

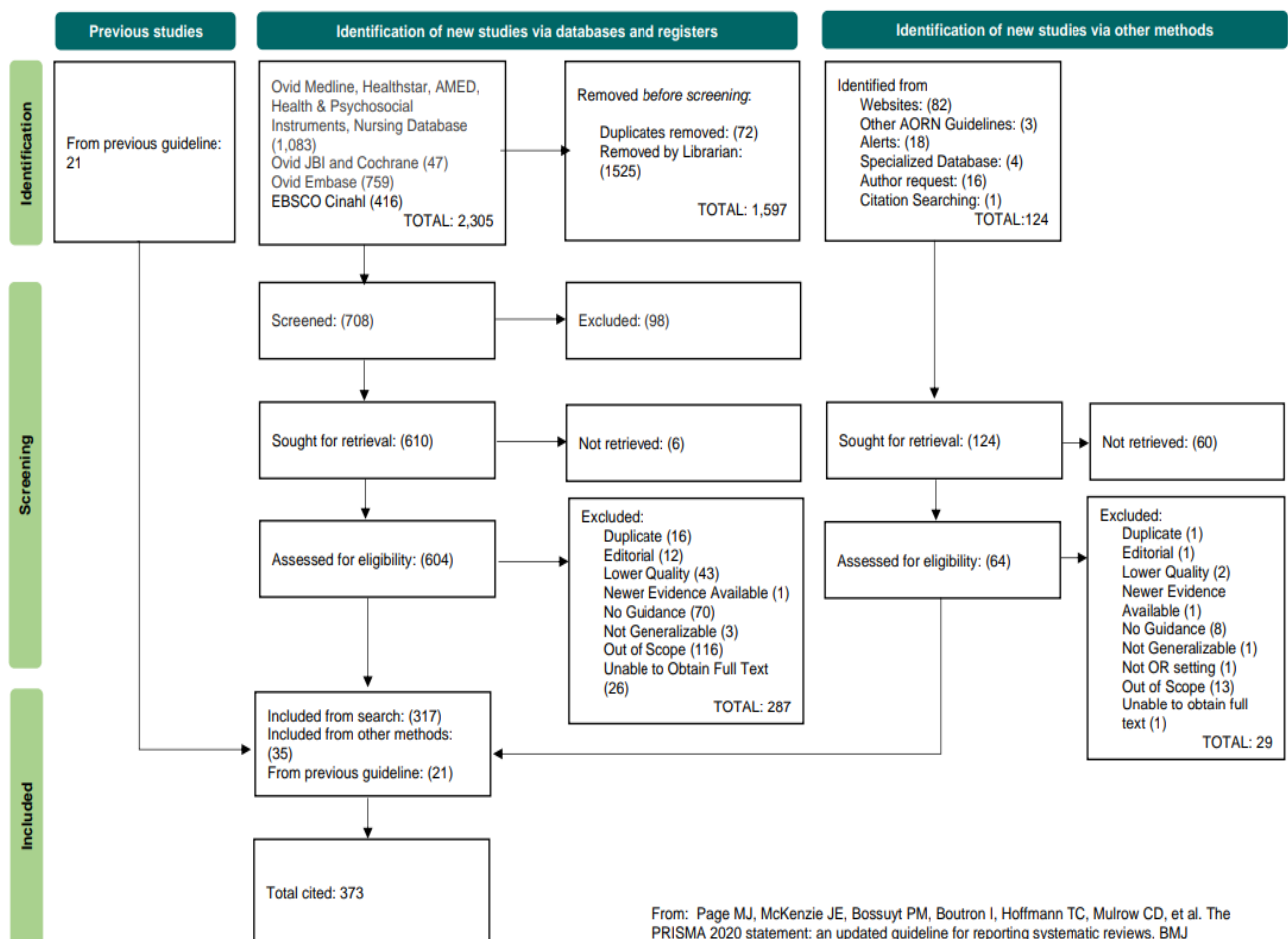
The Guideline for Team Communication was approved by the AORN Guidelines Advisory Board and became effective as of January 18, 2024.

