1. Practice Recommendation

Patient Classification/ Staffing Recommendations

Perianesthesia staffing should be based on patient acuity and complexity, census, types of procedures performed, patient flow processes, availability of support resources, staff competence and experience, transitions of care, monitoring needs, and physical facility.[1,2] The perianesthesia registered nurse uses clinical judgment to determine nurse-patient assignments based on these staffing considerations. The safety of both the patient and the healthcare team must be considered in determining safe nurse-patient staffing ratios in any given location.

Research has shown that adequate hospital nurse staffing and nurses with higher levels of education, combined with healthier nurse work environments, are associated with lower hospital mortality, decreased lengths of stay, and decreased readmission rates.[3,4] Failure to rescue rates decrease when there is an increase number of bedside registered nurses with a BSN.[4] Higher numbers of certified nurses correlate with decreased number of patient falls and decreased rates of central line infections.[5,6,7] Based on this evidence, ASPAN supports BSN as an entry into practice, and certification for perianesthesia nurses to promote optimal perianesthesia patient outcomes. The aging workforce, difficulty recruiting, nursing labor shortage, retention, and cost of recruiting remain high with a national RN turnover rate of 22.5%.[8] Inadequate nurse staffing may lead to adverse patient events failing to accurately reflect the needs of the patients recovering from anesthesia.[2] Every effort must be made to support safe staffing in all perianesthesia care units during all phases of care.

Preanesthesia, Phase I, Phase II, and Extended Care are distinct phases of care, not locations of care.

Background

Currently, ASPAN's staffing ratios are based on the best available evidence, expert opinion and consensus. Confounding staffing challenges are phases of care, rapid turnover, constant changes in census, case length accuracy, patient acuity, levels of RN competence, workload, on call hours, and variable shift lengths.

In 2022, Partners for Nursing Staffing Think Tank,[a] with members from the Nurse Staffing Task Force, formed to bring front-line nurses, leaders, quality experts, scientists, and advocates together to address the nursing crisis. The collaboration included leaders from multiple nursing specialty organizations to address staffing shortages and create solutions to develop a sustainable nursing workforce.[10] Five guiding principles were developed to ensure a positive future for the nursing workforce:

1. Safety
    a. Reliable, competent, appropriate number of registered nurses to provide effective, safe, and optimal care to patients and families

[a]Formed in 2018, members included AACN, ANA, AONL, HFMA, & IHI to explore nurse staffing issues.[9]

2. Accountable
    a. Leaders and direct-care nurses are aligned in determining appropriate staffing levels
3. Transformative
    a. Continual change is driven by nursing innovation to optimize staffing levels
4. Equitable
    a. Quality of care does not change based on geographic locations or patient characteristics
    b. Care provided will be equitable, just, and unbiased to meet the unique needs of patients
5. Collaborative
    a. Common goals, equity and shared decision-making allow for working together to provide holistic care to patients and families

Purpose

The ANA suggests that staffing patterns must be individualized to nursing units and concur that patient turnover, or environmental turbulence[1,b] and acuity are important factors in the staffing plan. While there are many variations in perianesthesia practice locations, it remains the responsibility of each healthcare organization to balance patient safety, acuity, census, complexity, case mix, skill mix, and nursing competencies when staffing.[1]

The perianesthesia nurse professional possesses expertise in the care of the patient in the perianesthesia setting. Just as licensed independent practitioners and ancillary members of the healthcare team possess particularized skills and training, perianesthesia nursing professionals possess a unique body of knowledge and expertise in the provision of perianesthesia care. It is ASPAN's position that perianesthesia nursing professionals utilize their specialized knowledge and expertise to assist with the development and implementation of staffing plans. The appropriate number of perianesthesia registered nurses with demonstrated competence, skills, and knowledge to care for the population served must be available to meet the individual needs of patients and families in each phase of perianesthesia care.

[b]It is difficult to prescribe staffing ratios for the Preadmission and Day of Surgery/Procedure units based on wide variations across the country in the role and function of the nursing staff in these units. When considering staffing patterns, patient safety is of highest priority with plans to accommodate patients with high acuity needs.

Recommendations

PREANESTHESIA PHASE

Preadmission

Perianesthesia registered nursing roles, during this phase, focus on assessing the patient and developing a plan of care designed to meet the preanesthesia physical, psychological, educational/health literacy, sociocultural, and spiritual needs of the patient/family.[11,12] The nursing roles also focus on preparing the patient/family for the experience throughout the perianesthesia continuum. Interviewing and assessment techniques are used to identify social determinants of health needs to include actual problems that may require intervention prior to the day of surgery.

