I. POLICY

Southern Illinois Healthcare (SIH) sets uniform requirements and minimum standards for the use of moderate sedation for therapeutic, diagnostic, or surgical procedures outside the operating room. All SIH patients who receive moderate sedation for a procedure are provided as safe a level of care as possible consistent with, or in excess of, the minimum recognized standards for such procedures.

II. DEFINITIONS

American Society of Anesthesiologists (ASA) Classification System

- Class I – normal, healthy patient with no medical problems and good exercise tolerance able to walk up a flight of stairs or a level city block with no distress; does not include patients at the extreme of ages or psychiatric disorders including anxiety

- Class II – normal, healthy patient at the extremes of age with no medical problems and good exercise tolerance; able to walk up a flight of stairs or a level city block with no distress; patient with a psychiatric disorder; patient with mild systemic disease; or patients with mild to moderate effects on a single organ system due to such things as pregnancy, tobacco use (without COPD), well controlled HTN, asthma, or diabetes

- Class III – patient with severe systemic disease with some functional limitations often affecting more than one organ system; examples include, but are not limited to, stable angina, prior MI, morbid obesity, chronic renal failure; patients may be able to walk one city block on a level surface or climb one flight of stairs, but may stop often to rest

- Class IV – patient with an incapacitating systemic disease that is a constant threat to life; examples include, but are not limited to, poorly controlled or end stage disease such as oxygen dependent COPD, unstable angina, symptomatic congestive heart failure, recent cerebrovascular accident, or multiple end stage organ diseases; patients unable to walk one city block on a level surface

- Class V – moribund patients not expected to survive twenty-four (24) hours with or without the procedure; examples include, but are not limited to, sepsis with unstable blood pressures or coagulopathy; patients are almost always hospitalized and terminally ill

The four (4) levels of sedation/analgesia as defined by the American Society of Anesthesiologists (ASA):

- Minimal sedation (anxiolysis) – a drug induced state during which patients respond normally to verbal commands; cognitive function and coordination may be impaired; ventilatory and cardiovascular functions are unaffected

- Moderate sedation (conscious sedation) – a drug induced depressed level of consciousness during which a patient responds purposefully to verbal commands, either alone or accompanied by light
tactile stimulation. No interventions are required to maintain a patent airway and spontaneous ventilation is adequate. Cardiovascular function is maintained.

- 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. A patient may require assistance with maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

- Anesthesia – a drug induced loss of consciousness which patients are not arousable, even by painful stimulation. Anesthesia consists of general anesthesia, spinal, or regional anesthesia. The ability to maintain independent ventilation 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 or neuromuscular function. Cardiovascular function may be impaired. Planned anesthesia is performed by a board eligible or certified Anesthesiologist or Certified Registered Nurse Anesthetist in compliance with facility-specific guidelines.

Adequate cardiopulmonary function – the ability to maintain adequate spontaneous ventilations, blood pressure, and pulse

Protective airway reflexes – the ability to maintain a patent airway and handle secretions without aspiration

PSA – Procedural Sedation and Analgesia

III. RESPONSIBILITIES

1.0 Medical Executive Committees delegate authority for the oversight, responsibility and performance improvement of the moderate sedation program.

2.0 Anesthesia Medical Director/designee develops standards of practice for sedation in collaboration with the appropriate medical staff, quality, and other departments that provide the service.

3.0 Quality Department collaborates with the facility-specific Clinical Performance Improvement Committee (CPIC) and the Anesthesia Medical Director/designees to oversee the continuous quality improvement process for assessing outcomes in patients receiving sedation.

4.0 Medical Staff Office, with medical staff oversight, oversees the appointment and reappointment of moderate sedation privileges for all privileged practitioners within SIH.

5.0 Department Managers/Staff Development/Human Resources, with medical staff oversight, oversee specific RN responsibilities and competencies.

IV. EQUIPMENT/MATERIALS

1.0 Monitoring equipment and supplies
   1.1 EKG monitor
   1.2 Blood pressure monitor
   1.3 Continuous pulse oximeter
   1.4 Oxygen administered via nasal cannula or oxygen mask
   1.5 End tidal CO₂ monitoring
   1.6 IV fluids

System
2.0 Emergency equipment is immediately accessible to every location where moderate sedation is administered and includes at least the following:
   2.1 Code cart with defibrillator
   2.2 Suction equipment
   2.3 Emergency reversal agents
      A. Naloxone (Narcan) for opioids
      B. Flumazenil (Romazicon) for benzodiazepines

V. PROCEDURE

1.0 Neonatal sedation, deep sedation of any age group and anesthesia may only be provided by a member of the Anesthesia Department.