EVIDENCE REVIEW

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 July 2017 through January 2023. 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 September 2023. 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



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: <http://www.prisma-statement.org/>

On January 9, 2023, 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 December 21, 2022, a medical librarian with a perioperative background conducted a systematic search of 16 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	Current
Books@Ovid	January 12, 2023
JBI EBP Database	Current to December 21, 2022
EBM Reviews: ACP Journal Club	1991 to December 2022
EBM Reviews: Cochrane Central Register of Controlled Trials	December 2022
EBM Reviews: Cochrane Database of Systematic Reviews	2005 to January 10, 2023
EBM Reviews: Cochrane Clinical Answers	December 2022
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 December 2022
Embase	1974 to 2023 January 12
Health and Psychosocial Instruments	1985 to October 2022
Ovid Healthstar	1902 to 1998, 1999 to September 2022
Ovid MEDLINE(R) ALL	1946 to January 12, 2023
Ovid Nursing Database	1946 to January week 1 2023
CINAHL complete via EBSCOhost	1937 to January 2023

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 "operating rooms".de,sh. or ("operating room" or "operating suite" or "surgical suite" or surgicent\$ or an\$sthesia).ti,ab. or (surgical adj1 procedure).ti,ab. or "operating room personnel".ti,ab. or (operating and theat\$).ti,ab. or ("ambulatory care" adj1 (facilit\$ or center)).ti,ab. or (perioperative adj1 nurs\$).ti,ab. 324819

- 2 (communication or "interdisciplinary communication").de. or ("effective communication" or "cross-disciplinary communication" or "multidisciplinary communication" or misinformation or miscommunication or "communication error").ti,ab. 300442
- 3 "patient handoff".de,sh,hw. or ((patient or clinical or nurs\$) adj1 (han\$over or han\$off)).ti,ab. or (Patient adj1 signo\$).ti,ab. 3590
- 4 "clinical protocols".de,sh,hw. or (huddle or "universal protocol" or time\$ut or \$briefing).ti,ab. or ((second or additional or surgical or interval) adj3 time\$ut).ti,ab. 74721
- 5 (awareness or "observer variation").de. or "risk management"/mt or "safety management"/mt or "intraoperative complications"/et, pc or ("observer bias" or "safety culture" or "just culture" or distract\$ or "situational awareness" or "perioperative complications" or "surgical injuries").ti,ab. 263656
- 6 checklists.de. or checklists/mt, st or ("safe surgery checklist" or "checklist implementation" or sbar or teamSTEPPS or "stop the line").ti,ab. 3953
- 7 ("failure to speak up" or "system reliability" or passive or assertive or "speaking up" or "high reliability teams" or ("high reliability" adj1 organi\$ation)).ti,ab. 355097
- 8 "medical errors"/ae, pc or (quality improvement or patient safety).de. or ("human error" or "human factor analysis" or "patient safety culture" or "never event" or "sentinel event" or "near miss" or "process improvement" or "surgical error" or "medical mistake" or "Critical Medical Incidents").ti,ab. or (Wrong adj2 (patient or procedure or site) adj2 (surgery or error)).ti,ab. or ("Medical Error" adj1 \$mmission).ti,ab. 305706
- 9 (("Team training" and "nontechnical skills") or ("resilience in healthcare" or "shared mental model")).ti,ab. 993
- 10 ("Minority groups" or "skin pigmentation").de,sh,hw. or ("people of color" or "persons of color" or "skin tone" or "skin color" or minorities).ti,ab. 129431
- 11 (Visib\$ and "surgical site marking").ti,ab. 28
- 12 ((Urban or "Medically underserved area") and "Patient safety culture").ti,ab,kw. 28
- 13 10 or 11 129459
- 14 "Gender identity".de,sh,hw. or gender.ti,ab. or (patient adj5 (preferred and name)).ti,ab. or "team member pronouns".ti,ab. 1398139
- 15 3 and 14 19
- 16 8 and 13 539
- 17 (keebler,j\$ or lazzara,e\$).m_auts. 84
- 18 2 or 3 or 4 or 5 or 6 or 7 or 8 1272233
- 19 1 and 18 17021
- 20 12 or 15 or 16 or 17 or 19 17682
- 21 limit 20 to cochrane library 12630
- 22 limit 21 to embase records 12351
- 23 limit 22 to english language 11413
- 24 limit 23 to human 9843
- 25 limit 24 to yr="2017 -Current" 3655
- 26 limit 25 to humans 3655
- 27 limit 26 to original articles 3628
- 28 limit 27 to primary source 3628
- 29 remove duplicates from 28 1889