Staffing for preadmission units (e.g., preadmission testing, preanesthesia testing, preoperative assessment clinic, preanesthesia assessment unit, preoperative teaching unit) is dependent on patient volume, patient health status and

educational/health literacy needs, discharge planning needs, and required support for preanesthesia/preprocedure interventions.

Day of Surgery/Procedure

Perianesthesia nursing roles, during this phase, focus on review and validation of existing information and completion of preparation of the patient. The perianesthesia registered nurse continues to assess the patient and develops a plan of care designed to meet the physical, psychological, educational, sociocultural, and spiritual needs of the patient/family.

Staffing for Day of Surgery/Procedure

Due to the varied complexities of these units, recommended staffing ratios must be determined by individual facilities based on, but not limited to, the following criteria:

- Patient safety
- Number and acuity of patients (patient characteristics including age, cultural diversity, health literacy and requirements of care based on preoperative interventions and type of procedure)
- Complexity (management of patient acuity) and required nursing interventions
  - Examples include, but are not limited to average time in patient preparation (e.g., physical assessments, education, testing, history completion, patient/family education, preoperative testing, vascular access, completion of required documentation, blood product administration)
  - Assessment and documentation of social determinants of health
  - Medication reconciliation/administration (e.g., antibiotics, sedatives, anxiolytics)
  - Moderate sedation and subsequent monitoring for invasive procedures
  - Procedures (e.g., insertion of invasive lines, regional blocks)
  - Need for additional monitoring
- Additional components of the specific unit (e.g., blending of phases of care and physical layouts)

POSTANESTHESIA PHASE

Phase I Care[c]

The perianesthesia registered nursing roles, during this phase, focus on providing postanesthesia nursing care to the patient in the immediate postanesthesia period and transitioning them to Phase II care, the inpatient setting, or to a critical care setting for continued care.

Two registered nurses, one of whom is a perianesthesia registered nurse competent in Phase I postanesthesia nursing, are in the same room/unit where the patient is receiving Phase I care.[d] The Phase I registered nurse must have immediate access and direct line of sight when providing patient care. The second registered nurse should be able to directly hear a call for assistance and be immediately available to assist. These staffing recommendations should be maintained during "on call" situations

[c]Phase I Care: Laidlaw et al v. Lions Gate Hospital is a landmark case that refers to the Phase I PACU as "the most important room in the hospital," because it "poses the greatest potential dangers to the patient" so that there should be no relaxing of vigilance and there should be constant and total care provided by the nurse.[13]

[d]The intent of this standard is that the qualified Phase I perianesthesia registered nurse, who is providing care to a Phase I patient, is not left alone with the patient at any time. The expectation is that the Phase I perianesthesia registered nurse is at the bedside providing direct patient care. The Phase I nurse must have immediate access and direct line of sight when providing care for a second patient. The second registered nurse should be able to directly hear a call for assistance AND be immediately available to assist. The qualifications of the second registered nurse should reflect patient acuity as well as the number of patients in the Phase I care.

- Staffing considerations include, but are not limited to:
  - Admissions/discharge
  - Bed holds
  - Rapid PACU progression
  - Case length accuracy
  - Meeting the needs of the OR
  - Zero wait time
  - Constant changes in workload
  - Competent staff
  - Skill mix
  - Resources (unit secretary, unlicensed assistive personnel, charge nurse, float nurses)
  - Number of PACU bays
  - Complexity of patients
  - Complexity of cases
- Staffing should reflect patient acuity, nursing competence, and skill mix. In general, a 1:2 nurse-patient ratio in Phase I allows for appropriate assessment, planning, implementation and evaluation for discharge as well as increased efficiency and flow of patients through the Phase I area
- The need for additional Phase I perianesthesia registered nurses and support team members is dependent on the patient acuity, complexity of patient care, patient census, and the physical facility
- This model allows for flexibility in assignments as patient acuity changes
- New admissions should be assigned so that the Phase I perianesthesia registered nurse can devote attention to the care of that admission until critical elements are met (See Class 1:1 One Nurse to One Patient.)
- Staffing patterns should be adjusted, as needed, based on changing acuity and nursing requirements and as discharge criteria are met
- For the patient with isolation requirements, plans must be made to provide a safe environment with recommended staffing ratios maintained based on the acuity of the patient and type of isolation precautions (e.g., negative pressure)
- The perianesthesia registered nurse will maintain appropriate staffing recommendations when planning for transport of patients in or out of the unit (See Practice Recommendation: Safe Transfer of Care: Handoff and Transportation.)

