HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Anesthesia Care		
Document:	Multidisciplinary Policy and Procedure		
Title:	Conscious Sedation for Diagnostic and Surgical Procedures		
Applies To:	All Medical and Nursing Staff		
Preparation Date:	January 05, 2025	**Index No:**	AN-MPP-001
Approval Date:	January 19, 2025	**Version :**	4
Effective Date:	February 19, 2025	**Replacement No.:**	AN-MPP-001(3)
Review Date:	February 19, 2028	**No. of Pages:**	19

1. PURPOSE:

1.1 To provide guidelines for patient management of all procedures requiring the use of sedation.

2. DEFINITIONS:

2.1 **Sedation** – is produced by the administration of pharmacologic agents. The patient to physical stimulation and/or command. The following are definitions for the four levels of sedation and anesthesia.

2.1.1 **Minimal Sedation (Anxiolytics)** – a drug – induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilator and cardiovascular functions are unaffected.

2.1.2 **Moderate Sedation/Analgesia (Conscious Sedation)** – a drug – induced depression of consciousness during which patients respond 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 usually maintained.

2.1.3 **Deep Sedation/Analgesia** – drug – induced depression of consciousness during which patient cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

2.1.4 **Anesthesia** – consists of general anesthesia and spinal or major regional anesthesia. It does not include local anesthesia. General anesthesia is a drug – induced loss of consciousness during which patient are not arousable, even by painful stimulation. The ability to independently maintain ventilator 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. NB: The parameters of this policy relate to moderate and deep sedation definitions.

3. POLICY:

3.1 It is the policy at Maternity and Children Hospital, Hafer Al Batin that these guidelines apply to all locations in the hospital where moderate and deep sedation is administered in MRI unit, Delivery Room, Operating Room but not in Intensive Care Units.

3.2 Only licensed independent practitioners (Physician) that are trained in professional standards and techniques to administer pharmacologic agents to predictably achieved desired levels of sedation and to monitor patients carefully in order to maintain them at the desired level of sedation, will provide sedation.

3.3 A pre – sedation assessment is performed and documented in the medical record for each patient before administering moderate to deep sedation.

3.4 The patient will be re – evaluated immediately before moderate or deep sedation is administered.

3.5 The ordering licensed independent practitioner (LIP) will review the risks, options and benefits of the selected agents with the patient, parent or guardian and document the patient, parent or guardian's

informed consent in the chart. The nurse must verify the presence of this documentation before administration of the sedative. Documentation may consist of a written note in the chart by the LIP.

3.6. A pre – sedation plan of care will be documented by the LIP in the patient's medical record prior to administration of sedation.

3.7 The LIP administering moderate and deep sedation must have privileges for clinical administration of this category of drugs.

3.8 The LIP administering moderate sedation must have the appropriate privileges and be qualified to rescue patients from deep sedation and must be competent to manage a compromised airway and to provide adequate oxygenation and ventilation.

3.9 The LIP administering deep sedation must have the appropriate privileges and be qualified to rescue patients from general anesthesia and must be competent to manage an unstable cardiovascular system as well as a compromised airway and inadequate oxygenation and ventilation including ACLS Certification.

3.10 Patients requiring moderate and deep sedation and who meet the criteria for patient selection will be monitored by a registered nurse trained in basic EKG/ arrhythmia, current BCLS certification and has satisfactorily completed the moderate and deep sedation medication education program, in addition to technician or nurse assisting the LP.

3.10.1 Monitoring will include:

3.10.1.1 Physical Assessment
3.10.1.2 Blood Pressure
3.10.1.3 Heart Rate
3.10.1.4 Respirations
3.10.1.5 Oxygen Saturation
3.10.1.6 Cardiac Monitoring
3.10.1.7 Level of Consciousness (Sedation Scale)

3.11 Non – Anesthetist LIP is allowed to give mild to moderate sedation for Pediatric patients only by oral medication. In case intravenous sedation is needed for procedures, the anesthetist should attend the case.

3.12 The patient will be continuously monitored and reassessment will be documented every 5 minutes until the procedure is completed. Emergency resuscitation equipment will be readily available.

3.13 Patient Selection:

3.13.1 Candidates for moderate and deep sedation are those patients who must undergo painful or difficult procedures where cooperation and/or comfort will be difficult or impossible without pharmacologic support.

3.13.2 Patient must be screened for potential risk factors for any pharmacologic agents selected. This decision on which agent to use, must be based on the goals of sedation, type of procedure and condition and age of the patient.

3.13.3 Patients will be screened by ordering LIP for risk factors utilizing the ASA Physical Status Classification.

3.13.4 Patients considered appropriate for moderate and deep sedation are ASA Class I and Class II.

3.13.5 Patients who fall into ASA Class III or Class IV present special problems which may necessitate a consultation by a member of the Anesthesia Department.

3.13.6 If the nurse disagrees with classification, Anesthesia personnel will be consulted and agreement among the RN, Anesthesia Personnel and LIP on appropriate monitoring and who should be responsible will be determined and agreed upon by those involved.

4. PROCEDURE:

4.1 Before Administering Sedation:

4.1.1 The sedation practitioner or designee (nurse practitioner, physician assistant, referring physician) will perform and document history and physical examination within 30 days of the procedure that includes at a minimum:

4.1.1.1 Identification of pre – existing medical conditions.
4.1.1.2 Past and present medication history.
4.1.1.3 Recent history of substance abuse.
4.1.1.4 Assessment of mental status.