EBSCOhost (CINAHL)

S21	S12 OR S15 OR S16 OR S17 OR S19 Limiters - Published Date: 20170701-20230131; English Language; Peer Reviewed; Exclude MEDLINE records; [Include] Human	416
S20	S12 OR S15 OR S16 OR S17 OR S19	3,713
S19	S1 AND S18	3,387
S18	S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8	471,879
S17	AU Lazzara, elizabeth OR AU keebler, joseph	41
S16	S8 AND S13	24
S15	S3 AND S14	0
S14	((MH "Gender Identity") OR (MH "Nonbinary Persons") OR (MH "Gender Affirming Care"))	7,947
S13	S10 OR S11	3,005
S12	((Urban or "Medically underserved area")) AND "Patient safety culture"	270
S11	(Visib* and "surgical site marking")	5
S10	((MH "Skin Pigmentation") OR ("people of color" or "persons of color" or "skin tone" or "skin color")	3,000
S9	(("Team training" and "nontechnical skills")) OR ("resilience in healthcare" or "shared mental model")	204
S8	((MH "Patient Safety") OR (MH "Treatment Errors/AE/PC") OR (MH "Health Care Errors/AE/PC")) OR ("medical errors" OR "human error" or "patient safety culture" or "never event" or "sentinel event" or "near miss" or "surgical error" or "medical mistake") OR (Wrong N2 (patient or procedure or site))	87,071
S7	(("failure to speak up" or "system reliability" or "speaking up" or "high reliability teams") OR "high reliability" N1 organi*ation	714
S6	(MH "Checklists") OR (MH "Checklists/MT/ST") OR ("safe surgery checklist" or "checklist implementation" or sbar or teamSTEPPS or "stop the line")	37,133
S5	((MH "Risk Management/MT") OR (MH "Intraoperative Complications/ET/PC")) OR (MM "Intraoperative Awareness")) OR (awareness or "safety management") OR ("safety culture" or "just culture" or "situational awareness" or "surgical injuries")	144,717
S4	MM "Nursing Protocols") OR (huddle or "universal protocol" or time*ut or *briefing) OR ((second or additional or surgical or interval) N3 time*ut)	3,716
S3	(MM "Hand Off (Patient Safety)") OR "patient handoff" OR ((patient or clinical or nurs*) N1 (han*over or han*off)) OR (Patient N1 signo*)	2,266
S2	((MM "Communication Skills")) OR (communication or "interdisciplinary communication") OR ("effective communication" or "cross-disciplinary communication" or "multidisciplinary communication" or misinformation or miscommunication or "communication error")	226,257
S1	((MM "Operating Rooms") OR (MM "Operating Room Personnel") OR (MH "Surgical Technologists") OR (MH "Perioperative Nursing"))	25,274

Web Searches

1/9: Navigated to cms.gov. 2] Entered "sentinel event" in search field. 3] Browsed to result, saved for author screening.

1/9: Used google.com to find site for The Joint Commission. 2] Navigated to jointcommission.org. 3] Clicked on "What We Offer" drop-down menu, and then "Complementary Resources." 4] Clicked on "Patient Safety Topics." 5] Chose "Zero Harm"; saved for author screening.

