SWEDISH MEDICAL CENTER

NEUROSCIENCE SURGERY PATIENT: POSTOPERATIVE MANAGEMENT

Clinical Job Aid	
Approved: January 2017	**Next Review:** January 2020
Clinical Area: Neuroscience Surgical Unit (3-East and 5-East)	
Population Covered: Adult neurosurgical patients	
Campus: Cherry Hill	**Implementation Date:** October 2009

Related Policies, Procedures, and Protocols:

Lumbar Drainage Device: Set-up and Management
Pain Management
Pain Management: Acute Pain in PACU
Procedural Sedation: Adult
TeleICU Department Structure
VTE Prophylaxis Perioperative Adult Risk Assessment
Wound Care: Complex

Purpose

To outline the nursing management of the postoperative neurosurgical patient.

Responsible Persons

Registered nurses are responsible for overall management; nurse technicians and nursing assistants-certified (NAC) as appropriate to role and scope of practice.

Responsible Person	STEPS
RN, Nurse Tech, NAC	**PRIOR TO THE PATIENTS ARRIVAL ON THE UNIT** 1. An RN on the receiving unit obtains a patient report from the PACU RN. 2. An RN, nurse technician, or NAC prepares the room for the patient, making sure equipment is in place specific to the patient's needs (pumps, PCA, IV poles, suction set up, oxygen flow meters, SCDs,[5-IVB, 7-IVB] slider boards, and/or safe patient handling equipment).
RN, Nurse Tech, NAC	**ARRIVAL OF THE PATIENT** 1. Transport personnel remain with the patient until receiving unit personnel are at the bedside to assume responsibility for the care of the patient. Unit staff assists with transfer of the patient from PACU stretcher to bed. 2. Verify patient identification. 3. Orient the patient (and family and friends if appropriate) to the room, staff, call light, bed controls, information on room white board, and therapeutic devices such as SCDs,[5-IVB, 7-IVB] IV pumps, and lumbar drains.[6-IVA]

	UNIT STANDARD FOR POSTOPERATIVE VITAL SIGNS AND NEURO CHECKS
RN, Nurse Tech, NAC	1. Obtain and record vital signs and neuro checks as indicated below, unless ordered otherwise by the LIP. a. Temperature, pulse, respiration, blood pressure, oxygen saturation, and neuro checks upon arrival to the unit.[2-VB, 4-VB, 5-IVB, 7-IVB] b. Pulse, respiration, blood pressure, and neuro checks are monitored as frequently as necessary based on the RN's assessment of the patient's condition. **Minimum monitoring:** Pulse, blood pressure, and respiratory rate every 15 minutes x 2, every 30 minutes once, and every 60 minutes once. Temperature, pulse, blood pressure, respiratory rate, and neuro checks are then monitored every 4 hours thereafter throughout the patient's stay.[2-VB, 4-VB,5-IVB, 7-IVB] 2. Notify the LIP of the following: • Temperature greater than 38.5° C (101.3° F) • Pulse less than 50 beats per minute (BPM) or greater than 110 BPM • Respiratory rate less than 10 or greater than 24 breaths per minute • Systolic BP less than 90 or greater than 180 mmHg • Diastolic BP greater than 110 mmHg • Pertinent neurological findings .[2-VB, 4-VB, 5-IVB, 7-IVB]
	INITIAL POSTOPERATIVE ASSESSMENT
RN	1. Upon arrival to the unit, perform and document the following assessment: • Pertinent neurological status • Respiratory status (respiratory rate, rhythm and use of accessory muscles, lung sounds, supplemental oxygen use, saturation, cough, production of sputum) • Initial pain assessment • Circulation, function/movement, and sensation of affected limb(s) as indicated by type of surgery and/or anesthesia • Condition and location of dressings and/or drains and tubes, noting and documenting presence of drainage (amount, color, consistency). • Set up drains or tubes according to orders, or unit protocol (such as lumbar drainage). [4-VB,5-IVB, 6-IVA] • Fluid status (intake and output) is recorded at a minimum of every 8 hours. • Patient safety such as fall risk factors, and skin integrity are assessed upon initial arrival and every shift.
	ONGOING ASSESSMENT AND CARE
RN	1. Complete and document assessment according to SMC standards and as the patient's condition warrants . 2. Ongoing pain assessment is based on interventions for pain management and the *Pain Management* protocol.[4-VB] 3. Keep the patient NPO until fully alert. Progress diet per orders and as patient tolerates. If patient remains NPO, ice chips are given *only* if ordered by the LIP. 4. Consider potential airway compromise related to surgical location (such as post anterior cervical discectomy ACDF patients) and initiate nursing swallow screen if applicable.[2-IVA] 5. Contact LIP for urine output less than 240 ml in an eight hour period.