4.1.1.5 Examination specific to the procedure proposed.
4.1.1.6 Plan of sedation care (e.g., moderate sedation).

4.1.2 On the day of (and before) the procedure, the sedation practitioner will evaluate and document factors that may increase patient risk related to sedation/analgesia including:
4.1.2.1 Airway or facial abnormalities which might interfere with intubations or mask ventilation. Past difficult intubations or sedations sleep apnea or severe snoring.
4.1.2.2 Severe GERD or gag reflex problems, which could increase aspiration risk.
4.1.2.3 Drug allergies.
4.1.2.4 Current medications, relevant medical/surgical history and last PO intake.

4.1.3 Informed consent shall be obtained for all procedures involving sedation/ analgesia. During this discussion all anesthesia options and risks should be discussed with the patient family/guardian, (if applicable) prior to administration of the sedation/analgesia. Consent must be obtained and documented in all areas when sedation/ analgesia is administered. As part of the consent process, staff members must clearly explain the proposed treatment or procedure. This explanation should include:
4.1.3.1 Potential benefits and drawbacks.
4.1.3.2 Potential problems related to recuperation.
4.1.3.3 Any possible adverse effects of treatment.
4.1.3.4 Any significant/reasonable alternative.
4.1.3.5 The likelihood of success.

4.1.4 Ascertain that equipment appropriate for the patient's age and weight is available including supplemental oxygen, pulse oximeter, BP measurement apparatus, EKG monitor, defibrillator, manual resuscitator (e.g., Jackson – Reese, Ambubag) and suction, airway and emergency cart.
4.1.4.1 In situations when moderate sedation/analgesia is to be administered Flumazenil And Naloxone must be immediately available.
4.1.4.2 For ambulatory patients before procedure:
4.1.4.2.1 Verify that there is a responsible adult to accompany the patient home. If not, cancel procedure and re – schedule patient for another time.
4.1.4.2.2 Document that instructions have been given to the patient, or their parent/legal guardian, if appropriate, to avoid drinking alcohol; driving, operating heavy machinery (or other injury prone physical activity), or making major decisions after the procedure for 24 hours.
4.1.4.3 For all patients assess and document:
4.1.4.3.1 Baseline physiological parameters: T, HR and rhythm, RR, and BP and O_2 saturation;
4.1.4.3.2 Modified Aldrete Score and level of consciousness;
4.1.4.3.3 Patency of IV access (if appropriate);
4.1.4.3.4 Availability of a responsible adult to accompany patients who will be discharged home.

4.2 **During the Diagnostic/Surgical Procedure:**
4.2.1 The sedation practitioner must he in the immediate procedural area.
4.2.2 The sedation practitioner, registered nurse, or other LIP will monitor HR, RR and pattern and O_2 saturation, level of consciousness, pain and adequacy of sedation continuously. BP should be measured every 5 minutes.
4.2.3 The sedation practitioners, registered nurse or LIP will:
4.2.3.1 Document HR, RR, BP, SPO_2, LOC and Pain Score at least every 15 minutes and at the end of procedure.

4.3 **Recovery Period:**
4.3.1 The sedation physician, registered nurse or LIP will be in the immediate recovery area.
4.3.2 Document HR and rhythm, RR, respiration and pattern, BP, O_2 saturation. Activity and level of consciousness and comfort on admission to recovery area (or at completion of procedure, if it was of performed at the patient's bedside).

4.3.3 Assess the patient at least every 15 minutes, until they have returned to their pre – sedation baseline, but in no case for less than one hour after the last sedative were administered. Monitor vital signs and O_2 saturation as appropriate for patient's age and condition.

4.3.4 Monitor for signs of re – sedation (i.e., decreased respiration, level of consciousness), particularly in patients who have received a reversal agent during or after the procedure. Monitor for at least one hour after the last reversal agent was given.

4.3.5 Document HR and rhythm, RR and BP immediately before discharge from the recovery area (when applicable).

4.3.6 The patient may be discharged from the sedation recovery protocol when they have met discharge criteria as ICU level of monitoring exceeds those listed in this protocol.

4.4 **Guidelines for Administration:**

4.4.1 Give drugs slowly and in small, incremental doses.

4.4.2 Assess therapeutic effect before determining.

4.4.2.1 A decrease in oxygen saturation.

4.4.2.2 Ability to maintain patent airway.

4.4.2.3 Appropriate response to physical stimulation and/or verbal command.

4.4.2.4 Significant changes in vital signs.

4.4.3 Adjust dosages per physician order based upon patient's age, level of debilitation, drug combinations, patient tolerance, pulmonary reserve, previous narcotic usage and length of procedure.

4.5 **Discontinuation of Protocol/Discharge of Patient:**

4.5.1 Patient may be discharged from the sedation protocol when his/her Modified Aldrete Scoring has reached 7, or 6, if pre – existing co – morbidity has altered the baseline status of the patient. An explanatory note shall be documented in the sedation record of any patient discharge.

4.5.2 The patient may also be discharged from the sedation protocol by a physician order, or may be transferred to ICU level of care prior to meeting recovery discharge criteria.

4.6 **Transportation of Patient:**

4.6.1 A sedation practitioner, other LIP or RN will always accompany the patient who must be transported to another area prior to meeting discharge criteria. The state of consciousness, heart rate and oxygen saturation will be monitored while in transit.