2.0 Moderate sedation is only performed in the following SIH facility departments:
   2.1 MHC: Emergency, Endoscopy, Interventional Radiology, Cath Lab, Intensive Care Unit, Surgery, Cardiology
   2.2 HH: Emergency, Endoscopy, Interventional Radiology, Intensive Care Unit, Surgery, Cardiology
   2.3 SJMH: Emergency, Imaging, Endoscopy/Procedure room, Surgery

3.0 Pediatric sedation may only be accomplished in the Emergency Department by ER physicians with approved credentials.

4.0 Neuromuscular blocking agents are only used in emergency procedures and in conjunction with intubations of the trachea or when ventilated in ICU.

5.0 Informed Consent
   5.1 Informed consent is completed as indicated in SY-PT-017: Consent or Authorization for Surgical Treatment, Diagnostic and/or Therapeutic Procedure.
      A. A separate anesthesia consent is not required for moderate sedation as indicated in Procedure 12.0 of the consent policy.
      B. Physician completes informed consent prior to sedation and the procedure.

6.0 Physician performing the procedure:
   6.1 Holds privileges to perform procedure
   6.2 Evaluates the patient prior to the procedure to determine that the patient is a candidate for moderate sedation by:
      A. Performing a baseline history and physical
      B. Reviewing allergies and previous adverse drug reactions
      C. Reviewing current medications
   6.3 Performs and documents the pre-anesthesia assessment with ASA score and anesthesia plan
   6.4 Completes order for medication, including dosage and route of administration
   6.5 Evaluates the airway immediately prior to induction
   6.6 Follows moderate sedation monitoring equipment
   6.7 Directs and provides emergency intervention if necessary
6.8 Completes procedure note immediately after completion of procedure or per facility-specific policy.

7.0 Registered Nurses (RNs):

7.1 Patients appropriate for RN administered moderate sedation are selected by using the Physical Status Classification of the American Society of Anesthesiologists (ASA Classification System).

A. Patients classified as ASA I or II are appropriate for RN administration.

B. Patients classified as ASA III are assessed on an individual basis by a physician to determine appropriateness for RN administration.

C. Patients classified as ASA IV or V are not appropriate for RN administered moderate sedation and have an anesthesia provider responsible for care.

1) Exclusions
   a) Intubated/ventilated patients in the Intensive Care Unit receiving continuous sedation infusion
   b) Cardiac Catheterization patients attended by cardiologist

7.2 RNs are limited to administering medications for moderate sedation that are reversible pharmacologically.

A. Acceptable medications are

1) Ketamine (ED only)
2) Morphine
3) Fentanyl
4) Hydromorphone
5) Lorazepam
6) Diazepam
7) Midazolam
8) Naloxone
9) Flumazenil
10) Propofol (Diprivan)
   a) May only be administered in the Emergency Department
   b) May not exceed 200mg
11) Etomidate
   a) May only be administered in the Emergency Department
   b) May not exceed 20mg

7.3 With the exception of intubated/ventilated patients in the ICU, continuous infusion of sedation medications or use of automated delivery devices are not permitted during moderate sedation.

7.4 Functions in collaboration with the physician

A. Is assigned exclusively the administration of medications for moderate sedation under the physician’s supervision and constant monitoring of the patient

1) Is familiar with the effects of the drugs used
2) Administers sedation medications in accordance with the 5 rights of medications, and in accordance with skills competencies
B. Has no other responsibilities during moderate sedation and does not engage in any other tasks
C. Arranges for supplemental oxygen to be administered for any patient receiving sedation or analgesia
D. Knows how to recognize airway obstruction and correct it

7.5 Has documented competency of the clinical knowledge skills and technology employed in the care of patients receiving moderate sedation

7.6 Performs a nursing assessment prior to the procedure

7.7 Establishes and maintains IV access

7.8 Documents vital signs, cardiac rate and rhythm, end tidal CO₂ and an evaluation of the patient’s condition in the Preanesthesia Assessment form prior to start of procedure.

8.0 Credentialing and Competency for physicians

8.1 Qualified individuals are trained in professional standards and techniques to administer pharmacologic agents to predictably achieve desired levels of sedation and to monitor patients carefully in order to maintain them at the desired level of sedation.

8.2 Included in the qualifications of individuals providing moderate sedation are:

A. Competency based education
B. Training and experience in evaluating patients prior to performing moderate sedation
C. Recognizes complications of sedation and analgesia sedation for each type of agent being administered
D. Possesses the competency to assess, diagnose, and intervene in the event of complications and to institute appropriate interventions in compliance with orders or facility-specific guidelines
E. Practitioners who have appropriate credentials and are permitted to administer moderate sedation
   1) Have current AHA approved ACLS Certification
   2) Have current AHA approved PALS Certification (as appropriate)
   3) Are qualified to rescue patients from deep sedation
F. Understands the principles of oxygen delivery, transport and uptake, respiratory physiology, as well as understands and is competent in the use of oxygen delivery devices
G. Knows how to call for medical assistance in each location where they administer sedation/analgesia
H. Successful completion of ASA web based test with 100% score

