

Delphi Study: ASPAN Adult Patient Pain and Comfort Practices

Dina A. Krenzischek, PhD, RN, CPAN, CFRE, FAAN, FASPAN,

Elizabeth Card, MSN, APRN, FNP-BC, CPAN, CCRP,

Jacque Crosson, DNP, RN, CPAN, FASPAN,

Theresa Clifford, MSN, RN, CPAN, CAPA, FASPAN,

Susan Russell, BSN, RN, JD, CPAN, CAPA, FASPAN, Ryan MacDonald, PhD,

Linda Wilson, PhD, RN, CPAN, CAPA, BC, CNE, CNEcl, CHSE-A, ANEF, FAAN, FASPAN

Purpose: *The American Society of PeriAnesthesia Nurses (ASPAN) is responsible for establishing evidence-based standards to guide perianesthesia nursing practice. The ASPAN model for evidence-based practice acknowledges the potential for the Delphi technique to identify priorities for perianesthesia research. The purpose of this Delphi study was to generate a consensus on pain and comfort among a panel of experts.*

Design: *ASPAN convened a panel of experts to provide recommendations based on seven categories, this led to the development of a questionnaire to build consensus.*

Methods: *Survey conducted among panel of experts to obtain consensus. Two survey rounds were completed.*

Findings: *A consensus was obtained reaching a 70% benchmark for an acceptance.*

Conclusions: *The results found a consensus on topics required for education and competency among perianesthesia nurses including transfer and discharge criteria related to pain and comfort, resources for perianesthesia nurses, policy guidelines, and the management of the special needs of perianesthesia patients.*

Keywords: *pain, comfort, Delphi study, expert consensus.*

© 2019 American Society of PeriAnesthesia Nurses. Published by Elsevier, Inc. All rights reserved.

THE AMERICAN SOCIETY OF PERIANESTHESIA NURSES (ASPAN) is responsible for establishing and promoting evidence-based guidelines to guide perianesthesia nursing practice and safe patient care. The ASPAN model for evidence-

based practice acknowledges the potential for the Delphi technique to identify priorities for perianesthesia research.^{1,2} Postoperative pain is one of the most frequently verbalized concern of preoperative patients.³ Postoperative pain has

Dina A. Krenzischek, PhD, RN, CPAN, CFRE, FAAN, FASPAN, Professional Practice, Patient Care Services, Mercy Medical Center, Baltimore, MD; Elizabeth Card, MSN, APRN, FNP-BC, CPAN, CCRP, Nursing Research, Vanderbilt University Medical Center, Nashville, TN; Jacque Crosson, DNP, RN, CPAN, FASPAN, Perioperative Services, Northern Light Mercy Hospital, Portland Maine; Theresa Clifford, MSN, RN, CPAN, CAPA, FASPAN, Perioperative Services, Northern Light Mercy Hospital, Portland, ME; Susan Russell, BSN, RN, JD, CPAN, CAPA, FASPAN, Postanesthesia Care Unit, HealthTrust Workforce Solutions, Austin, TX; Ryan MacDonald, PhD, Mercy Medical Center,

Baltimore, MD; and Linda Wilson, PhD, RN, CPAN, CAPA, BC, CNE, CNEcl, CHSE-A, ANEF, FAAN, FASPAN, Drexel University, Philadelphia, PA.

Conflict of interest: None to report.

Address correspondence to Dina A. Krenzischek, e-mail address: ekrenzis@mdmercy.com or dinaak@verizon.net.

© 2019 American Society of PeriAnesthesia Nurses. Published by Elsevier, Inc. All rights reserved.