4.6.2 Before transporting the patient to an inpatient bed, the patient will meet all discharge criteria as described in VII above.

4.7 Guidelines for Obtaining Moderate and/ or Deep Sedation Credentials:

4.7.1 It is the goal of the certification process to ensure that those seeking sedation privileges are being thoroughly assessed and are able to provide to all patients the same standard of patient care; whether undergoing a diagnostic, surgical, or therapeutic procedure. All individuals responsible for ordering, administering and monitoring of patients receiving sedation will be required to demonstrate competency prior to their privileges being granted or renewed. This policy applies only when sedation and analgesia are provided during diagnostic, surgical or interventional/ therapeutic procedure. It does not apply to clinicians managing pain intervention, alcohol withdrawal or the control of psychiatric disorders (agitation/anxiety). It is not a policy directed for the sedation of patients on ventilators or for patients administered only local anesthetics.

4.7.2 The JCAHO in the United States has noted that because sedation - anesthesia is a continuous; it is not always possible to predict how an individual patient receiving medications with the intent to achieve moderate to deep sedation will respond. Therefore, qualified individuals are trained in professional standards and techniques. "In order to be compliant with the stated standards and techniques, the credentialing process will incorporate required knowledge of these measures.

4.7.3 All members and affiliates of the Medical Staff with prescriptive authority may apply for moderate sedation privileges. After fulfilling mandated requirements, and when administered under the general, but not direct supervision of an Attending Physician.

4.7.4 Respiratory compromise is the main potential primary complication of moderate sedation and as such, individuals responsible for the administration of moderate sedation are responsible for monitoring, detecting and treating patients who may experience such compromise. Those

individuals completing the certification process and being granted privileges for moderate sedation and analgesia will be required to:

4.7.4.1 Submit recent (within two years) Basic Life Support (BLS) or more advanced life support certification, or demonstrate acceptable airway management skills.

4.7.4.2 Be able to recognize and safety manage anticipated complications associated with the moderate sedation and analgesia process.

4.7.4.3 Be capable of establishing a patent airway in order to assure adequate oxygenation and ventilation.

4.7.4.4 Understand and support the process of identifying any and all untoward events and document the occurrence and outcome on the appropriate Adverse Event Form. Adverse and sentinel events are to be reported to the Quality Assurance Subcommittee, Sedation Analgesia Council and/or directed to the Chief of Staff within a timely Fashion.

4.7.5 Those individuals seeking moderate sedation and analgesia privileges must complete the process implemented by the Sedation Analgesia Council. This consists of verified understanding of basic knowledge concerning administration of moderate sedation/analgesia, as well as demonstrated airway management skills. The process parallels the two-year re-credentialing cycle mandated by the Medical Staff. Individuals being granted privileges for moderate sedation and analgesia are required to have knowledge or show competency in the items described below:

4.7.5.1 Assure that sufficient numbers of qualified personnel are present during procedures using moderate sedation and analgesia in order to:

4.7.5.1.1 Appropriately evaluate the patient prior to beginning the procedures using moderate sedation and analgesia.

4.7.5.1.2 Provide safe and effective moderate sedation and analgesia.

4.7.5.1.3 Safely perform the intended procedure.

4.7.5.1.4 Appropriately monitor the patient (e.g., level of consciousness and hemodynamics).

4.7.5.1.5 Ensure a safe recovery and discharge of the patient.

4.7.5.2 Administer pharmacological agents to predictably achieve desired levels of sedation.

4.7.5.3 Understand the pharmacology and appropriate utilization of specific antagonists whenever opioid analgesics or benzodiazepines are being administered for sedation and analgesia. Monitor patients carefully in order to maintain them at the desired level of sedation. Methods and techniques required to rescue those patients who unavoidably or unintentionally progress into a deeper than desired level of sedation or analgesia. Manage a compromised airway and to provide adequate oxygenation and ventilation. If credentialed to provide deep sedation, is competent to manage an unstable cardiovascular system as well as a compromised airway and inadequate oxygenation and ventilation. Ensure that emergency equipment is immediately accessible in every location where moderate or deep sedation is to be administered order appropriate post-procedural recovery care with nursing monitoring. Adequately and completely document the patient's response to sedation and analgesia in the patient's medical record. Support data collection for patients having complications of moderate sedation, in order to identify opportunities to improve care.

4.7.5.4 In order to accomplish these basic goals and to be granted moderate sedation and analgesia certification, individuals must: be familiar with the expected and known possible adverse effects of selected drugs (sedative hypnotics and opioids). Acknowledge the sedation is a continuum and that the more alert patient may unpredictably progress to deeper levels of sedation. Be aware of drug administration techniques that have a higher likelihood of resulting in over sedation (example: rapid injection, co – drug administration, etc.).

4.7.6 ASA (American Society of Anesthesiology) Physical Status Classification:

4.7.6.1 Class I: No organic, physiologic, biochemical or psychiatric disturbance.

4.7.6.2 Normal: healthy patient.

4.7.6.3 Class II: Mid – moderate systemic disturbance; may or may not be related to reason for surgery.
4.7.6.4 (Examples: hypertension, diabetes mellitus).
4.7.6.5 Class III: Severe systematic disturbance. (Examples: heart disease, poorly controlled hypertension).
4.7.6.6 Class IV : Life threatening systemic disturbance (Examples: congestive heart failure, persistent angina pectoris)

4.7.7 Sedation Scale:
4.7.7.1 1 – Alert.
4.7.7.2 2 – Occasionally drowsy; easy to arouse.
4.7.7.3 3 – Frequently drowsy; easy to arouse.
4.7.7.4 4 – Asleep; easy to arouse.
4.7.7.5 5 – Somnolent; difficult to arouse.