CLASS 1:2 ONE NURSE TO TWO PATIENTS

Examples may include, but are not limited to, the following:

a. Two conscious patients, stable and free of complications, but not yet meeting discharge criteria
b. Two conscious patients, stable and under the age of eight years, with family or competent support team members present, but not yet meeting discharge criteria
c. One unconscious patient, hemodynamically stable, with a stable airway, over the age of eight years and one conscious patient, stable and free of complications
d. Consideration should be made for the developmentally delayed patient taking into consideration psychological age, responses to unfamiliar surroundings, and family involvement[14]

CLASS 1:1 ONE NURSE TO ONE PATIENT

Examples may include, but are not limited to, the following:

a. At the time of admission, until the critical elements are met which include:
   - Report has been received from the anesthesia care provider, questions answered and the transfer of care has taken place
     - Patient has a stable/secure airway**
     - Patient is hemodynamically stable
     - Patient is free from agitation, restlessness, combative behaviors
     - Initial assessment is complete
     - Report has been received from the anesthesia care provider
     - The nurse has accepted the care of the patient

b. Airway and/or hemodynamic instability**
   **Examples of an unstable airway include, but are not limited to, the following:
   - Requiring active interventions to maintain patency such as manual jaw lift or chin lift or an oral airway
   - Evidence of obstruction, active or probable, such as gasping, choking, crowing, wheezing
   - Symptoms of respiratory distress including dyspnea, tachypnea, panic, agitation, cyanosis, etc.

c. Any unconscious patient eight years of age and under
   - A second nurse must be available to assist as necessary

d. Patient with isolation precautions until there is sufficient time for donning and removing personal protective equipment (PPE) (e.g., gowns, gloves, masks, eye protection, specialized respiratory protection) and washing hands between patients. Location dependent upon facility guidelines

CLASS 2:1 TWO NURSES TO ONE PATIENT

Example may include, but is not limited to, the following:

a. One critically ill, unstable patient

Phase II Care

Perianesthesia nursing roles, during this phase, focus on preparing the patient/family for discharge from the facility.

> Two personnel, one of whom is a perianesthesia registered nurse competent in Phase II postanesthesia nursing, are in the same room/unit where the patient is receiving Phase II care.[d] The second person should be able to directly hear a call for assistance and be immediately available to assist. The need for additional registered nurses and support staff is dependent on the patient acuity, age, complexity of patient care, family support, patient census, and the physical facility. These staffing recommendations should be maintained during "on call" situations.

Generally, a 1:3 nurse patient ratio allows for appropriate assessment, planning, implementing care, and evaluation for discharge as well as increasing efficiency and flow of patients through Phase II.

- The need for additional Phase II perianesthesia registered nurses and support team members is dependent on the patient acuity, complexity of patient care, patient census, and the physical facility

- This model allows for flexibility in assignments, as patient acuity is subject to change
- New admissions should be assigned so that the Phase II perianesthesia registered nurse can devote attention, as needed, to appropriate discharge assessment and teaching
- Staffing patterns should be adjusted, as needed, based on changing acuity, nursing requirements, and as discharge criteria are met
- For the patient with isolation (negative or positive) requirements, plans must be made to provide a safe environment with recommended staffing ratios maintained based on the acuity of the patient and type of isolation precautions
- The perianesthesia registered nurse will maintain appropriate staffing recommendations when planning for transport of patients in or out of the unit (See Practice Recommendation: Safe Transfer of Care: Handoff and Transportation.)

CLASS 1:3 ONE NURSE TO THREE PATIENTS

Examples include, but are not limited to:

a. Over eight years of age
b. Eight years of age and under with family present

CLASS 1:2 ONE NURSE TO TWO PATIENTS

Examples include, but are not limited to:

a. Eight years of age and under without family or support healthcare team members present
b. Initial admission to Phase II

CLASS 1:1 ONE NURSE TO ONE PATIENT

Example includes, but is not limited to:

a. Unstable patient of any age requiring transfer to a higher level of care

Extended Care[e]

The nursing roles, in this phase, focus on providing the ongoing care for those patients requiring extended observation/intervention after transfer/discharge from Phase I and/or Phase II care.

Two competent personnel, one of whom is a registered nurse possessing competence appropriate to the patient population, are in the same room/unit where the patient is receiving extended care. The need for additional registered nurses and support staff is dependent on the patient acuity, age, complexity of patient care, family support, patient census, and the physical facility. These staffing recommendations should be maintained during "on call" situations.

