



# ACCREDITATION STANDARDS

## Patient Care

### POST-ANESTHESIA CARE

All patients who have received general anesthesia, regional anesthesia, monitored anesthesia care and/or IV procedural sedation and analgesia shall receive care in a post-anesthetic care unit (PACU). Patients who have received IV procedural sedation and analgesia may be admitted to phase II PACU as determined by the anesthesiologist.

The anesthesiologist(s) should have overall medical administrative responsibility for the PACU.

**Note:** Non-hospital facilities providing pediatric services shall also comply with the National Association of PeriAnesthesia Nurses of Canada (NAPAN) standards for care of the pediatric patient.

#### Definitions

<b>discharge scoring system</b>	Universally recognized tool for the successful indication of patient readiness to transition to the next phase in recovery from anesthesia (e.g. Modified Aldrete, Post Anesthetic Discharge Scoring System (PADSS)).
<b>extended observation phase</b>	Occurs directly after phase II and focuses on preparing the patient for discharge to home or discharge to overnight stay.
<b>normothermia</b>	Core temperature between 36°C and 38°C.
<b>post-anesthesia phase I</b>	Occurs directly after the surgery/procedure and the administration of sedation/analgesia and/or anesthetic agents/techniques. Patients who have undergone general and/or regional anesthesia require phase I care immediately following cessation of anesthesia.
<b>post-anesthesia phase II</b>	Occurs directly after phase I. Patients who have been discharged from phase I care and patients who have undergone IV procedural sedation and analgesia require phase II care.
<b>unintended perianesthesia hypothermia (UPH)</b>	Core temperature of less than 36°C.

**PACU staffing supports the provision of safe post-anesthesia patient care and promotes a safe post-anesthesia environment**

## INDICATORS:

**General**

- Two registered nurses\* are present in the PACU at all times when a patient is receiving care—this minimum staffing requirement is observed at all times even when there may be only one patient
  - \*See phase I RN staffing and phase II RN staffing sections below for qualification requirements
- Nurse-to-patient ratios observed meet or exceed the minimum requirements\*
  - \*See phase I RN staffing, phase II RN staffing, and extended observation/overnight stay staffing sections for minimum ratio requirements
- Additional staffing levels are based upon but not limited to:
  - number of patients
  - patient age
  - patient acuity
  - invasiveness of the surgical procedure
  - type/technique of the anesthesia administered
  - consensus between the facility administrator and charge-nurse regarding the staffing levels needed to provide safe patient care
- The anesthesiologist remains at the facility and immediately available while the patient is intubated and is in attendance for extubation
- The most responsible physician (anesthesiologist, surgeon) remains at the facility until the patient meets documented pre-determined discharge criteria

**Phase I RN staffing**

- Two registered nurses, both competent in post-anesthesia care,\* are present in the PACU at all times where the patient is receiving phase I level of care—this minimum staffing requirement is observed at all times
  - \*Post-anesthesia competency is defined in the NHMSFP [Human Resources](#) standard
- One-to-one (1:1) nurse-to-patient ratio levels are observed upon admission to phase I until the patient is assessed and confirmed to have a patent airway, be hemodynamically stable and transfer communication received from the anesthesiologist
- One-to-one (1:1) nurse-to-patient ratio levels are observed when the patient is physiologically unstable, requires complex care (e.g. patient with artificial airway), or when the patient's status has regressed
- One-to-one (1:1) nurse-to-patient ratio levels are observed for pediatric patients eight years of age or younger without family or competent support staff present

**Phase II RN staffing**

- Two registered nurses, one whom is competent in post-anesthesia care,\* must be present in the PACU at all times where the patient is receiving phase II level of care—this minimum staffing requirement is observed at all times
  - \*The second RN is not required to have completed approved postgraduate critical care/post-anesthesia recovery room nursing education (see NHMSFP [Human Resources](#) standard)
- One-to-two (1:2) nurse-to-patient ratio levels are observed upon admission to phase II until the patient is assessed and confirmed to be hemodynamically stable
- One-to-two (1:2) nurse-to-patient ratio levels are observed for pediatric patients eight years of age or younger without family or competent support staff present
- One-to-three (1:3) nurse-to-patient ratio levels, at minimum, are observed when:
  - the patient is hemodynamically stable and progressing towards meeting discharge criteria
  - the patient is over the age of eight years
  - the patient is eight years of age or younger with family or support staff present (in addition to the minimum RN staffing levels required)

**Extended observation and/or overnight stay staffing**

- Two nurses, both competent in post-operative care,\* are present in the extended observation and/or overnight stay area at all times where the patient is receiving care—this minimum staffing level is observed at all times
  - \*Extended observation/overnight stay staff competency is defined in the NHMSFP [Overnight Stay](#) standard
- A total of two nurses, one registered nurse (RN), plus one RN or licensed practical nurse (LPN) are present when one to five patients are receiving extended observation/overnight stay care
- A total of three nurses, two RNs, plus 1 RN or 1 LPN, are present when six to 10 patients are receiving extended observation/overnight stay care