4.7.8 Pre – Procedure Monitoring:
4.7.8.1 Physical and baseline assessment parameters include, but are not limited to:
4.7.8.1.1 Level of Consciousness.
4.7.8.1.2 Anxiety Level.
4.7.8.1.3 Vital Signs, Including Temperature.
4.7.8.1.4 Skin Color.
4.7.8.1.5 Sensory Defects.
4.7.8.1.6 Current Medications and Drug Allergies.
4.7.8.1.7 Relevant medical/ surgical history including history of substance abuse
4.7.8.1.8 Patient perceptions regarding procedure and moderate and deep sedation.
4.7.8.2 IV access is established. Fluid type and rate per LIP order.
4.7.8.3 Supplemental oxygen is administered as necessary.

4.7.9 Supplemental oxygen is administered as necessary.
4.7.9.1 Patient is continually reassessed throughout the procedure.
4.7.9.2 Vital signs (EKG, oxygen saturation, heart rate and blood pressure) are recorded every 5 minutes. Level of consciousness (sedation scale) is recorded every 15 minutes.
4.7.9.3 Verbal reassurance to patient frequently throughout the procedure.
4.7.9.4 Untoward reactions or sudden/significant changes in monitoring parameters should be immediately reported to the LIP.

4.7.10 Post – procedure Monitoring and Discharge Criteria:
4.7.10.1 Documentation of the Aldrete Score will be completed prior to patient discharge. The score must return to the baseline assessment before the patient may be released from the procedure area. The range is 10 for complete recovery to 0 in comatose patients.
4.7.10.2 Evidence that patient has met discharge criteria must be clearly documented in the medical record. Aldrete scoring is as follows:

4.7.10.2.1

Activity:	
Muscle activity is assessed by observing the ability of the patient to move his/her extremities spontaneously or on command.	
SCORE	
2	Able to move 4 extremities
1	Able to move 2 extremities
0	Not able to control any extremity

4.7.10.2.2

Respiration:	
SCORE	
2	Able to breathe deeply and cough
1	Limited respiratory effort (dyspnea or splinting)
0	No spontaneous respiratory effort

4.7.10.2.3

Respiratory efficiency evaluated in a form that permits accurate and objective assessment without complicated physical tests.	
SCORE	
2	Able to breathe deeply and cough
1	Limited respiratory effort (dyspnea or splinting)
0	No spontaneous respiratory effort

4.7.10.2.4

Circulation:	
Use changes of arterial blood pressure from pre – anesthetic level. Score:	
SCORE	
2	Systolic arterial pressure plus or minus 20% of Pre – anesthetic level (Riva –Rocci method).
1	Systolic arterial pressure between plus or minus 20% to 50% of Pre – anesthetic level.
0	Systolic arterial pressure between plus or minus 51% or more of pre – anesthetic level.

4.7.10.2.5

Consciousness:	
Determination of the patient's level of consciousness. Score:	
SCORE	
2	Full alertness seen in patient's ability to answer questions and acknowledge his/her location
1	aroused when called by name
0	Failure to elicit a response upon auditory stimulation. Physical stimulation should not be considered reliable as even a decerebrated patient might react to it

4.7.10.2.6

Oxygen Saturation:	
SCORE	
2	SPO2 greater than or equal to 92% on room air
1	SPO2 greater than 90% on room air
0	SPO2 less than 90% on room air

4.7.10.3 All outpatients who receive sedation for any procedure must be observed and monitored for a minimum of 1 hour prior to being discharged home. Vital signs (Heart Rate, Respiratory Rate and Blood Pressure) are recorded at 15 – 30 minute intervals.

4.7.11 Discharge Home:

4.7.11.1 Completion of Aldrete Score.

4.7.11.2 Ability to ambulate consistent with baseline assessment.

4.7.11.3 Ability to demonstrate a gag reflex.
4.7.11.4 Ability to retain oral fluid, as appropriate to LIP orders.
4.7.11.5 Pain minimal.
4.7.11.6 Ability of patient and home care provider to understand all home care instructions.
4.7.11.7 Written discharge instructions given to patient/family.
4.7.11.8 Concurrence with prearrangements for safe transportation including discharge to the care of a responsible adult. The patient may not drive self – home.

4.7.12 Return to Nursing Unit:

4.7.12.1 All in patients who receive sedation for any procedure will have vital signs (heart rate, respiratory rate and blood pressure) monitored every 15 – 30 minutes until criteria is met in the recovery area. The patient may then be returned to their specific unit, where monitoring is continued as per that unit's nursing standard.

4.7.12.2 Outcomes from patients undergoing moderate or deep sedation will be collected for measurement and analysis, and reported as a component of the organization wide performance improvement program. Evaluation of patient outcomes will be utilized in an effort to identify opportunities to improve the use of moderate and deep sedation throughout the institutions.