1089-9472/\$36.00

<https://doi.org/10.1016/j.jopan.2019.06.003>

long been considered an expected consequence of surgery, occurring in staggering numbers of patients. This fact alone emphasizes the need to address both pain and comfort (eg, pain, anxiety, nausea, environment).^{4,6} The Agency for Health Care Policy and Research created the *Acute Pain Management Guidelines* in 1992, yet up to 80% of patients continue to experience moderate-to-severe postoperative pain.⁷ Untreated or undertreated pain impacts not only the postanesthesia care unit (PACU) length of stay, but also quality of life in the event that a chronic pain condition develops.⁸

There are multiple resources to guide the treatment of pain, but few are focused on the perianesthesia patient. Acute surgical pain is unique and frequently compounded by additional discomforts (eg, hypothermia, anxiety, postoperative nausea and vomiting). Adequate treatment of discomfort in the perianesthesia period is multimodal in nature, potentially inclusive of analgesics, opioids, antiemetics, nonpharmacologic interventions (eg, cold or heat therapy, positioning) and therapeutic communication (reassurance). In 2004, ASPAN responded to The Joint Commission's (TJC) call for improved pain and discomfort assessment and treatment with the *ASPAN Pain and Comfort Guideline*.^{5,6} Perianesthesia nurses are uniquely positioned to impact pain, comfort, and patients' well-being. Evidence-based guidelines standardize practice, decrease cost, and improve patient outcomes. It is imperative that recommendations for addressing these patient concerns remain current and are based on best practice evidence. To achieve this goal, the guidelines must be revisited regularly and revised when supported by reliable evidence.

To develop the original *Pain and Comfort Guideline*, ASPAN used a multidisciplinary approach, using clinical experts to review, rate, and integrate current evidence. This guideline was endorsed by the ASPAN Board of Directors and approved by its Representative Assembly in 2004. The *ASPAN Pain and Comfort Clinical Guideline* is now due for revision and update to reflect current evidence, embody ethical and safe patient care and meet the needs of nurses practicing in all phases of perianesthesia care. Pain and comfort priorities to be included in the update will require a new investigation to identify current trends and concerns.

The ASPAN Clinical Practice Committee received 542 questions related to pain and comfort from 2013 through 2016. Inquiries ranged from pain and comfort assessment, interventions, and outcomes, to requests for unit-based policies and procedures. ASPAN must continue to provide research and evidence-based specialty practice recommendations to guide the bedside perianesthesia nurse while providing safe patient care.

Delphi Technique

In 2005, the original ASPAN conceptual model for evidence-based practice was introduced as a framework for both clinical practice and research. This framework acknowledged the potential for the Delphi technique to help identify priorities for perianesthesia research.¹ The Delphi survey design for research was originally developed in the 1950s by the Research and Development Corporation (headquarters Santa Monica, California). The US government contracted Research and Development Corporation to predict the impact of emerging technology during times of war.^{9,12} The nursing community incorporated the technique in the late 1970s to identify health care quality indicators.^{10,13} Currently, the Delphi survey method is used by a wide range of professional health care services and groups seeking consensus on crucial policy development processes.¹⁴

The Delphi technique is a structured group consensus development process or decision-making tool using a multistaged survey approach.¹⁰⁻¹² The overall goal for using this technique is to reach consensus on specific topics that include known issues, questions, or ideas.¹⁰ The process generally works well for problem solving when relevant data are incomplete, when identifying new ideas, or for supporting proposed agendas for future research or practice priorities.^{10,12,15} Findings from the Delphi approach may be either qualitative or quantitative or both depending on the design of the questions.^{10,15} The process begins when the study question has been defined and refined through a literature review.^{13,15} Following institutional review board (IRB) approval, participants are provided two or more rounds of structured questions, each round intended to reduce the range of responses until consensus is achieved.^{10,11} The role of the

researcher, or primary investigator (PI), is to provide the questions, administer the survey, and facilitate the analysis of the data.¹⁰ Recipients of the surveys were invited to participate on the basis of their shared clinical expertise, knowledge, and skills as these relate to the issue being investigated. The participants also consent on the basis of time and willingness to support the study.^{10,15} Assuming that the participants represent a homogenous background, the premise of the Delphi technique is that the structured format will provide results that more accurately reflect reliable outcomes.^{10,15}

The advantages of the Delphi technique include the following data points:

- The approach is helpful in addressing questions that are not associated with established scientific procedures¹⁰
- A well-constructed Delphi identifies the mutual yet subjective expert judgments¹¹
- The survey can be simple, less time consuming, and cost effective to manage¹⁰
- Participants remain anonymous^{10,12}
- The participants are not limited by geographic considerations¹¹
- Careful participant selection can lead to useful and diverse background expertise and experience¹⁴
- Lower attrition of experts using electronic platforms.¹⁵