CLASS 1:3-5 ONE NURSE TO THREE-FIVE PATIENTS

Examples of patients that may be cared for in this phase include, but are not limited to:

a. Patients awaiting transportation home
b. Patients with no caregiver, home, or support system
c. Patients who have had procedures requiring extended observation/interventions (e.g., potential risk for bleeding, pain management, postoperative nausea and vomiting management, removing drains/lines)
d. Patients being held for a non-critical care inpatient bed

[e] *Appropriate staffing requirements should be met to prioritize safe, competent nursing care for the immediate postanesthesia patient, or the patient needing the highest level of care, in addition to the care of the blended patient population. Patient safety is the highest priority.*

Blended Postanesthesia Care[e]

Perianesthesia units may provide Phase I, Phase II, and/or Extended Care within the same environment.[15] This may require the blending of patients and staffing patterns.

In the blended environment, the perianesthesia registered nurse uses clinical judgment based on patient acuity, nursing observations, and required interventions to determine staffing needs.

Perianesthesia registered nurses will share the data that is utilized to support unit staffing with leadership. It is the responsibility of all perianesthesia registered nurses to ensure that leadership and administration are aware of this practice recommendation and the nuances involved in providing appropriate staffing patterns that balance patient safety, acuity, census, complexity, case mix, skill mix, and nursing competencies when staffing.

REFERENCES

1. American Nurses Association. *Principles for Nurse Staffing.* 3rd ed. ANA; 2020. [Level E5]
2. Bagstaff K. Developing a model for quantifying staffing requirements in the post-anaesthesia care unit. *Nurs Manag.* 2023;30(5):19-25. https://doi.org/10.7748/nm.2023.e2096 [Level M5]
3. Lasater KB, Sloane DM, McHugh MD, Porat-Dahlerbruch J, Aiken LH. Changes in proportion of bachelor's nurses associated with improvement in patient outcomes. *Res Nurs Health.* 2021;44:787-795. https://doi.org/10.1002%2Fnur.22163 [Level E5]
4. O'Brien D, Knowlton M, Whichello R. Attention health care leaders: Literature review deems baccalaureate nurses improve patient outcomes. *Nurs Educ Perspect.* 2018;30(4):E2-E6. https://doi.org/10.1097/01.nep.0000000000000303 [Level E5]
5. Coto JA, Wilder CR, Wynn L, Ballard MC, Webel D, Petkunas H. Exploring the relationship between patient falls and levels of nursing education and certification. *J Nurs Adm*. 2020;50(1):45-51. https://doi.org/10.1097/01.nep.0000000000000303 [Level M5]
6. Coehlo P. Relationship between nurse certification and clinical patient outcomes A Systematic Literature Review. *J Nurs Care Qual*. 2019;35(1):E1–E5. https://doi.org/10.1097/NCQ.0000000000000397
7. Whitehead L, Ghosh M, Walker DK, Bloxsome D, Vafeas C, Wilkinson A. The relationship between specialty nurse certification and patient, nurse and organizational outcomes: a systematic review. *Int J Nurs Stud.*. 2019;93:1-11. https://doi.org/10.1016/j.ijnurstu.2019.02.001
8. Nursing Solutions Incorporated. *2024 NSI National Health Care Retention & RN Staffing Report*. 2024. https://www.nsinursingsolutions.com/Documents/Library/NSI_National_Health_Care_Retention_Report.pdf
9. Partners for Nurse Staffing Think Tank. Nurse Staffing Think Tank: Priority Topics and Recommendations. 2022. https://www.nursingworld.org/globalassets/practiceandpolicy/nurse-staffing/nurse-staffing-think-tank-recommendation.pdf [Level E5]
10. Nurse Staffing Task Force. Nurse Staffing Task Force Imperatives, Recommendations, and Actions. American Association of Critical-Care Nurses and American Nurses Association; 2023. [Level E5]
11. Ross J. Legislating nurse staffing: understanding the issues and reviewing the evidence. *J Perianesth Nurs*. 2010;25(5):319-321. http://doi.org/10.1016/j.jopan.2010.07.006
12. French KS. Transforming nursing care through health literacy ACTS. *Nurs Clin N Am*. 2015;50(1);87-98. https://doi.org/10.1016/j.cnur.2014.10.007
13. Laidlaw v Lions Gate Hospital, 1969 CanLII 704 BC SC. Accessed July 14, 2022. http://canlii.ca/t/gc72p
14. Clifford T. The developmentally and physically challenged patient. In: Schick L, Windle PE, eds. *PeriAnesthesia Nursing Core Curriculum: Preprocedure, Phase I and Phase II PACU Nursing*. 4th ed. Elsevier; 2021:113-117.
15. Godden B. Mixing patients: can this work? *J Perianesth Nurs*. 2011;26(4):281-283. http://doi.org/10.1016/j.jopan.2011.04.066

ADDITIONAL READING

American Association of Critical Care Nurses. *AACN Standards for Establishing and Sustaining Healthy Work Environments: A Journey to Excellence*. AACN; 2005.