8.3 Practitioners Credentialing:

A. Current ACLS certification, successful completion of ASA web based test with 100% score, and granted facility-specific moderate sedation privileges or
B. Practitioners with core privileges that include sedation analgesia and management of cardiovascular system (Anesthesiology or Certified Registered Nurse Anesthetist)

8.4 Practitioner Re-Credentialing

A. Is required at 2-year intervals and is satisfied when core privilege requirements are met
B. Review of the practitioner’s past performance of moderate sedation, including but not limited to data from the hospital QA/QI department
9.0 Credentialing and Competency for Registered Nurses (RN)

9.1 Registered Nurse (RN): New Hire/Core Credentialing

A. Current ACLS certification

B. Completion of an approved SIH sedation analgesia curriculum with test. Curriculum includes:
   1) ASA classifications
   2) Basic dysrhythmia recognition
   3) Knowledge of basic pharmacology of administered medications
   4) Airway management
   5) Population specific responses

C. Observation of 3 moderate sedation procedures and participation in 3 moderate sedation procedures

9.2 Registered Nurse (RN): Re-Credentialing

A. Current ACLS certification

B. Completion of approved SIH sedation analgesia curriculum

C. Re-Credentialing is required annually

10.0 General Overview:

10.1 This policy applies to the use of moderate sedation in all hospital departments and areas except patients who:

A. Are given deep sedation

B. Are in the Intensive Care Unit, mechanically ventilated, and receiving sedation as part of the daily plan of care and for whom no procedure is planned

C. Have pain control issues, such as chronic pain (cancer), acute pain (sickle cell crisis) and for whom no procedure is planned

D. Are receiving comfort or terminal care

E. Require emergency procedures (i.e., immediate threat to life, limb or eyesight)

F. Have obstructive sleep apnea (OSA); those patients are handled only by anesthesia staff

10.2 Any moderate sedation case requires compliance with the established NPO guidelines in SY-AN-009 when possible.

A. Exceptions to SY-AN-009: NPO guidelines require completion of the "Waiver of NPO" form with the reason for the waiver documented in the medical record before proceeding.

10.3 An anesthesia consult is considered for patients with previous adverse events with sedation or anesthesia, who have chronic pain, or are opioid tolerant or have a history of substance abuse, alcoholism, psychiatric disorders, are morbidly obese, have obstructive sleep apnea, or have physical features or a medical history which suggest a difficult airway.

10.4 Patients are evaluated prior to moderate sedation and/or the procedure. A history and physical is in the patient's medical record prior to the procedure.

A. A nurse may collect this information in collaboration with the physician.

10.5 It is the responsibility of the procedural physician to provide back-up personnel who are experts in airway management, emergency intubation, and advanced cardiopulmonary resuscitation are available.
10.6 A qualified professional capable of managing complications is present in the facility and remains in the facility until the patient is stable.

11.0 Pre-procedure
11.1 RN completes a pre-procedure nursing assessment appropriate to the department.
11.2 Physician completes a pre-anesthetic assessment appropriate to the department.
11.3 Physician obtains written consent for procedure and moderate sedation using Consent to Operation or Other Medical Procedures form.
   A. Form is signed by patient/representative, physician, and witness(es) and is placed in the medical record.
11.4 Patients receiving moderate sedation have continuous IV access until the patient has recovered.
   A. Venous access is maintained until discharge criteria are met.
11.5 RN reviews history and physical, pre-anesthetic assessment, informed consent forms, and discharge plan for completeness of documentation.
11.6 RN confirms the physician orders for dose, rate, etc. of the sedatives.
   A. All medications are titrated to patient response with each dose recorded in the patient’s medical record.
      1) Administration of all medications is titrated against the patient’s response to the dose under the direct order of a physician.
11.7 RN initiates SIH Strict Falls Precautions.
11.8 RN confirms the presence of nearby emergency resuscitation equipment.
11.9 RN assembles equipment.

12.0 Intra-procedure
12.1 An RN is assigned exclusively the administration of medications for moderate sedation under the physician’s supervision, constant monitoring of the patient, and does not engage in any other tasks.
12.2 Medications to provide moderate sedation/analgesia are given on the direct order of a physician who has been trained to perform procedures requiring sedation and who is physically present during the initial and continued administration of moderate sedation.
12.3 Medications may be administered by a practitioner who has been privileged, or an RN who has successfully completed competency assessment (and the medication is within administration authority) and administers the medication under the direct supervision of said credentialed practitioner.
12.4 The RN continually assesses:
   A. Vital signs
   B. Level of consciousness
   C. Skin condition
   D. Quality of respirations
   E. Level of comfort

12.5 Monitoring
   A. Following the administration of any medication to induce a state of moderate sedation or to reverse a state of moderate sedation, vital signs are documented every five (5) minutes
until the completion of the procedure and for no less than a minimum of thirty (30) minutes.

