" or "elective surgical procedures" or "complications, intraoperative" or "minor surgical procedures" or "ambulatory surgical procedures" or "complications, postoperative").de,sh,hw.	186603
18	(analgesia or "anesthesia, local" or "anesthetics, local").de,sh,hw.	400307
19	((local or topical or "local only" or infiltration) and an\$sthesia) or "wide awake local anesthesia" or "wide awake surgery" or WALANT or ("straight local" adj3 "no an\$sthesia provider") or (("surgeon administered" and (local or regional)) adj3 an\$sthesia)).ti,ab,kw.	1280
20	17 or 18 or 19	581730
21	16 and 20	96409
22	21 not (chronic or neuropathic or spinal or epidural or regional or cancer).ti,ab,kw.	62468
23	limit 22 to cochrane library	47351
24	limit 23 to embase records	42887
25	limit 24 to english language	38298
26	limit 25 to human	32575
27	limit 26 to medline records	31446
28	limit 27 to yr="2019 -Current"	4743
29	limit 28 to humans	4743
30	remove duplicates from 29	2509

EBSCOhost (CINAHL)

S24	S22 NOT ((chronic or neuropathic or spinal or epidural or regional or cancer)) Limiters - Publication Date: 20190101-20241131; English Language; Peer Reviewed; Exclude MEDLINE records; Human	1,082
S23	S22 NOT ((chronic or neuropathic or spinal or epidural or regional or cancer))	13,709
S22	S17 AND S21	18,159
S21	S18 OR S19 OR S20	303,100
S20	((local or topical or "local only" or infiltration) and an\$sthesia) OR "straight local" N3 "no an\$sthesia provider" OR ("surgeon administered" and (local or regional) N3 an\$sthesia)) OR ("wide awake local anesthesia" or "wide awake surgery" or WALANT)	172,646
S19	(MH "Anesthesia, Local") OR (MH "Anesthetics, Local") OR (MH "Analgesia")	19,458
S18	(MH "Surgery, Elective") OR (MH "Postoperative Complications") OR (MH "Intraoperative Complications") OR (MH "Surgery, Operative") OR (MH "Ambulatory Surgery") OR "minor surgical procedures"	129,336
S17	S5 OR S9 OR S12 OR S16	293,975
S16	S13 OR S14 OR S15	87,919
S15	("nurse's scope of practice" or "surgical nursing" or "advanced cardiac life support") OR ACLS N1 certifi*	50,729

S14	AB ("Nursing Role") OR ("Perioperative Nurses")	2,164
S13	(MH "Nursing Role") OR (MH "Perioperative Nurses")	67,139
S12	S10 OR S11	16,278
S11	xylocaine or "lidocaine with epinephrine" or marcaine or sensorcaine or "liposomal bupivacaine" or exparel	5,583
S10	(MH "Sodium Bicarbonate") OR (MH "Bupivacaine") OR (MH "Lidocaine") OR (MH "Epinephrine")	16,032
S9	S6 OR S7 OR S8	189,249
S8	(("physiologic monitoring" or "LAST assessment" or "patient monitoring" or "ASA classification" or "lidocaine toxicity" or Intralipid or "local anesthetic systemic toxicity" or methemoglobinemia)) OR ((lipid and (emulsion or rescue or resuscitation)))	16,529
S7	(MH "Blood Pressure Determination/MT/NU") OR (MH "Heart Rate") OR (MH "Blood Pressure") OR (MH "Risk Assessment/MT/ST") OR ("heart rate determination" or "physiologic monitoring" or "vital signs" or "physical examination")	151,496
S6	(MH "Hypersensitivity") OR ("drug hypersensitivity" or allergy or "allergic reaction" or "anaphylactic reaction" or anaphylaxis or "physical reaction")	33,520
S5	S3 AND S4	4,872
S4	S1 OR S2	123,427
S3	(MH "African Americans") OR (MH "People of Color") or ("white people" or "racial groups" or "minority health" or "hair color")	38,645
S2	(MH "Attitude of Health Personnel") OR (MH "Racism") or (MH "Healthcare Disparities") OR ("Health Disparate, Minority and Vulnerable Populations")	92,185
S1	(MH "Pain/DT/PA/PP") OR (MH "Pain Measurement/MT/SN") OR (MH "Pain Threshold")	31,523

Web Searches

12/3/24: Navigated to FDA website using google.com. 2] Entered "Local anesthetics" in search box for web site. 3] Browsed results, saved for author screening. [x2]

12/3/24: Navigated to ASA website using google.com. 2] Chose "Research & Guidelines" menu. 3] Chose "ASA Standards, Guidelines, and Statements." 4] Chose "Clinical Practice Resources." 4] Browsed available resources, saved for author screening.

12/3/24: Navigated to AANA website using google.com. 2] Chose "Practice" menu. 3] Chose "Clinical practice." 4] Chose "Clinical Practice Resources." 5] Chose "Facility Considerations," saved for author screening.

12/3/24: Navigated to AANA website using google.com. 2] Chose "Practice" menu. 3] Chose "Clinical practice." 4] Chose "Clinical Practice Resources." 5] Chose "Facility Considerations," and then scrolled to "AANA Office-Based Anesthesia Settings Resources." 6] Browsed available resources, saved for author screening. [x3]

12/3/24: Navigated to ASPAN site using google.com. 2] Noted advertisement for 2023-24 Standards. 3] Checked Library catalog for availability. 4] Saved for author review.

PUBLICATION HISTORY

- Originally published March 1985, AORN Journal as Recommended Practices: Electrosurgery. Revised April 1991; revised July 1993.
- Revised November 1997; published January 1998, AORN Journal as Recommended Practices for Electrosurgery.
- Reformatted July 2000.
- Revised November 2003; published February 2004, AORN Journal.
- Revised November 2004; published in Standards, Recommended Practices, and Guidelines, 2005 edition. Reprinted March 2005, AORN Journal.
- Revised July 2009 for online publication in Perioperative Standards and Recommended Practices.
- Minor editing revisions made in November 2009 for publication in Perioperative Standards and Recommended Practices, 2010 edition.

- Editorial revisions made July 2012. Recommendation X was revised and approved by the Recommended Practices Advisory Board. Reformatted September 2012 for publication in Perioperative Standards and Recommended Practices, 2013 edition.
- Minor editing revisions made in November 2014 for publication as Guideline for Electrosurgery in Guidelines for Perioperative Practice, 2015 edition.
- Revised and combined with the Guideline for Laser Safety, as Guideline for Safe Use of Energy-Generating Devices, September 2016, for online publication in Guidelines for Perioperative Practice.
- Evidence ratings revised and minor editorial changes made to conform to the current AORN Evidence Rating model, September 2019, for online publication in Guidelines for Perioperative Practice.
- Revised July 2020 as the Guideline for Electrosurgical Safety for publication in Guidelines for Perioperative Practice online; separated from the Guideline for Laser Safety.
- Revised December 2025 as the Guideline for the Safe Use of Surgical Energy Devices for publication in Guidelines for Perioperative Practice online.
- Scheduled for review 2030.