There are also a few disadvantages to this approach to be considered. One challenge can be the potential for researcher bias.¹⁰ Another possible obstacle involves barriers to the identification of subject experts to serve as participants.¹⁴ In smaller expert panels, some members may have knowledge of other participant members.¹⁰ The phenomenon of “survey fatigue” can lead to attrition of subject experts and result in poor response rates.^{10,14} Occasionally, the time required to complete the process may be extended beyond the capacity of the participants as a result of the need for multiple rounds.^{11,12}

Conceptual Framework

Katharine Kolcaba’s comfort theory was used as a basis for this study. Comfort is described as the satisfaction of the basic human needs of ease, relief, and transcendence.¹⁶ A patient’s comfort needs can arise from four contexts: (1) physical,

(2) psychospiritual, (3) sociocultural, and (4) environmental.¹⁶

In the perianesthesia setting, it is important to focus on the holistic care approach to vulnerable patients who have undergone surgery and are in the need of pain and comfort management. Pain history and assessment are evaluated initially in the preadmission setting. A patient’s expectations and comfort goals are re-evaluated throughout the preanesthesia process. As the patient travels to the postanesthesia setting, nurses reassess and implement interventions to ease a patient’s pain, discomfort, and anxiety. On discharge or transfer, the nurse strives to meet the patient’s comfort goal and expectations while maintaining safe patient outcomes.

Purpose

The purpose of this Delphi study was to develop a structured and interactive quantitative viable method aimed to generate a consensus among a panel of pain and comfort experts. This study identified topics of priorities and best practices in adult perianesthesia pain and comfort. The results of this study inform the development of ASPAN’s Adult Pain and Comfort Resources as well as the identification of priorities for the ASPAN Pain and Comfort Education Program.

Methodology

Participants

The Delphi methodology was used as an evidence-based approach to structure group communication among the identified pain and comfort experts regarding nursing education and training related to the pain and comfort management of adult patients in the perianesthesia setting. Participants (experts) were conveniently recruited based on their role functions and expertise in the management of postanesthesia patients who are experiencing pain with various comorbidities, types of surgery, and various anesthetic techniques.

The panel of experts was recruited following these criteria: role function, years of experience in perianesthesia and related fields of expertise (critical care and pain management), and advanced educational degrees.

Procedure

1. The ASPAN Pain and Comfort Research Team planned the Delphi study, developed quasi-survey open-ended questions, and recruited a panel of experts.
2. An IRB protocol was submitted and approval was obtained from the Vanderbilt University Medical Center IRB.
3. The panel of experts were informed on the purpose of the study, methodology, risks and benefits, privacy and confidentiality, and were assured confidentiality on all responses. To ensure confidentiality, experts created their individual unique identifier using the Research Electronic Data Capture (REDCap) electronic survey.

A quasi anonymity was sustained because the group was small and some experts may have had knowledge of or familiarity with other members. The PI did not disclose individual responses, thereby preventing undue influence of other experts. The participants on the panel were kept confidential except among the Pain and Comfort Research Team. The experts were informed regarding the importance of confidentiality and had a choice to participate or not participate. Responding and completing the survey served as consent to participate.

4. Survey rounds:
 - First round: participants were asked to make recommendations on open-ended questions. The PI collated the recommendations for each category.
 - Second round: participants rated all recommendations using the Likert scale from 1 = extremely unimportant to 4 = extremely important.

The PI evaluated results and identified the 70% agreement benchmark. All accepted recommendations (3 = important and 4 = extremely important) that met the 70% benchmark were not evaluated on the third round. Responses with ratings 1 and 2 were modified based on recommendations from the experts.

- Third and fourth rounds were planned to re-evaluate the modified recommendations by experts following the same process. In general, a Delphi study may be discontinued after a predetermined num-

ber of rounds or when consensus has been reached (70% consensus on 3 = important and 4 = extremely important).