Documentation includes:
1) Pulse rate and rhythm
2) Blood pressure
3) Respiratory rate
4) Oxygen saturation
5) End Tidal CO₂ monitoring

B. Level of consciousness (LOC) is documented:
1) At the beginning of the procedure
2) Following the administration of moderate sedation
3) When a change is noted during the course of the procedure
4) At the end of the procedure

C. Significant variations in physiologic parameters are reported to the procedure physician immediately. These include, but are not limited to:
1) A ≥ 20% variation in BP
2) A clinically significant variation in pulse
3) Dyspnea, apnea, hypoventilation, or a ≥ 5% decrease in oxygen saturation from pre-procedure baseline
4) Respirations < 8 breaths per minute
5) The inability for patient to maintain own airway
6) Diaphoresis
7) Arrhythmia
8) Unresponsiveness to stimuli
9) Pain and/or other untoward or unexpected patient responses

D. Emergency resuscitative equipment is immediately available on site.
1) SY-NG-028: Code Blue is followed as warranted.

13.0 Post-Procedural Process: The patient’s post-procedure clinical needs are assessed prior to the patient receiving moderate sedation.

13.1 If the patient receives moderate sedation in a procedural area where recovery requires a transfer, the intra-procedure monitoring RN gives report to the receiving RN and documents the following:
A. All relevant information regarding the procedure
B. Vital signs monitored
C. All medications and fluids administered
D. Any complications or adverse events
E. Name of the nurse receiving report

13.2 Following the administration of any medication to induce a state of sedation, vital signs including End Tidal (ET) CO₂ are taken and recorded every 5 minutes for no less than 30 minutes before patient is transferred to unit.
13.3 Unless otherwise directed by a physician directly involved in the care of the patient, patients who receive narcotic reversal agents and/or benzodiazepine reversal agents have extended post-procedure observations.
   A. Discharge is delayed until sufficient time (at least 2 hours) has elapsed to evaluate that re-sedation will not occur.

13.4 Unanticipated adverse events or the use of any reversal agent requires vital signs and ET CO\textsubscript{2} q5 minutes x 30 minutes, then vital signs q15 minutes for 1.5 hours or as needed per patient condition.
   A. Report any adverse event to the facility Patient Relations Department.

13.5 The physician and House Supervisor is immediately notified of:
   A. Variations in blood pressure or pulse of 20% or more
   B. Drop in oxygen saturation to 5 points below the pre-procedural baseline
   C. Signs of respiratory distress
   D. Signs of decreasing level of consciousness
   E. Need to maintain the airway mechanically
   F. Inability to rouse the patient or
   G. Any other untoward or unexpected patient response
   H. Any ET CO\textsubscript{2} change of ±10 (ten) points from the baseline (baseline defined as lying down, prior to medication administration)

13.6 In the absence of stability and recovery as noted above, or if unwanted deep sedation occurs, the patient is transferred to the post anesthesia care unit (PACU) or appropriate area.
   A. The procedural physician must consult the on call MDA for the given facility of his/her intent to transfer care of the patient to the PACU and the reason for the transfer.
   B. Qualified personnel trained in moderate sedation accompany the patient.
   C. A verbal report of procedures done and sedation measures is given to the receiving department and personnel who provide continuation of care and monitoring.

14.0 Discharge

14.1 For discharge criteria, refer to SY-OR-005: Discharge from Anesthesia and Surgical Services.

15.0 QA/QI

15.1 The Quality Department collects and analyzes data of patients undergoing moderate sedation to identify opportunities for improvement.

15.2 Those cases with significant events that are related to practitioner or nurse competency are forwarded to the Peer Review Committee (PRC) or Nursing Managers to
   A. Analyze the individual case
   B. Identify problems and determine the proper action
   C. Assess the effectiveness of these actions, and
   D. Communicate relevant information to appropriate medical personnel
VI. DOCUMENTATION

1.0 Brief History and Physical with ASA and appropriate informed consent is documented in the medical record.

2.0 Pre-anesthesia assessment is documented in the medical record.

3.0 The patient’s response to care provided throughout the sedation-supported procedure is documented in the patient’s medical record.

4.0 A procedure note is written by the responsible physician immediately at the conclusion of the procedure.

VII. CHARGES

1.0 Charge according to current department and institutional guidelines.

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### Additional Approvals and Review/Revision Dates

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<td>SJ-NG-159: Conscious Sedation; MC-AN-101: Moderate Sedation/Analgesia; HH-AD-009: Moderate Sedation</td>
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<td></td>
<td>Michael Shipman, DO</td>
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<td>Josh Miksanek, MD</td>
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