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Owner	Amanda Moomey: Director Medical Staff Services
Department Area	Medical Staff
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References	PAMC/MS

Deep Sedation

Historical Number:

POLICY - PAMC/MS 951.139

PURPOSE/SCOPE

This policy applies to administration of deep sedation. Providence Alaska Medical Center (PAMC) recognizes the different clinical settings and situations where sedation is administered. Sedation practices throughout the organization are monitored and evaluated by the Department of Anesthesia.

The goal of deep sedation is to achieve a medically controlled state of depressed consciousness from which the patient is not easily aroused.

RNs may not administer medication for deep sedation.

POLICY

In keeping with the philosophy and mission of Providence Health & Services, Anesthesia Standards of Care apply to any area in the medical center where deep sedation is administered. There is a separate policy for moderate sedation.

DEFINITIONS/ACRONYMS

A. **Minimal sedation (anxiolysis)**: A drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, respiratory and cardiovascular functions are unaffected.

B. **Moderate sedation:** A drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. Note, reflex withdrawal from a painful stimulus is not considered a purposeful response. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is maintained.

C. **Deep sedation:** A drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patient may require assistance in maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

D. **Rescue:** Rescue of a patient from a deeper level of sedation than intended is an intervention by a practitioner proficient in airway management and advanced life support. The qualified practitioner corrects adverse physiologic consequences of the deeper-than intended level of sedation (such as hypoventilation, hypoxia and hypotension) and returns the patient to the originally intended level of sedation.

E. **General Anesthesia:** Consists of general anesthesia or major regional anesthesia. It does not include local anesthesia. General anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.

F. **Obstructive Sleep Apnea (OSA):** A condition where there is reduced muscle tone in the airway leading to periodic, partial, or complete airway obstruction during sleep.

G. **Immediately Available: Within the department or has the ability to arrive within 1 to 5 minutes, whichever is less (e.g., Code Blue Team responders).**

H. **Physical Status Classification of the American Society of Anesthesiologists (ASA):**

    1. **ASA 1** – A normal healthy patient
    2. **ASA 2** – A patient with mild systemic disease
    3. **ASA 3** – A patient with severe systemic disease
    4. **ASA 4** – A patient with severe systemic disease that is a constant threat to life
    5. **ASA 5** – A moribund patient who is not expected to survive without the operation
    6. **ASA 6** – A declared brain-dead patient whose organs are being removed for donor purposes
    7. **ASA E**- Added to a score if the procedure is considered an emergency

I. **Sedation Scoring System** – Modified Aldrete Score for adults (see attachment A) or the N-PASS Sedation Scoring for Neonates.

J. **Capnography** - Refers to the comprehensive measurement and display of CO2 (Carbon dioxide) including end tidal inspired CO2 and the CO2 wave form which is referred to as a capnogram. Capnography depicts respiration which includes all three components of respiration: metabolism, transport, and ventilation.

K. **Universal Protocol-** The three principal components, per Joint Commission, of the Universal Protocol include a preprocedure verification, site marking (if applicable), and a time out.

L. **Procedural Time Out:** Includes verifying correct patient using 2 patient identifiers, correct procedure, correct site (marked if applicable), consent matches the procedure, safety precautions reviewed, medications labeled, and, if applicable, antibiotics, radiologic/lab studies, implants, irrigation fluids are available.

M. **Ramsey Score:** A type of sedation scale utilized to establish the desired level of sedation in a quick, safe manner.

SPECIAL CONSIDERATIONS

A. Patients not covered under this policy:
    1. Intubated patients or emergently intubated patients
    2. Patients receiving medication either by direct injection, ingestion or patient controlled analgesia (PCA) for control of pain or anxiety, which is not related to the medical procedure,
    3. Patients receiving IV medication for treatment of seizures or alcohol withdrawal, and
    4. Patients who are emergently intubated.

B. Parents or legal guardians will be encouraged, when appropriate, to stay with and participate in their child's care, as they feel comfortable before, during and after the procedure.

C. The Sedation Scoring Criteria (Modified Aldrete Score or Ramsey Sedation Scale) cannot be changed or modified without the approval of the Anesthesia Department.

D. Adverse medication reactions are reported to the pharmacy and an UOR is completed.

E. In emergent situations consent is implied.

F. For patients with known or suspected obstructive sleep apnea (OSA), special considerations related to post procedural monitoring and discharge education is recommended due to the residual effects of sedatives and strong analgesics that can further suppress the patient's already reduced chemoreceptor respiratory responses to hypoxia and hypercapnia. Although there is not a universally accepted criterion for patient monitoring post sedation, it is recommended that patients with OSA can be monitored longer than a non-OSA patient after receiving the last dose of sedation. As applicable, patients are instructed to wear their CPAP/ BiPAP post discharge.

PROCEDURES

A. **Equipment:** The following procedural and emergency equipment is immediately accessible and available where sedation is performed, including:
    1. A positive pressure oxygen delivery system capable of administering greater than 90% oxygen for at least 60 minutes and
    2. A bag valve mask.
    3. Oral and nasal airways in various sizes and appropriate for patient age.