RN	**NOTE: For pituitary tumor resection surgeries, specific orders for monitoring I&O and specific gravity will be ordered**.[5-IVB, 7-IVB] 6. A routine bladder scan for post void residual (PVR) is to be done: • After the first void (after arrival on 5-East) • First void after urinary catheter discontinued • When there are signs/symptoms of urinary retention (discomfort, distention, passing small frequent amounts of urine) Notify the provider if PVR is 300 ml or greater.[1IVA] 7. Dressings may be reinforced and saturated dressings may be changed by the RN for assessment purposes; after assessment information is obtained the RN contacts the LIP if appropriate after the assessment.
RN	**RESPIRATORY MANAGEMENT** 1. Assess respiratory status for evidence of shortness of breath, dyspnea, tachypnea, decreased breath sounds, excessive secretions / inability to handle oral secretions, adventitious sounds, stridor, cough, decreasing oxygen saturation and/or chest pain.[4-VB] 2. Supervise sustained deep breathing every 1-2 hours until patient is able to perform independently.[4-VB] 3. Instruct in and supervise the use of the incentive spirometer (IS) every hour while awake until the patient is able to perform this exercise independently (may be contraindicated in some patients such as a transsphenoidal approach (TSA) pituitary tumor resection). Document use of the incentive spirometer in the medical record.[6-IVA] 4. Patients ordered to have centralized oxygen saturation monitoring are placed on the Masimo monitoring device for transmission and monitoring by eICU. 5. For increased monitoring of respiratory status, the RN, based on his/her clinical judgment and a discussion with the charge nurse, may initiate use of the MP-30 (Rover).
RN	**ACTIVITY** Listed below are the postoperative mobilization standards for all neurosurgery patients unless otherwise ordered . The goal of mobilization is to get the patient up out of bed and mobilized as soon as condition allows. Orders are checked for contraindications and for orders regarding collars and braces.[5-IVB] 1. Assist with turning and positioning at least every 2 hours until the patient is able to reposition self, or as ordered by LIP. Maintain the head in neutral alignment. (ICP can increase when head is turned, flexed, or extended.)[2-VB, 5-IVB, 7-IVB] 2. Dangle at edge of bed and progress to chair, bedside commode and/or bathroom with assistance for the first post-op evening. 3. POD #1: Up in a chair for meals. If the patient remains NPO, up in chair three times daily. Continue with up to bedside commode and/or bathroom with assistance (room ambulation). Document activity and patient tolerance. . 4. POD #1 and 2: Progress ambulation from inside of room to hallway. 5. If not already ordered, consider involving OT/PT and discuss with LIP.

RN	**BOWEL CARE** Due to opioids used in the management of postoperative pain and the decrease in the patient's normal function and level of activity, bowel care is essential. 1. Check with the patient regarding usual pattern of bowel movement. If the patient's usual bowel pattern is daily or every other day, a bowel movement should occur by POD #2.[4-VB, 5-IVB, 7-IVB] 2. Determine bowel function by assessment of bowel tones. 3. Advance diet as tolerated and/or ordered. 4. Begin prescribed bowel care medications as ordered and when the patient is able to take orally. Notify the provider if there are no orders for bowel medication. *Do not* wait until the patient complains or shows signs and symptoms of abdominal distention, bloating or constipation.

Supplemental Information

Assessment is the key to positive patient outcomes in the neurosurgical patient.

Excessive noise is to be avoided on the neurosurgical unit. Keep this in mind during your shift and make an attempt to decrease any unnecessary noise.

Other policies, procedures, and protocols (e.g., *Pain Management*, *Pain Management: Acute Pain in PACU*; *Procedural Sedation: Adult*; *Wound Care: Complex*; *VTE Prophylaxis Perioperative Adult Risk Assessment; Lumbar Drainage Device: Set-up and Management*) and unit/department standards are followed in conjunction with these guidelines. LIP orders that deviate from these guidelines always take priority.

Patients admitted to 3-East and 5-East who have neurosurgeons as the primary physician may also have neurosurgery fellows, PA-Cs (physician assistants), and ARNPs (advanced registered nurse practitioner). Check orders and/or check with the charge nurse regarding on-call and coverage schedules and providers. A call schedule and coverage signage is posted next to the patient locator board.

Maintaining the patient's temperature control is essential in the neurosurgery patient. . Postoperative temperature parameters are strictly adhered to. Contact the provider for temperatures greater than 38.5° C (101.3° F) if no parameters are noted in the orders.

Charge nurses are responsible for communication of these guidelines to temporary staff and float staff.

References

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STAKEHOLDERS

Author/Contact

Pat Blissitt, PhD, ARNP-CNS, CCRN, CNRN, SCRN, CCNS, CCM, ACNS-BC,
Neuroscience Clinical Nurse Specialist

Expert Consultants

Marci Mann, BSN, RN, Manager, 5-East Neuro/Epilepsy, Cherry Hill
Heather Martin, MSN, RN, CNRN, SCRN, Neuroscience Clinical Nurse Specialist