1/9: Used google.com to find site for The Joint Commission. 2] Navigated to jointcommission.org. 3] Clicked on "What We Offer" drop-down menu, and then "Complementary Resources." 4] Clicked on "Sentinel Event Alerts." 5] Browsed result list; saved for author screening. (x3)

1/10: Used google.com to find site for The Joint Commission. 2] Navigated to jointcommission.org. 3] Clicked on "Standards" drop-down menu, and then chose "Patient Safety Systems PS Chapter" from the LEFT menu. 4] Browsed results; saved for author screening. (x2)

1/10: Used google.com to find site for The Joint Commission. 2] Navigated to jointcommission.org. 3] Clicked on "Standards" drop-down menu, and then chose "R3 Report" from the LEFT menu. 4] Browsed results; saved for author screening. (x2)

1/10: Used google.com to find site for The Joint Commission. 2] Navigated to jointcommission.org. 3] Clicked on "Resources" drop-down menu, and then chose "Sentinel Event" from the LEFT menu. 4] Scrolled to "RCA2," and clicked "Learn about RCA2." 5] Link directed me to "RCA2: Improving Root Cause Analyses and Actions to Prevent Harm" on the Institute for Healthcare Improvement (IHI) web site. Saved referenced document for author screening.

1/11: Used google.com to find site for Ariadne Labs. 2] Navigated to ariadnelabs.org. 3] Chose "Resources" drop-down menu, and clicked "All Resources." 4] Browsed result list, saved for author screening.(x27)

1/11: Used google.com to find site for Ariadne Labs. 2] Navigated to ariadnelabs.org. 3] Chose "Our Work" drop-down menu, and then under "Frontline Clinical & Public Health Experience," chose "Safe Surgery/ Safe Systems." 4] Scrolled to "Focus Areas," and chose "Training and Coaching." 5] Saved for author screening. (x2)

1/11: Used google.com to find site for Ariadne Labs. 2] Navigated to ariadnelabs.org. 3] Chose "Our Work" drop-down menu, and then under "Frontline Clinical & Public Health Experience," chose "Safe Surgery/ Safe Systems." 4] Scrolled to "Focus Areas," and chose "Training and Coaching." 5] Skimmed text, and clicked link to SCOPE study. 6] Saved citation for author review. (x2)

1/11: Used google.com to find site for Ariadne Labs. 2] Navigated to ariadnelabs.org. 3] Chose "Our Work" drop-down menu, and then under "Frontline Clinical & Public Health Experience," chose "Safe Surgery/ Safe Systems." 4] Scrolled to "Focus Areas," and chose "Surgical Safety." 5] Scrolled to linked text, "Implementing Emergency Checklists website". 6] In new web site, www.implementingemergencychecklists.org, and chose "The Toolkit." 7] Saved for author screening.

1/11: Used google.com to find site for Ariadne Labs. 2] Navigated to ariadnelabs.org. 3] Chose "Our Work" drop-down menu, and then under "Frontline Clinical & Public Health Experience," chose "Safe Surgery/ Safe Systems." 4] Scrolled to "Focus Areas," and chose "Surgical Safety." 5] Scrolled to linked text, "Implementing Emergency Checklists website". 6] In new web site, www.implementingemergencychecklists.org, and chose "The Toolkit." 7] Chose "Resources" from LEFT navigation menu. 8] Browsed results; saved for author screening. (x4)

1/11: Used google.com to find site for Ariadne Labs. 2] Navigated to ariadnelabs.org. 3] Chose "Our Work" drop-down menu, and then under "Focus Areas," chose "Communication Gaps." 4] Chose "Medical Error." 5] Clicked "Learn More" under "Programs". 6] Saved for author screening.

1/11: Used google.com to find site for Ariadne Labs. 2] Navigated to ariadnelabs.org. 3] Chose "Our Work" drop-down menu, and then under "Focus Areas," chose "Safety Gaps." 4] Under "Safety Gaps," chose "Safe Surgery/ Safe Systems." 5] Scrolled to "Communication" under "Focus Areas" heading. 6] Saved for author screening.

1/11: Used google.com to find site for American Society of Anesthesiologists. 2] Navigated to asahq.org. 3] Opened "Research & Guidelines" drop-down menu, and chose "ASA Standards & Guidelines." 4] Browsed resources; saved for author screening.