American Nurses Association. Nurse staffing. Accessed June 20, 2020. https://www.nursingworld.org/practice-policy/work-environment/nurse-staffing/

American Society of Anesthesiologists. Practice advisory for preanesthesia evaluation: an updated report by the American Society of Anesthesiologists Task Force on Preanesthesia Evaluation. *Anesthesiology.* March 2012;116:522-528. https://doi.org/10.1097/ALN.0b013e31823c1067

American Society of Anesthesiologists. Standards for postanesthesia care. Last amended October 23, 2019. Accessed September 30, 2024. https://www.asahq.org/standards-and-practice-parameters/standards-for-postanesthesia-care

Apfelbaum JL, Silverstein JH, Chung F, et al. Practice guidelines for postanesthetic care: an updated report by the American Society of Anesthesiologists Task Force on Postanesthetic Care. *Anesthesiology*. 2013;118:291-307. https://doi.org/10.1097/ALN.0b013e31827773e9

Atkins DL, Berger S, Dugg JP, et al. Part II: Pediatric basic life support and cardiopulmonary resuscitation quality: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2015;132:18(2). https://www.doi.org/10.1161/CIR.0000000000000265

Blake N. The healthy work environment standards: ten years later. *AACN Adv Crit Care.* 2015;26(2):97-98. https://doi.org/10.4037/NCI.0000000000000078

Clifford T. Perianesthesia nurse-sensitive indicators. *J Perianesth Nurs*. 2014;29(6):519-520. https://doi.org/10.1016/j.jopan.2014.08.001

DeWitt L. Licensed practical nurses in the PACU. *J Perianesth Nurs.* 2009;24(6):356-361. https://doi.org/10.1016/j.jopan.2009.10.004

Godden B. Nursing-sensitive indicators: their role in perianesthesia care. *J Perianesth Nurs*. 2012;27(4):271-273. https://doi.org/10.1016/j.jopan.2012.05.007

GovTrack. H.R. 2083 (114th): Registered nurse safe staffing act of 2015. Accessed September 30, 2024. https://www.govtrack.us/congress/bills/114/hr2083

Halfpap E, Bracy K, Cornwell MA. PACU acuity. *J Perianesth Nurs.* 2013;28(3):e6. https://doi.org/10.1016/j.jopan.2013.04.017

Iacono M. Perianesthesia staffing ... thinking beyond the numbers. *J Perianesth Nurs*. 2006;21(5):346-352. https://doi.org/10.1016/j.jopan.2006.07.009

Grissinger M. Drawn curtains, muted alarms, and diverted attention lead to tragedy in the postanesthesia care unit. *P&T*. 2016;41(6):344-345.

Kasprak J. California RN staffing ratio law. OLR Research Report. Connecticut General Assembly website. February 10, 2004. Accessed September 30, 2024. https://www.cga.ct.gov/2004/rpt/2004-R-0212.htm

Mamaril ME, Sullivan E, Clifford TL, Newhouse R, Windle PE. Safe staffing for the post anesthesia care unit: weighing the evidence and identifying the gaps. *J Perianesth Nurs*. 2007;22(6):393-399. https://doi.org/10.1016/j.jopan.2007.08.007

Reiter KL, Harless DW, Pink GH, Mark BA. Minimum nurse staffing legislation and the financial performance of California hospitals. *Health Serv Res*. June 2012;47(3 Pt 1):1030-1050. https://doi.org/10.1111/j.1475-6773.2011.01356.x

White C, Pesut B, Rush KL. Intensive care unit patients in the postanesthesia care unit: a case study exploring nurses' experiences. *J Perianesth Nurs.* 2014;29(2):129-137. https://doi.org/10.1016/j.jopan.2013.05.014

Wong M. Recent death of 17-year old from unmonitored tonsillectomy should never have happened. Physician-Patient Alliance for Health and Safety website. Accessed June 20, 2020. https://ppahs.org/2013/02/recent-death-of-17-year-old-from-unmonitored-tonsillectomy-should-never-have-happened/

Young G, Zavelina L, Hooper V. Assessment of workload using NASA task load index in perianesthesia nursing. *J Perianesth Nurs*. 2008;23(2):102-110. https://doi.org/10.1016/j.jopan.2008.01.008

This Practice Recommendation was reviewed and updated at the October 2023 meeting of the Standards Strategic Work Team in Cherry Hill, NJ