4. Suction and suction catheters of appropriate size.
5. Automated blood pressure cuff
6. Cardiac monitor with appropriate size pads.
7. Pulse oximeter with appropriate size probes.
8. Capnography with appropriate nasal cannula or mask adapters.
9. Emergency crash cart, with defibrillator, at the location where the procedure is being performed.
10. Flashlight
11. Mobile telephone if no other reliable two-way communication is available.
12. Easily accessible reversal agents if applicable

B. **Pre-sedation responsibilities**

1. **Physician** who is prescribing the sedation is responsible for:
    a. Maintaining credentials and competence for deep procedural sedation,
    b. Assessing the adequacy of equipment and personnel to meet sedation/ anesthesia requirements,
    c. Obtaining informed consent for deep sedation,
    d. Ordering medications including dose and route of administration,
    e. Assessing NPO status and employ strategies to prevent aspiration,
    f. Performing a history and physical (H & P) that is completed immediately prior to sedation or between 24 hours and 30 days with an interval note prior to sedation. An H & P includes documentation of:
        i. Allergies and reactions to medications and anesthetics
        ii. Current medications and co morbid conditions
        iii. Indication for deep procedural sedation
        iv. Airway assessment (Mallampati)
        v. Physical Exam
    g. Assigning ASA status,
    h. Documenting planned level of sedation, and the route **the sedation medications are to be administered.**
    i. Reassessing the patient immediately prior to sedation start
2. **Registered Nurses (RN)** and/or Cath Lab Technologists, assisting in the sedation is responsible for:
    a. Maintaining appropriate education and training requirements set forth by Providence Alaska Medical Center, including completion of appropriate competencies,
    b. Current BLS and ACLS, PALS, NRP as appropriate for population served,

c. One individual capable of establishing a patent airway and positive pressure ventilation must be present. This may be:
    i. A physician who has current ACLS, NRP/NALS, or PALS training or equivalent core competencies
    ii. RN who has current ACLS, NRP/NALS, and/or PALS training and who has completed the deep sedation competency-based education within the last year
    iii. Respiratory Therapist
    iv. CRNA
d. Verifying physician's **deep** sedation privileges,
e. Acquiring all monitoring and resuscitation equipment listed above,
f. Obtaining and labeling of medications ordered by physician,
g. Ensuring appropriate access for medication administration (e.g. functioning intravenous line),
h. Ensuring reversal medications are available as applicable,
i. Verifying allergies and reactions to medications and anesthetics,
j. Obtaining or verifying a pre-sedation set of vital signs are completed to include- height, weight, temperature, pulse, blood pressure, oxygen saturation, level of consciousness, respirations (adequacy and number), and baseline cardiac rhythm,
k. Documenting pre-sedation Modified Aldrete Score,
l. Completing pre-procedure checklist,
m. Verifying free and unimpeded access to the patient's chest,
n. Confirming a safe mode of transportation is available for post sedation discharge,
o. Confirming appropriate adult supervisor will be with the patient for a minimum of 6 hours following sedation recovery. If adult supervisor is not available discuss patient disposition with the physician.

C. **Intra-procedural responsibilities**

1. **Physician** who is prescribing the sedation is responsible for considering Anesthesia consultation for patients with an ASA score of III or higher per ASA airway algorithm.
2. **Registered Nurses** (RN) and Cath Lab Technologists, assisting in the sedation are responsible for:
    a. Performing the procedural time out with the MD and patient (when applicable) present,
    b. Monitoring the patient in collaboration with the attending physician who is responsible for the care of the patient
        i. Vital signs including pulse, respirations (adequacy and number), blood pressure, presence of capnography, oxygen saturation,

level of consciousness, cardiac rhythm and/ or arousability **(Sedation Scale such as Ramsey can be utilized**) are documented every 5 minutes during the procedure.

ii. Frequent blood pressure measurements in pediatric patients receiving sedation can cause agitation and may be deferred per physician discretion.

iii. When sedation is being performed by an anesthesiologist or CRNA, intraprocedural medication and vital sign measurement are documented by the anesthesiologist or CRNA.

c. The RN will monitor the patient's airway, respiratory status, and level of consciousness during the intra-sedation and the immediate post-sedation period of deep sedation. **This individual will have no other responsibilities.**

d. The Cath Lab Technologist is considered to be under the direct supervision and observation of the attending physician and may monitor and provide care in this phase however a RN will perform pre and post sedation monitoring, care and teaching,

e. RN and Cath Lab Technologists may not administer medications if the intent is to deeply sedate the patient and will comply with rulings of the Alaska State Board of Nursing.

f. Documenting any change in patient condition or therapies utilized throughout procedure.

D. **Post-sedation responsibilities**

1. **Physician** who is prescribing the sedation is responsible for: Post- Procedure Documentation: The sedating physician dictates his/her procedure note is entered/ dictated directly into the patient's EMR.