Questionnaire Design/Tool

A classical Delphi study includes 10 open-ended questions.¹⁷ Utilization of the Delphi framework allowed the generation of themes identified as needs relevant to perianesthesia nursing education, training, and management of patients experiencing pain and discomfort in the PACU. Open-ended questions were developed on the basis of the following seven primary categories:

- Knowledge and competency skills
- Transfer and discharge criteria
- ASPAN resources
- Policy, principles, regulatory, ethical issues and concerns
- Special needs (eg, opioid tolerance, cultural diversity, language barriers)
- Specific practice recommendations in each perianesthesia setting and phase of care (assessment, intervention, reassessment, and outcomes)
- Future research opportunities.

The experts' recommendations on each of the seven open-ended category questions were used to develop the pain and comfort questionnaire using the REDCap survey. The experts' suggestions were designed to focus on the current scope of perianesthesia practice and how nurses might enhance knowledge, safety, and competency within the role of the perianesthesia nurse related to pain and comfort. Questions were designed to assess areas of agreement and importance. A Likert numerical scale (1 = extremely unimportant to 4 = extremely important) was used for rating both the agreement and the importance. The ASPAN Pain and Comfort Research Team members agreed to use a 70% consensus as a cutoff to accept or reject expert recommendations. To reject an expert recommendation, there must be a 70% consensus on the 1 = extremely unimportant and 2 = unimportant. To accept an expert opinion, there must be a 70% consensus on the 3 = important and 4 = extremely important. A quasi-anonymity of individual answers was

ensured and no demographics were collected on the electronic REDCap survey.

Study data were collected and managed using REDCap electronic data capture tools hosted at Vanderbilt University Medical Center.¹⁸ REDCap is a secure, web-based application designed to support data capture for research studies, providing: (1) an intuitive interface for validated data entry, (2) audit trails for tracking data manipulation and export procedures, (3) automated export procedures for seamless data downloads to common statistical packages, and (4) procedures for importing data from external sources.

Data Analysis

A 70% benchmark set for acceptance and rejection and considered clinically meaningful. Mean and mode scores were reported for each question as well as range.

Results

See [Tables 1–4](#) to review our results.

Discussion

The Delphi study process was planned to have four rounds to obtain experts' consensus identified as 70% on each of the recommendations. However, 70% consensus was obtained on the second round. Therefore, rounds 3 and 4 were discontinued. The Delphi study was discontinued after the experts reached a consensus (70% consensus on 3 = important and 4 = extremely important).

This Delphi study has identified priorities relevant to perianesthesia nurses for education and competencies. Understanding the impact of pharmacologic and nonpharmacologic agents received 100% consensus in the first round. Providing pain relief for postoperative patients in the PACU is often a first priority. The use of intravenous opioid therapy is common, but perianesthesia nurses must understand dosing and adverse effects. The ability to determine safe opioid titration based on pharmacological properties is necessary to decrease the adverse effects of opioid-induced respiratory depression, unwanted sedation, and

Table 1. Percent Agreement of Respondents on Pain, Comfort Topics, and Competency Skills

Topic	Round 1	Round 2
What pain and comfort topics do you think that are required for perianesthesia nurses to know?		
Pharmacologic agents	100	*
Nonpharmacologic agents	100	*
Potential complications	94.7	*
Patient assessment	94.7	*
Integrative therapies	68.4	94.4
Specialty populations	94.7	*
Pain theory	73.7	*
Comfort theory	84.2	*
What are the pain and comfort competency skills that a perianesthesia nurse should acquire?		
Pharmacologic agents	100	*
Nonpharmacologic agents	94.7	*
Potential complications	100	*
Patient assessment	94.7	*
Integrative therapies	73.7	*
Specialty populations	89.5	*
Pain theory	73.7	*
Comfort theory	57.9	83.3

*Consensus reached in Round 1.

postoperative nausea and vomiting.¹⁹⁻²¹ Assessment of pain must also include factors that may influence dosing such as age, sedation level, respiratory status, tolerance, drug-drug interactions, obesity hypoventilation, and cardiovascular status.¹⁹ When managing postoperative acute pain in patients with a history of chronic pain, perianesthesia nurses must balance appropriate pain management strategies with nonopioid and nonpharmacological interventions.²² Additional education should include the importance of a multimodal approach to pain management using supplementary adjuncts such as nonsteroidal anti-inflammatory medications and acetaminophen.^{19,20} Use of ice, heat, repositioning, and elevating operative extremities are all nonpharmacologic therapies useful to provide comfort to postsurgical patients when not contraindicated. Assisting patients with relaxation techniques such as guided imagery can be instrumental in pain management strategies. Development of comprehensive pain management education, as identified in this study, should include all the previously mentioned components so that perianesthesia