1/11: Used google.com to find site for Accreditation Assoc for Ambulatory Health Care. 2] Navigated to aaahc.org. 3] Under "News and Updates" drop-down menu, chose "Standards and Policies." 4] Upon realizing that standards are not posted on site, but rather sold as a publication, cited publication from Library for author screening.

1/12: Used google.com to find site for American Nurses Association. 2] Navigated to nursingworld.org. 3] Clicked 3-bar menu expander in RIGHT corner. 4] Chose "Practice & Advocacy." 5] Scrolled down, chose "Work Environment." 6] Chose "Health & Safety" from LEFT menu. 7] Chose "Incivility, Bullying, and Workplace Violence" text link under "Health & Safety" heading. 8] Scrolled to "Related ANA Position statements." 9] Browsed results, saved for author screening.

1/12: Used google.com to find site for American Nurses Association. 2] Navigated to nursingworld.org. 3] Entered "position statements" in search field. 4] Chose first result, a link for "ANA Official Position Statements." 5] Browsed results, saved for author screening.

1/12: Used google.com to find site for American Organization for Nurse Leaders. 2] Navigated to aonl.org. 3] Under "Resources" drop-down menu, chose "Nurse Resource Library." 4] Clicked arrow to see "Nurse Leader Resource Library." 5] Browsed results, saved for author screening. 1/12: Used google.com to find site for American Organization for Nurse Leaders. 2] Navigated to aonl.org. 3] Under "Resources" drop-down menu, chose "Nurse Resource Library." 4] Clicked arrow to see "Nurse Leader Resource Library." 5] Browsed results, saved for author screening.

1/12: Used google.com to find site for Association for the Advancement of Medical Instrumentation. 2] Navigated to aami.org. 3] Chose "Visit ARRAY" from menu at top of page. 4] Typed "human factors" in search bar at top of page. 5] Clicked "Standards & Publications" tab. 6] Browsed results, saved for author screening.

1/13: Used google.com to find site for American Hospital Association. 2] Navigated to aha.org. 3] Under "Advocacy" drop-down menu, chose "Workforce." 4] Scrolled to "Case studies, White papers & Publications." 5] Browsed results, saved for author screening.

1/13: Used google.com to find site for American Hospital Association. 2] Navigated to aha.org. 3] Under "Education & Events" drop-down menu, chose "AHA Team Training." 4] Saved for author screening. (x2)

1/13: Used google.com to find site for the Institute for Healthcare Improvement. 2] Navigated to ihi.org. 3] Under "Topics" drop-down menu, chose "Patient Safety." 4] Saved for author screening. (x2)

1/13: Used google.com to find site for the Institute for Healthcare Improvement. 2] Navigated to ihi.org. 3] Under "Topics" drop-down menu, chose "All Topics A-Z." 4] Chose "SBAR Communication Technique." 5] Scrolled to result, saved for author screening. (x3)

1/13: Used google.com to find site for the Institute for Healthcare Improvement. 2] Navigated to ihi.org. 3] Under "Resources" drop-down menu, chose "Publications." 4] Scrolled to "View All." 5] Browsed results, saved for author screening. (x5)

1/13: Used google.com to find site for the National Institute for Health and Care Excellence. 2] Navigated to nice.org.uk. 3] Under "Standards and indicators" drop-down menu, clicked on "View our quality standards." 4] Un-checked box to retrieve all under "Type." 5] Entered "perioperative" in search box next to "Filter by title or keyword." 6] Browsed results, saved for author screening.

RESULTS

Studies that offer insights that can inform perioperative nursing practice in the area of perioperative team communication were included in this review. Studies that appeared to meet the inclusion criteria were excluded if they were of lower quality, provided no guidance, were duplicates of already-included studies, full text was not available in English, the results were not applicable or generalizable to the perioperative practice setting, were the wrong setting, or wrong population. A synthesis of the study results informed construction of practice recommendations and this synthesis is described briefly in the corresponding rationales that follow each practice recommendation. Additional information about each included study is found in the [evidence table](#) that corresponds to the published guideline.

REGISTRATION

PROSPERO Registration: CRD42021274097