5. MATERIAL AND EQUIPMENT:

5.1 Oxygen and Nasal Cannula
5.2 Suction
5.3 Emergency Crash Cart with Defibrillator
5.4 Cardiac Monitor
5.5 Pulse Oximeter
5.6 Blood Pressure Monitor

6. RESPONSIBILITIES:

6.1 Anesthesiologist
6.2 Pediatrician
6.3 Neonatologist
6.4 OBS Physicians
6.5 Nurses

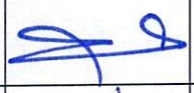
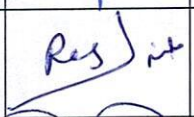
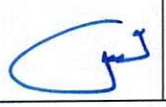
7. APPENDICES:

7.1 Appendix A – Sedation Agents
7.2 Appendix B – Discharge Assessment Checklist
7.3 Appendix C – Pre Anesthesia / Sedation Assessment Form
7.4 Appendix D – Moderate Sedation Flow Sheet

8. REFERENCES:

8.1 Ministry of Health Policies and Procedures, 2013.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Ms. Naimah Naif Al Salem	Head Nurse of the Operating Room		January 05, 2025
Prepared by:	Dr. Abdelghani Ibrahim	Head of the Anesthesia Department		January 05, 2025
Reviewed by:	Mr. Sabah Turayhib Al Harbi	Director of Nursing		January 07, 2025
Reviewed by:	Mr. Abdulelah Ayed Al Mutairi	QM&PS Director		January 08, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 12, 2025
Approved by:	Mr. Fahad Hezam Al - Shammari	Hospital Director		January 19, 2025

APPENDIX A

UNRESTRICTED SEDATION AGENTS

PREFERRED AGENTS

AGENT	ROUTE	ONSET (MIN)	DURATION (HR)	TYPICAL PEDIATRIC DOSE	TYPICAL ADULT DOSE	CONSIDERATIONS
MIDAZOLAM		1 – 5	1 – 2	6 Month – 5 year old patient: 0.05 – 0.1 mg/kg, max dose of 1 mg; may repeat q3 min to max total dose of lesser of 0.6 mg/kg or 6 mg/kg 6 – 12 year old patient: 0.025 – 0.05 mg/kg/dose, max 1 mg, may repeat q3 min to total dose of lesser of 0.4 mg/kg or 10 mg.	0.5 – 2.5 mg/dose may repeat q 2 – 3, total dose rarely to exceed 10 mg.	PREFERRED BENZODIAZEPINE Reversible with flumazenil. Administer slowly over at least 2 minutes to avoid respiratory depression or apnea. Use smaller doses in debilitated, chronically ill, elderly, or patient with decreased pulmonary or cardiovascular reserve. Patients with chronic benzodiazepine or alcohol use may require higher doses. Respiratory depression is potentiated when combined with a narcotic.
	PO	10 - 15	1 – 2	0.5 – 0.75 mg/kg/dose, max 20 mg	Not routinely given to adults	
	PR	20 – 30	1 – 2	0.3 – 0.7 mg/kg (use IV formulation rectally)	Not routinely given to adults	
	Intra – nasal	3 – 5	1 – 2	0.2 – 0.3 mg/kg/dose (use IV formulation nasally)	Not routinely given to adults	

AGENT	ROUTE	ONSET (MIN)	DURATION (HR)	TYPICAL PEDIATRIC DOSE	TYPICAL ADULT DOSE	CONSIDERATIONS
FENTANYL	IV	1 – 3	0.5 – 2	1 mcg/kg/dose, may repeat q 3 – 4 minimum. Total dose generally not to exceed 3 mcg/kg.	25 – 50 mcg/dose; may repeat q1 – 2 min. patients not responding to a 50 mcg dose may receive 100 mcg repeat doses. Total dose > 200mcg rarely needed for short procedures; patients undergoing prolonged procedures (i.e. > 45 min) may require up to 400 mcg total dose.	<u>PREFERRED OPIATE</u> Reversible with Naloxone. Use smaller doses in debilitated, chronically ill, elderly, or patients with decreased pulmonary/cardiovascular reserve. Respiratory depression is potentiated when combined with a benzodiazepine.
	Trans – mucosal	20 – 30		15 – 40 kg patient: 5 – 15 mcg/kg (children who are not apprehensive at the onset may require 5 mcg/kg). Greater than 40 kg patient: 5 mcg/kg. Dose rarely exceeds 400 mcg.	Not routinely given to adults	

AGENT	ROUTE	ONSET (MIN)	DURATION (HR)	TYPICAL PEDIATRIC DOSE	TYPICAL ADULT DOSE	CONSIDERATIONS
FENTANYL	IV	1 – 3	0.5 – 2	1 mcg/kg/dose, may repeat q 3 – 4 minimum. Total dose generally not to exceed 3 mcg/kg.	25 – 50 mcg/dose; may repeat q1 – 2 min. patients not responding to a 50 mcg dose may receive 100 mcg repeat doses. Total dose > 200mcg rarely needed for short procedures; patients undergoing prolonged procedures (i.e. > 45 min) may require up to 400 mcg total dose.	PREFERRED OPIATE Reversible with Naloxone. Use smaller doses in debilitated, chronically ill, elderly, or patients with decreased pulmonary/cardiovascular reserve. Respiratory depression is potentiated when combined with a benzodiazepine.
	Trans – mucosal	20 – 30		15 – 40 kg patient: 5 – 15 mcg/kg (children who are not apprehensive at the onset may require 5 mcg/kg). Greater than 40 kg patient: 5 mcg/kg. Dose rarely exceeds 400 mcg.	Not routinely given to adults	