Table 2. Percent Agreement of Respondents for Transfer, Discharge Criteria, and ASPAN Support

Criteria	Round 1	Round 2
What are transfer criteria to the receiving unit?		
Stable vital signs	100	*
Oxygen saturation at baseline	78.9	*
Minimal nausea and vomiting	100	*
Pain level tolerable	94.7	*
Sedation	5.3	100
What are discharge criteria for patients going home?		
Stable vital signs	100	*
Oxygen saturation at baseline	100	*
Minimal nausea and vomiting	89.5	*
Pain level tolerable	100	*
Sedation	10.5	100
What would you like ASPAN to provide to support pain and comfort standard of practice?		
Clinical guideline for each perianesthesia setting	94.7	*

ASPAN, American Society of PeriAnesthesia Nurses.

*Consensus reached in Round 1.

nurses are competent to provide optimal and safe pain management to postanesthesia patients. The panel of experts recommended additional important educational topics including:

- Multimodal analgesia with an emphasis on nonsteroidal agents and acetaminophen to decrease the need for opioids with consideration for the impact of anesthetic agents and alternative therapies
- Management of opioid-naïve patients
- Management of chronic pain patients
- Sedation scales and identification of unwanted sedation
- Different types of pain and associated evidence-based treatment and recommendations
- Considerations for cultural beliefs in pain management
- Peripheral and neuraxial blocks including patient-controlled analgesia or epidural management including patient-controlled epidural analgesia
- Hospital Enhanced Recovery After Surgery (ERAS) protocols for pain management after surgery
- Assessment and care of non-English populations
- Assessment and care of patients with mental disabilities
- Management of patients with diagnosed or undiagnosed obstructive sleep apnea,

altering plan of care as appropriate for pain management including multimodal therapies

- Documentation requirements throughout all phases of perianesthesia care
- Patient education throughout all phases of perianesthesia care.

Priorities identified in this study for discharge and transfer criteria included stable vital signs, baseline oxygen saturation, tolerable pain, and minimized nausea and vomiting. These elements received consensus in the first round and should be part of any standardized handoff between members of the health care team. The perianesthesia nurse must appreciate that most adverse respiratory events occur in the first 24 hours after surgery.^{23,24} This fact underpins the importance of communication on the timing of medications administered, specifically the last dose of opioids. Continued vigilant patient observation and pain assessment should be patient-specific and guide sound clinical decision-making¹⁹ enhanced by effective handoff. Included information of pre-existing cardiac and pulmonary disease, and obstructive sleep apnea,^{24,25} enable the receiving nurse to provide safe and appropriate care. TJC requires documentation of pain assessment as a means of prompting clinicians to assess pain systematically and consistently. Consistency and standardization guide the identification of unrelieved pain and the evaluation of treatment-related change. As the goal of therapy is to alleviate

Table 3. Percent Agreement of Respondents for Policy Guidelines and Special Needs Populations

Policy	Round 1	Round 2
List policies, principles, regulatory, and ethical issues related to pain and comfort practice guidelines:		
Multimodal therapy	94.7	*
Permissive procedure: refer to state and institutional policies	52.6	82.4
TJC: Pain assessment and pain management, including safe opioid prescribing, are identified as organizational priorities for the hospital. (TJC, 2018)	94.7	*
JC: The hospital assesses and manages the patient's pain based on clinical practice guidelines and evidence-based practices and minimizes the risks associated with treatment.	94.7	*
JC: The hospital collects data on pain	36.8	83.3
Patient population	Round 1	Round 2
Special needs patients that require specific perianesthesia pain and comfort nursing care.		
Pediatric patients	100	*
Geriatric patients	94.7	*
Chronic pain patients in acute pain	100	*
Patients with an addiction	94.7	*
Obstetrical patients	68.4	100

TJC, The Joint Commission.
*Consensus reached in Round 1.

pain and improve function, assessment should focus on pain and functional status.²⁶ The panel of experts also recommended additional important educational topics when transferring or discharging patients including:

- Peak plasma effects of opioids
- Sedation level on transfer (eg, Pasero Opioid-induced Sedation Scale no greater than 2 or a

Table 4. Pain and Comfort Expert Panel Demographics

Pain and Comfort Expert Panel Demographics						
Years in Nursing	Years in PACU Nursing	Educational Level	Certification	Work Setting	Current Role	US Region
15-25 = 0	15-25 = 31%	BSN = 8%	Perianesthesia = 84%	Surgical center = 8%	Bedside staff = 16%	NE = 38%
42 = 0	37 = 0	MSN/Masters = 62%	Other = 16%	Community hospital = 8%	Manager/Team leader = 32%	Midwest = 0
26-35 = 31%	26-35 = 38%	Doctorate = 31%		Teaching hospital = 84%	Educator = 44%	SE = 0
36-45 = 69%					CNS = 8%	NW = 0
					Director = 0	SW = 24%
						Central = 38%
						Mountain = 0

PACU, postanesthesia care unit.

1-hour re-evaluation if benzodiazepine reversal was necessary)

- Consider type of receiving units (eg, intensive care unit, inpatient, home)
- Vital signs including oxygen saturation and the need for supplemental oxygen
- Patient education/written instructions that include both the patient and the accompanying responsible individual
- Discharge criteria.

Perianesthesia nursing education for patients being discharged home must include patient and responsible accompanying individual information on the correct use of pain medications, proper storage, and disposal of any unused medications.²² Stable vital signs, baseline oxygen saturation, and a tolerable pain level all received 100% consensus on the first round of this study and should be included in future ASPAN practice recommendations. Providing a pain and comfort guideline for each phase of perianesthesia care was deemed important by 94.7% of the Delphi participants. The panel of experts recommended additional important educational information for nurses including:

- Consideration for different methods of teaching and learning (eg, continuing educational opportunities, webinars, articles, lectures)
- Multidisciplinary evidence-based guidelines related to pain and comfort
- Focus on the impact of different populations: neonatal, pediatric, obstetric, adult, surgical procedures, and patients with special needs.

In 2000, TJC released standards regarding pain assessment and included this component in 2001 when surveying hospitals for compliance.¹⁹ Since then, pain experts have expressed ongoing concern regarding the use of pain intensity as the sole element of a pain assessment.¹⁹ The focus on treatment of patient pain based on a number has led to adverse clinical events including sedation and respiratory depression in hospitalized patients.^{25,27} In March of 2014, the Centers for Medicaid & Medicare Services updated their standards to include monitoring requirements for postoperative patients receiving intravenous opioids. Acceptable monitoring includes vital signs, pain level, respiratory status, and sedation level.²⁸ Results of this study emphasize the need for policies and principles that support organiza-

tional evidence-based practices to minimize risks associated with treatment of pain using multimodal therapies. Including all patient populations was deemed important for specific treatment of pain and provision of comfort care in diverse populations. The panel of experts recommended additional important educational resources for nurses including:

- Access to the American Society for Pain Management Nursing, American Pain Society, and other agencies and accredited organizations' guidelines and position statements on pain, comfort, cognitively impaired patients, cultural sensitivity, communication barriers, and the impact on comorbidities (eg, obesity, respiratory compromise, trauma, cancer, malnourishment)
- Up-to-date information on substance use disorders
- Consideration for the research implications regarding appropriate management of patients with chronic use and opioid dependencies, relationships between preoperative pain goals and use of postoperative opioids, the impact of preoperative teaching on postdischarge care among outpatients, effectiveness of ERAS protocols, effectiveness of ERAS protocols on clinical outcomes, best methods to determining appropriate pain assessment scales, the effects of alternative therapies, and multimodal therapy strategies.

Implications

The Delphi study identified a consensus on topics required for education and competency among perianesthesia nurses including transfer/discharge criteria related to pain and comfort, resources for perianesthesia nurses, policy guidelines, and management of the special needs of perianesthesia patients. Although patient and responsible individual education was recognized as an integral nursing function, there was no consensus as to the specific location or point of care where teaching was most effective. The findings indicated that patient and responsible individual teaching should occur in every perianesthesia setting and that it is important to reinforce the priority of patient safety in pain and comfort management.