2. **Registered Nurses** (RN) is responsible for:

a. Post Sedation Monitoring to include:

i. Obtain an initial set of vital signs immediately post sedation including pulse, blood pressure, oxygen saturation, level of consciousness, arousability, and respirations (adequacy and number),

ii. Assignment of Modified Aldrete/N-PASS Score,

iii. A surveillance temperature,

iv. Vital Signs and Modified Aldrete/N-PASS **to continue every 5 minutes until patient is arousable to verbal and light tactile stimulation and stable,Then every 15 minutes X 2 and 30 minutes X 1for the first hour, per unit routine, or until patient awake, conversing, and back to baseline Modified Aldrete/N-PASS** (once the N-Pass is back to baseline, the patient may then be discharged from post anesthesia care),

v. Then per unit routine or until discharged.

vi. **If reversal agents are used, the patient is monitored for a minimum of two hours after the final dose of any reversal agent.**

b. For patients that are discharged or transferred from the post-sedation area: All patients must meet the following criteria prior to patient discharge/transfer from the post-sedation area:

i. A minimum of two [2] hours has lapsed after the administration of reversal agents to ensure patients do not become re- sedated after reversal effects have abated.

ii. The duration of monitoring is individualized depending on the level of sedation achieved, overall condition of the patient, and the nature of the intervention for which sedation was administered.

iii. OSA patients may need to stay longer than a non OSA patient. The OSA patient is observed in an unstimulated environment as much as possible, to establish the ability to maintain their baseline oxygen level.

iv. Modified Aldrete Score of 18 or higher or return to pre-sedation score or upon discretion of sedating physician

c. Transferring Patients:

i. Patient must be transferred in a gurney or crib in accordance to intrahospital transfer policy 957.006

ii. Pediatric patient may be carried as condition warrants

iii. Hand-off communication is given to receiving unit

d. Discharging Patient to Home:

i. The patient and their responsible adult care provider understand all the home instructions, to include but not limited to:

- Procedure post care
- Sedation post care
- Obstructive Sleep Apnea (If applicable)
- Continued risk for respiratory compromise could be up to a week post procedure
- CPAP/BiPAP use is crucial during the first week post procedure

ii. The patient may be discharged once discharge criteria is met. If the discharge criteria is not met, exceptions may be made by the sedating physician or a physician of equal competence.

iii. Discharge Criteria:

- Modified Aldrete > or equal to 10 or a return to the patient's baseline
- Protective reflexes are intact and the patient exhibits no signs of respiratory distress
- The patient is not suffering from nausea, vomiting, or dizziness
- A minimum of 30 minutes has elapsed since the end of the procedure
- The patient is accompanied by a responsible adult
- The patient has a responsible adult staying with them for 24 hours

iv. If the patient does not have a responsible adult who can remain with the patient, the patient will be cared for in an observation unit for 6 hours following sedation recovery (OSA patients may need to be monitored longer). The patient may then be discharged home if Modified Aldrete has a score of 18 or who has returned to their pre procedure Modified Aldrete and meets discharge criteria.

v. The patient will be instructed not to drive, operate any heavy equipment, or make any important decisions for the next 24 hours after the last dose of sedating agent.

3. Per regulatory requirements, RN/Cath Lab Techs need the core competencies for moderate sedation upon hire and annually.
4. Sedation QI processes are utilized to track quality initiatives agreed upon by the department of anesthesiology.

A. REFERENCES

B. **Regulatory and / or Accreditation**
The Joint Commission, Comprehensive Accreditation Manual (2014), Provisions of Care, PC.03.01.01, PC.03.01.03, PC.03.01.05, PC.03.01.07, PI.01.01.01, RC.02.01.03

C. **Policy**
Policy PAMC 970.005 - Adverse Drug Reactions Management and Reporting
Policy PAMC 957.006 - Intrahospital Transporting of Patients
Policy-Discharge/transporting of patients

D. **Other**
American Society of Anesthesiologists Task Force on Sedation and Analgesia by Non-Anesthesiologists: "Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists", Anesthesiology 2002; 96: 1004-17
CMS guidelines 42CFR582.52
Alaska Board of Nursing Advisory Opinion Nurse Administration of Sedating and Anesthetic Agents 2007
C90125 Moderate and Deep Sedation

Lippincott. (2014). Sleep Apnea Patient Care, PACU
Up To Date. (2014). Postoperative management of adults with obstructive sleep apnea
Perianesthesia Nursing Standards, Practice Recommendations and Interpretive Statements 2015-2017. Practice Recommendation 10- Obstructive Sleep Apnea in the Adult Patient

ATTACHMENTS

Attachment A: Modified Aldrete Scoring system

HISTORY: ** NEW ** ***This policy replaces, in part, PAMC/MS 951.090 "Sedation Policy".***

Attachments

A: Modified Aldrete Scoring System

Approval Signatures

Step Description	Approver	Date
Administrative Signature	Ella Goss: Chief Exec PAMC & Cao Cah [GG]	03/2022
Administrative Signature	Daniel Safranek	02/2022
General Staff Review (30 days)	General Staff Review: (30 days) [IC]	02/2022
MEC	Medical Executive Committee: MEC [IC]	02/2022
Bylaws	ByLaws Committee [IC]	02/2022
Owners	Sheri Clovis: Rgnl Dir Qual Regulatory Svcs	02/2022

Standards

No standards are associated with this document