ALTERNATE AGENTS

AGENT	ROUTE	ONSET (MIN)	DURATION (HR)	TYPICAL PEDIATRIC DOSE	TYPICAL ADULT DOSE	CONSIDERATIONS
Chloral Hydrate	PO	10 – 20	5 – 10	75 mg/kg. may repeat 25 mg/kg after 30 minutes. If sedation is inadequate TOTAL DOSE NOT TO EXCEED 1.0 GRAM.	Not routinely given to adults.	For children over 48 weeks post conceptional age to 3 years of age and under 30 lbs. Not at – home prescribing or administration before arrival to institution for procedure. If sedation inadequate after 2nd dose, then must schedule for future date. Caution! Effects are long lasting! Consider alternative agent for future procedure.
Diazepam	IV	1 – 3	2 – 6	0.05 – 0.1 mg/kg/dose, may repeat 130 minutes. Total dose generally not > 5 mg.	2 – 10 mg/dose, may repeat q30 min. total dose generally not > 30 mg	MIDAZOLAM IS PREFERRED BENZODIAZEPINE Diazepam lasts longer than Midazolam. Reversal with flumazenil. Administer slowly (i.e. over at least 2 – 3 min) to avoind respiratory depression/apnea. Re – sedation may occur at 6 – 8 hours due to enterohepatic re – circulation and formation of active metabolite. Respiratory depression is potentiated when combined with a narcotic.
	PR			0.2 – 0.3 mg/kg	Not routinely given to adults.	

AGENT	ROUTE	ONSET (MIN)	DURATION (HR)	TYPICAL PEDIATRIC DOSE	TYPICAL ADULT DOSE	CONSIDERATIONS
Meperidine	IV	5	2 – 4	Not Used in pediatric patients.	25 – 150 mg/dose may repeat q5min, rarely to exceed total dose of 300 mg. P & T Committee recommends intra – procedural use only	Reversible with Naloxone. Contraindicated in patients receiving MAOI (phenelzine, tranylcypromine, selegeline) within 14 days. Avoid in patients with renal failure or seizure history. Administer slowly (i.e. 10 mg/min). Respiratory depression is potentiated when combined with a benzodiazepine.
Morphine	IV	5	2 - 4	0.05 – 0.1 mg/kg/dose may repeat q 10 min	2.5 – 10 mg/dose, may repeat q10 min. total dose required generally not > 15 mg.	Reversible with Naloxone. Administer slowly to avoind respiratory depression or apnea. Use smaller doses in debilitated, chronically ill, elderly, patients with decreased pulmonary or cardio – vascular reserve. Respiratory depression is potentiated when combined with a benzodiazepine.

AGENT	ROUTE	ONSET (MIN)	DURATION (HR)	TYPICAL PEDIATRIC DOSE	TYPICAL ADULT DOSE	CONSIDERATIONS
Pentobarbital	IV	1	0.25	1 – 2 mg/kg/dose, may repeat q5 – 10 min. Total dose generally not to exceed lesser of 6mg/kg or 150 mg.	Not routinely given to adults.	No reversal agent available. Administer slowly over 2 – 5 minutes to avoid respiratory depression or apnea. Not considered first line agent due to slow onset and long duration of action (especially IM/PO route).
	PO	15 – 60	1 – 4	2 – 6 mg/kg. Max 100 mg may repeat q5 – 10 min.	Not routinely given to adults.	
	IM	10 – 15				

RESTRICTED AGENTS

(NOTE: MDs MUST CONTINUOUSLY AT BEDSIDE DURING DRUG ADMINISTRATION)

AGENT	ROUTE	ONSET (MIN)	DURATION (HR)	TYPICAL PEDIATRIC DOSE	TYPICAL ADULT DOSE	CONSIDERATIONS
Etomidate	IV	< 1	3 – 5 min	NOT indicated in patients < 10 year old although 0.1 – 0.4 mg/kg given over 1 minute has been used. In patients > 10 year old, the usual adult dose is suggested. Generally, give 0.1 mg/kg q1 min to effect.	0.1 – 0.6 mg/kg over 15 – 60 seconds. Generally, give 0.1 mg/kg q1 min to effect	Larger doses (0.3 mg/kg or more) may confer an anesthesia – grade effect. NO reversal agent.
Propofol	IV	< 1	3 – 10 minutes	1 – 2 mg/kg bolus followed by maintenance infusion of 75 – 100 mcg/kg/min has been used for procedural sedation.	0.5 – 1 mg/kg over 20 – 30 seconds or continuous infusion starting at 100 – 150 mcg/kg/min followed by maintenance infusion of 25 – 75 mcg/kg/min.	Propofol is not indicated for pediatric ICU sedation. Dosing guidelines are presented as information but should not considered recommendation for use. NO reversal agent. Contraindicated in patients with hypersensitivity to soybeans or eggs. Avoid bolus dosing and use smaller infusion doses in elderly/debilitated patients. May cause hypotension in 3 – 10% adult patients and 17% of pediatric patients.
Ketamine	IV	< 1	1 – 2	0.2 – 1 mg/kg/dose (PREFERRED route)	0.2 – 1 mg/kg/dose	Contraindicated in patients with open globe, active upper respiratory tract infections, psychiatric or seizure history, increased intracranial pressure. Ketamine does not preserve the gag reflex; may increase risk of laryngospasm due to increased salivation, consider concomitant use of glycopyrrolate or atropine. NO reversal agent available. Administer over 1 – 3 minutes. Final concentration not to exceed 2 mg/ml. Emergency reactions including hallucinations can occur in up to 12 % of patients and may occur up to 24 hours later.
	IM	3 – 4	3 – 4	1 – 6 mg/kg/dose, may repeat after 5 – 10 minutes if no response, some patients may require up to total of 10 mg/kg.	0.5 – 4 mg/kg/dose	

HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

DISCHARGE ASSESSMENT CHECKLIST

NAME: _____

MRN : _____ NATIONALITY: _____

ROOM NO: _____ BED NO: _____ AGE: _____

DATE & TIME OF ADMISSION: _____

DATE OF BIRTH: _____

GENDER: ☐ MALE ☐ FEMALE

DISCHARGE ASSESSMENT:

VITAL SIGNS

Temperature:

Pulse Rate:

Respiratory Rate:

Blood Pressure:

RESPIRATORY

- ☐ REGULAR ☐ IRREGULAR
- ☐ MODERATE DEEP ☐ SHALLOW
- ☐ UNLABORED ☐ LABORED
- ☐ CLEAR ☐ CONGESTED
- ☐ ROOM AIR ☐ O_2@____LPM

CARDIOVASCULAR

- ☐ PINK ☐ OTHER
- ☐ WARM ☐ COLD
- ☐ DRY ☐ MOIST
- ☐ HISTORY OF MI WHEN?_____
- ☐ CURRENT C/O CHEST PAIN? ☐ YES ☐ NO

PSYCHOLOGICAL

- ☐ CALM ☐ ANXIOUS
- ☐ COMMUNICATIVE ☐ WITHDRAWN
- ☐ COOPERATIVE
- ☐ UNCOOPERATIVE

NEUROLOGICAL

- ☐ AWAKE ☐ ASLEEP
- ☐ ALERT ☐ DROWSY
- ☐ ORIENTED ☐ DISORIENTED
- ☐ LOSS OF SEDATION ☐ _____

MUSCULO/SKELETAL

- ☐ AMBULATORY INDEPENDENTLY
- ☐ AMBULATORY WITH ASSISTANCE OF A MECHANICAL DEVICE: ☐ CANE ☐ WALKER
- ☐ WHEELCHAIR BOUND
- ☐ LOSS OF EXTREMITY

DISCHARGE

	YES	NO
☐ Patient able to tolerate food/fluids	☐	☐
☐ Patient able to bear weight/ambulate safely	☐	☐
☐ Patient able to void	☐	☐
☐ Patient given follow – up appointment/instructions	☐	☐
☐ Patient discharges to the care of an adult: _____	☐	☐
☐ Patient discharge to physician's office: _____	☐	☐
☐ Patient discharged other: _____at _____(time)	☐	☐

SIGNATURE: _____

KINGDOM OF SAUDI ARABIA

وزارة الصحة
Ministry of Health

Hospital: _____ مستشفى:

Region: _____ المنطقة/المحافظة:

Dept./Unit: _____ القسم/الوحدة:

MRN: | | | | | | | | | | رقم الملف الطبي:

Name: _____ الاسم:

Nationality: _____ الجنسية:

Age: _____ ☐ سنة Years ☐ شهر Months ☐ يوم Days العمر:

Date of Birth: ___/___/14___ H ___/___/20___ تاريخ الميلاد:

Gender: ☐ Male ☐ Female الجنس:

PRE-ANESTHESIA /SEDATION ASSESSMENT FORM

Weight: | Height: | PR: | RR: | BP: / | TEMP: c°

Anesthesia Assesment done in:
☐ OPD ☐ Ward ☐ OR
Other : _____

Diagnosis: _____
Procedure: _____

ADMITTED THROUGH
☐ Emergency ☐ Routine
☐ Day Case

PATIENT HISTORY

Allergies: ☐ No ☐ Yes
☐ Drugs ☐ Food ☐ Others: _____

Cardiac: ☐ Negative ☐ IHD
☐ Hypertensive ☐ Valve Disease
☐ Arrhythmia ☐ CHF
☐ Previous MI /Date : _____
Other/Comments: _____

Respiratory: ☐ Negative ☐ Asthma
☐ COPD ☐ Emphysema
☐ O2 Dependent ☐ Sleep Apnea
☐ Recent URI ☐ Other: _____
☐ Smoking ☐ amount:

Endocrine: ☐ Negative
☐ Diabetic ☐ Thyroid disease

Liver: ☐ Negative
☐ Hepatitis ☐ Cirrhosis

Neurological: ☐ Negative ☐ CVA
☐ Seizure disorder Other: _____

Renal : ☐ Negative
☐ Renal Failure ☐ Renal impairment
☐ Dialysis, Last Dialysis: ___/___/___

Cancer : ☐ Negative
☐ Chemo /XRT ☐ Other:

Pregnancy: ☐ No ☐ Yes
_____ Week

Other Disease(s):
_____
_____

Medications/ supplements:
_____
_____

Previous Surgery and Anesthesia:
☐ General ☐ Sedation ☐ Regional ☐ Local
Complications: ☐ No ☐ Yes
Family History of Anesthetic complications:
☐ Yes ☐ No
History of PONV : ☐ No ☐ Yes