Limitations

A limitation of this study was the use of a convenience sample of perianesthesia nurses who were members of the ASPAN. Because of this limitation, the results may not be generalizable.

Conclusion

In conclusion, the results of the study found a consensus on topics required for education and competency among perianesthesia nurses, which includes transfer and discharge criteria related to pain and comfort, resources for perianesthesia nurses, policy guidelines, and the management of the special needs of perianesthesia patients. Although patient and responsible individual education was recognized as integral part of nursing function, there was no consensus as to the specific location for the education to occur. These findings suggest that patient and responsible individual teaching should occur in every perianesthesia setting and that the reinforcement of the priority of patient safety in pain and comfort management

is critical. This information will be used to update and revise the ASPAN Pain and Comfort Clinical Guideline.

Future Priorities

Future studies are needed to identify current recommendations for assessment and interventions for all phases of perianesthesia care. In addition, more research is needed to create practice specific recommendations for various aspects of pain and comfort management in the perianesthesia setting.

Acknowledgments

Thank you to ASPAN for your support and guidance of this project. The authors also acknowledge Linda Beagley, MS, BSN, RN, CPAN, FASPAN, Mary Ellen Bednar, MSN, RN, CPAN, Laura Kaiser, MSN, RN, CAPA, H. Lynn Kane, MSN, MBA, RN, CCRN, Myrna Mamaril, DNP, MSN, RN, CPAN, CAPA, FAAN, FASPAN, Denise O'Brien, DNP, RN, ACNS-BC, FAAN, FASPAN, Melanie Simpson, PhD, RN-BC CNS CPNP, Nancy Strzyzewski, MSN, RN, CPAN, CAPA, Ellen Sullivan, BSN, RN, CPAN, Diane Swintek, MSN, RN, CAPA, Linda Webb, MSN, RN, CPAN, Pam Windle, DNP, RN, NE-BC, CPAN, FAAN, FASPAN, and Linda Ziolkowski, MSN, RN, CPAN.

References

- Mamaril ME, Ross JM, Krenzischek D, et al. The ASPAN's EBP conceptual model: framework for perianesthesia practice and research. *J Perianesthesia Nurs*. 2017;21:157-167.
- Windle PE. Delphi technique: assessing component needs. *J Perianesthesia Nurs*. 2004;19:46-47.
- Theunissen M, Peters ML, Bruce J, Gramke HF, Marcus MA. Preoperative anxiety and catastrophizing: a systematic review and meta-analysis of the association with chronic postsurgical pain. *Clin J Pain*. 2012;28:819-841.
- Coll AM, Ameen JR, Mead D. Postoperative pain assessment tools in day surgery: a literature review. *J Adv Nurs*. 2004;46:124-133.
- Krenzischek DA, Wilson L. An introduction to the ASPAN pain and comfort guideline. *J Perianesthesia Nurs*. 2003;18:228-231.
- Krenzischek D, Wilson L, Newhouse R, Mamaril M, Kane HL. Clinical evaluation of the ASPAN pain and comfort guideline. *J Perianesthesia Nurs*. 2004;19:150-159.
- Agency for Healthcare Research and Quality (AHRQ). *Acute pain management: operative or medical procedures and trauma*. Rockville, MD: AHRQ; 1992.
- Baratta JL, Schwenk ES, Viscusi ER. Clinical consequences of inadequate pain relief: barriers to optimal pain management. *Plast Reconstr Surg*. 2014;134:15S-21S.
- Helmer O. *Analysis of the future: the Delphi method*. Available at: <https://www.rand.org/content/dam/rand/pubs/papers/2008/P3558.pdf>; 1967. Accessed January 5, 2019.
- Asselin M, Harper M. Revisiting the Delphi technique: implications for nursing professional development. *J Nurses Prof Development*. 2014;30:11-15.
- Avella JR. Delphi panels: Research design, procedures, advantages, and challenges. *Int J Doctoral Stud*. 2016;11:305-321.
- McMillan SS, King M, Tully MP. How to use the nominal group and Delphi techniques. *Int J Clin Pharm*. 2016;38:655-662.
- Boukdedid R, Abdoul H, Loustau M, Sibony O, Alberti C. Using and reporting the Delphi method for selecting healthcare quality indicators: a systematic review. *PLoS One*. 2011;6:e20476.
- Mamaril ME, Ross J, Poole EL, Brady JM, Clifford T. ASPAN's Delphi study on national research: priorities for perianesthesia nurses in the United States. *J Perianesthesia Nurs*. 2009;24:4-13.
- Wilkes L. Using the Delphi technique in nursing research. *Nurs Stand*. 2015;29:43-49.
- Kolcaba KY. A taxonomic structure for the concept of comfort. *Image*. 1991;23:237-240.