**The PACU environment provides the necessary equipment****INDICATORS:**

- Each phase I bed is equipped with the following as a minimum:
  - cardiac monitoring
  - blood pressure monitoring
  - pulse oximetry
  - suction including suction tips and catheters
  - oxygen including nasal cannulas, masks, oral airways
  - bag/valve/mask device
- Each phase II bed is equipped with the following as a minimum:
  - blood pressure monitoring

- suction including suction tips and catheters
- oxygen including nasal cannulas, masks, oral airways
- Each extended observation and/or overnight stay bed is equipped with the following as a minimum:
  - vital sign monitoring equipment
  - suction including suction tips and catheters
  - oxygen including nasal cannulas, masks, oral airways
  - nurse call bell
- The following equipment, as a minimum, is readily available in the PACU:
  - oral/nasal airways
  - stethoscope
  - otoscope/ophthalmoscope
  - iv solutions, catheters and supplies
  - medications
  - dressings and surgical supplies
  - thermoregulation methods (e.g. convective warming devices, warmed blankets)
  - emergency cart

**Patient assessment, monitoring and health-care team communication supports the delivery of safe and quality phase I care**

INDICATORS:

- The patient is accompanied from the OR to the PACU by an RN and the anesthesiologist
- The process for transferring a patient from the OR to the PACU is well defined and includes direct verbal communication between the anesthesiologist and the PACU nurse accepting the patient. Care is not handed over until the anesthesiologist and PACU nurse are assured that the patient care be safely observed and cared for in the PACU
- Hand-off communication is standardized and includes but is not limited to:
  - patient name and age
  - procedure performed
  - type of anesthesia/sedation
  - pertinent medical history
  - medications given
  - allergy status
  - perioperative course including any complications, unusual or adverse events
  - vital signs, drains, dressing, operative site
  - fluid balance including fluids administered and estimated blood/fluid loss
  - post-operative plan

- A patient may be fast-tracked to phase II at the discretion of the anesthesiologist/most responsible physician
- Patient suitability for fast-tracking to phase II is documented by the anesthesiologist/most responsible physician
- Post-operative orders are written and client specific
- Pre-printed orders, if used, are made patient specific by adding the name of the patient, making any necessary changes to the pre-printed order to reflect the individual needs of the patient and signed by the physician
- Patients are assessed and vital signs measured upon arrival to PACU (see Appendix A)
- Patients are continuously assessed and vital signs monitored every 15 minutes at a minimum (see Appendix A)
- Patients with obstructive sleep apnea (OSA) or suspected OSA risk are continuously monitored in accordance with the facility's PACU OSA protocol which is modified by the anesthesiologist, if necessary
- Patients are monitored for UPH and warming measures implemented to maintain normothermia (see Appendix C)
- Readiness for transfer to phase II is based upon an objective discharge scoring system and not on a specified period of time (see Appendix D)
- Minimum discharge score requirements are met before transferring a patient from phase I to phase II
- Patients are assessed and vital signs measured prior to discharge from phase I (see Appendix A)

**Patient assessment, monitoring and health-care team communication supports the delivery of safe and quality phase II care**

INDICATORS:

- Patients are continuously assessed and vital signs monitored every 30 minutes at a minimum (see Appendix B)
- Patients are monitored for UPH and warming measures implemented to maintain normothermia (see Appendix C)
- Readiness for discharge home or transfer to overnight stay is based upon an objective discharge scoring system and not on a specified period of time
- Minimum discharge score requirements are met before discharging or transferring a patient from phase II to home or overnight stay (see Appendix D)
- Patients are assessed and vital signs measured prior to discharge from phase II (see Appendix B)

**Patient assessment, monitoring and health-care team communication supports the delivery of safe and quality extended observation/overnight stay care**

## INDICATORS:

- The patient is accompanied from the phase II to the extended care/overnight stay area by an RN
- Hand-off communication is standardized and includes but is not limited to:
  - patient name and age
  - procedure performed
  - type of anesthesia/sedation
  - pertinent medical history
  - allergy status
  - perioperative course including any complications, unusual or adverse events
  - post anesthesia course including vital signs, drains, dressing, operative site and medications given
  - fluid balance including fluids administered and estimated blood/fluid loss
  - post-operative plan
- Patients are assessed and monitored, at minimum, in accordance with established post-operative care plans
- A documented call rota for anesthesia service and the surgical specialty of any overnight stay patient is in place
- Facility written policy and procedures are in place for transfer to hospital if patient status changes

**PACU records ensure consistent and informed care**

## INDICATORS:

- A unified medical record is maintained for every patient in which all components (e.g. medical history, laboratory and imaging reports, surgical reports, consultations etc.) are gathered into one file, in one location
- The medical record is complete, up to date and includes documentation of the date and time of transfer to PACU and all assessments, monitoring and interventions including their effect.

**Appendix A: Patient care assessment – phase I****On admission and a minimum of every 15 minutes (more frequently if clinically indicated)**

- Respiratory
  - Airway patency, airway adjuncts, respiratory rate, breath sounds, oxygen therapy
- Pulse oximetry

- Continuous O<sub>2</sub> saturation (SpO<sub>2</sub>) monitoring
- Cardiovascular
  - Continuous cardiac monitoring
  - Blood pressure
  - Pulse rate and regularity
- Temperature
  - On admission and every 15 minutes until normothermic then hourly until discharge
- Neurological/neurovascular/neuromuscular
  - Level of consciousness
  - Neuromuscular function
  - Neurovascular assessment of distal pulse, sensation, color, temperature, capillary refill and movement (vascular surgery; limb surgery; back surgery; iv regional anesthetic and axillary nerve blocks)
  - Dermatome sensory level (spinal/epidural anesthesia)

**On admission and as clinically indicated**

- Pain, nausea and vomiting
  - Assessment, management and response to treatment
- Intake and output
  - Intravenous therapy including location of line(s), condition of IV site(s) and the amount, type and rate of solution(s) infusing
  - Output from tube(s), catheter(s), drain(s) and voiding, as indicated
- Surgical site, dressings and drains
  - Condition of visible incisions and dressings
  - Drainage tube(s), catheter(s) and drain(s) including type, patency, security, drainage and installations

**Appendix B: Patient care assessment – phase II****On admission and a minimum of every 30 minutes (more frequently if clinical indicated)**

- Respiratory
  - Respiratory rate, breath sounds, oxygen therapy
  - O<sub>2</sub> saturation
- Cardiovascular
  - Blood pressure

- Pulse rate and regularity
- Temperature
  - Hourly until discharge
- Neurological/neurovascular/neuromuscular
  - Level of consciousness
  - Neuromuscular function
  - Neurovascular assessment of distal pulse, sensation, color, temperature, capillary refill and movement (vascular surgery; limb surgery; back surgery; iv regional anesthetic and axillary nerve blocks)
  - Dermatome sensory level (spinal/epidural anesthesia)

**On admission and as clinically indicated**

- Pain, nausea and vomiting
  - Assessment, management and response to treatment
- Intake and output
  - Intravenous therapy including location of line(s), condition of IV site(s) and the amount, type and rate of solution(s) infusing
  - Urine output and voiding
- Surgical site, dressings and drains
  - Condition of visible incisions and dressings
  - Drainage tube(s), catheter(s) and drain(s) including type, patency, security, drainage and installations

**Appendix C: Maintenance of normothermia**

Prevention of unintended perianesthesia hypothermia (UPH) and maintenance of normothermia are key priorities in the prevention of surgical site infection.

The following should be considered when maintaining perianesthesia normothermia:

- identify risk factors for UPH
- measure temperature on arrival to phase I and at minimum every 15 minutes until patient is normothermic
- assess temperature at least once per hour until discharge to ensure maintenance of normothermia
- maintain normothermia with warm blankets, minimizing skin exposure, socks and head coverings
- correct hypothermia using a convective warming system



**Appendix D: Discharge scoring system examples****Modified Aldrete scoring system (NAPAN, 2014)**

Category	Description of status	Aldrete score
Respirations	Able to deep breathe and cough freely	2
	Dyspnea or limited breathing	1
	Apneic	0
O <sub>2</sub> Saturation	Able to maintain O <sub>2</sub> saturation > 92% on room air	2
	Requires supplemental O <sub>2</sub> to maintain SpO <sub>2</sub> > 90%	1
	O <sub>2</sub> saturation < 90% even with supplemental O <sub>2</sub>	0
Circulation	BP +/- 20% pre-op value	2
	BP +/- 20–50% pre-op value	1
	BP +/- > 50% pre-op value	0
Level of Consciousness	Awake and oriented	2
	Wakens with stimulation	1
	Not responding	0
Movement	Moves 4 limbs on own	2
	Moves 2 limbs on own	1
	Moves 0 limbs on own	0

**Post-anesthetic discharge scoring system (PADSS) (NAPAN, 2011)**

Category	Description of status	PADSS score
Vital Signs	Within 20% range of pre-op value	2
	20–40% range of pre-op value	1
	> 40% range of pre-op value	0
Ambulation	Steady gait/no dizziness	2
	Ambulates with assistance	1
	Not ambulating/dizziness	0
Nausea & Vomiting	Minimal, treated with PO medications	2
	Moderate, treated with parenteral medications	1
	Continues after repeated treatments	0

Category	Description of status	PADSS score
Pain	Acceptable to patient (PO medications)	2
	Acceptable to patient (parenteral medications)	1
	Pain not controlled/not acceptable to patient	0
Surgical Bleeding	Minimal/no dressing changes required	2
	Moderate bleeding	1
	Severe bleeding	0

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