17. Meskell P, Murphy K, Shaw D, Casey D. Insights into the use and complexities of the policy Delphi technique. *Nurse Res.* 2014;21:32-39.
18. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap) - a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform.* 2009;42:377-381.
19. Polomano RC, Fillman M, Giordano NA, Vallerhand AH, Nicely KL, Jungquist CR. Multimodal analgesia for acute postoperative and trauma-related pain. *Am J Nurs.* 2017;117:S12-S26.
20. Gan T, Epstein R, Leone-Perkins M, Salimi T, Iqbal S, Whang P. Practice patterns and treatment challenges in acute postoperative pain management: a survey of practicing physicians. *Pain Ther.* 2018;7:205-216.
21. Chau EH, Lam D, Wong J, Mokhlesi B, Chung F. Obesity hypoventilation syndrome: a review of epidemiology, pathophysiology, and perioperative considerations. *Anesthesiology.* 2012;117:188-205.
22. Simpson M, Bruckenthal P. The current state of perioperative pain management: challenges and potential opportunities for nurses. *AORN.* 2016;104:S1-S8.
23. Lee L, Caplan R, Stephens L, et al. Postoperative opioid-induced respiratory depression: a closed claim analysis. *Anesthesiology.* 2015;122:659-665.
24. Gupta K, Nagappa M, Prasad A, et al. Risk factors for opioid-induced respiratory depression in surgical patients: a systematic review and meta-analyses. *BMJ Open.* 2018;8:e024086.
25. Jungquist CR, Card E, Charchafieh J, Gali B, Yilmaz M. Preventing opioid-induced respiratory depression in the hospitalized patient with obstructive sleep apnea. *J PeriAnesthesia Nurs.* 2018;33:601-607.
26. The Joint Commission. Approved: new and revised pain assessment and management standards. Available at: https://www.jointcommission.org/assets/1/18/APPROVED_New_and_Revised_Pain_Assessment_and_Management_Standards.pdf; 2018. Accessed January 5, 2019.
27. Jungquist C, Pasero C, Tripoli N, Gorodetsky R, Metersky M, Polomano R. Instituting best practice for monitoring for opioid-induced advancing sedation in hospitalized patients. *Worldviews Evidence-Based Nurs.* 2014;11:350-360.
28. Centers for Medicare & Medicaid Services (CMS). Requirements for hospital medication administration, particularly intravenous (IV) medications and post-operative care of patients receiving IV opioids, 2014. Available at: www.cms.gov/Medicare/Provider-Enrollmentand-Certification/SurveyCertificationGenInfo/Downloads/Surveyand-Cert-Letter-14-15.pdf. Accessed January 5, 2019.

ASPAN 2021 National Conference

CALL FOR PROPOSALS

Proposals are now being accepted for presentations at the

ASPAN National Conference April 25 – 29, 2021 • Orlando, Florida

Lecture topics will be selected for the following categories:

- Clinical
- Pediatrics
- Geriatrics
- New Technology
- Management
- Safety
- Legal / Ethical
- Leadership
- Standards
- Special Populations
- Advanced Critical Care
- Research / EBP
- Pain Management
- Perianesthesia Education
- Preoperative Testing / Assessment
- Preanesthesia Screening
- Quality Improvement / PI

Proposal packet information available on ASPAN's website

Visit www.aspan.org and click: Events / 2021 NC Call for Proposals

Questions? Contact Courtney Papp at the National Office: 877-737-9696 ext. 217 or cpapp@aspan.org

Proposals must be postmarked by May 15, 2020.