PHYSICAL EXAMINATION

☐ Awake ☐ Alert ☐ Oriented ☐ Comatose
GCS ____ /15
Cardiac: ☐ Regular ☐ Irregular rhythm
☐ Murmur: ☐ Murmur:

Lungs: ☐ Normal ☐ Rales ☐ Wheezing
Physical Activity: _____

AIRWAY

q No airway problems Teeth: ☐ Appear normal ☐ Decayed ☐ Missing
☐ Dentures: ☐ Upper ☐ Lower ☐ Removed
Chin/Tongue: _____ Neck: _____
Other: _____
MALLAMPATI: ☐ I ☐ II ☐ III ☐ VI

OTHER FINDINGS

_____
_____
_____

TEST RESULTS

ECG ☐ WNL ☐ Abnormal _____
Chest X-ray ☐ WNL ☐ Abnormal _____
Hb _____ ☐ Blood Needed/ Derivatives : ☐ Yes ☐ No Amount _____ ml
Others: _____
_____

ASA Classification: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ E

ANESTHETIC PLAN

_____
_____
_____

Patient Education

Anesthetic plan, benefits, alternatives and risks are explained to patient ☐ Yes ☐ No
If not explained to patient, give reason: _____
Patient appears to understand and accept the anesthetic plan and possible risks:
☐ Yes ☐ No Why: _____
_____

ANESTHETIST RECOMENDATIONS:

☐ ICU Bed Requested ☐ High Risk Consent:
☐ Additional Consultation: _____
_____
_____
_____
_____

Anesthetist Name: _____
Stamp&Signature: _____
Date: ___/___/___ *Time:*

GDOH-INP-PASA-095 ISSUED DATE:09/02/2013 1 OF 1 0 000000 000956 SN

KINGDOM OF SAUDI ARABIA

وزارة الصحة
Ministry of Health

Hospital: _____ مستشفى:

Region: _____ المنطقة/المحافظة:

Dept./Unit: _____ القسم/الوحدة:

MRN: _____ رقم الملف الطبي:

Name: _____ الاسم:

Nationality: _____ الجنسية:

Age: _____ ☐ سنة Years ☐ شهر Months ☐ يوم Days العمر:

Date of Birth: ____/____/14____H ____/____/20____ تاريخ الميلاد:

Gender: ☐ Male ☐ Female الجنس:

MODERATE SEDATION FLOWSHEET

IMMEDIATE PRE- SEDATION ASSESSMENT

BP:	PR:	RR:	Temp:	Spo2:	Weight:

PROCEDURE:_____

_____

☐ Risk, benefits & alternatives discussed;
☐ patient understand & elects to proceed
☐ Consents for procedure and sedation signed and dated

ASA PHYSICAL STATUS: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ E

Glasco Coma Scale: ( ) (3-15)

☐ IV Site: Gauge: ( )

Sedation Plan:

ALLERGIES:

AIRWAY EVALUATION

MOUTH ☐ Normal ☐ Small Mouth
☐ Protruding Incisors ☐ Receding Lower Jaw ☐ Dentures

Neck ☐ Normal ☐ Decreased ROM
☐ Thyromental Distance Less Than 6 cm ☐ Short Neck

Mallampati classification

☐ Calss 1 ☐ Calss 2 ☐ Calss 3 ☐ Calss 4

MONITORING OF PATIENT INTRA –PROCEDURE

MEDICATION:									
O2 L/m									
O2 Saturation									
BIS									
Pain Score: (0-10)									
Sedation Score (0-4)									
Time:									

Monitoring
☐ ECG
☐ NBP: ☐ R ☐ L
☐ Temp
☐ Oximeter
☐ ETCO2

Sedation Scale
☐ Without Sedation=0
☐ Light Sedation awake Calm=0
☐ Sedation/Analgesic Easy to Arouse=2
☐ Deep Sedation
☐ Unconscious

200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40

Fluids:_____

PhysicianNotes:_____

_____

Time of transportation to post sedation care room:_____ Sedation Scale:_____

Doctor Name:_____ Stamp&Signature:_____ Date:___/___/_____

0 000000 000970 SN

Name: _____ الاسم:	MRN: رقم الملف الطبي:

POST SEDATION CARE ROOM

Time		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
Monitoring ☐ ECG ☐ NBP ☐ Oximeter	180																								
	170																								
	160																								
	150																								
	140																								
	130																								
	120																								
	110																								
	100																								
	90																								
	80																								
	70																								
	60																								
	50																								
	40																								
Pain Score (0-10)																									
Sedation Score (0-4)																									

TOTAL ALDRETTE SCORE AT DISCHARGE =

(If 9 and more patient can discharge from post Sedation care unit

Activity :	Consciousness:	Respiration:	Oxygen Saturation:	Circulation:
Four extremities = 2	Fully awake = 2	Breathe deep= 2	Sat O2>92 % on room air = 2	BP +/- 20mm hg of pre-op = 2
Two extremities = 1	Arousal oncalling=1	Dyspnea, limited breathing = 1	Needs oxygen to maintain Sat O2>90% = 1	BP +/- 20-50mm hg of pre-op = 1
No extremities = 0	Unresponsive=0	Apnea = 0	Saturation <90% with oxygen = 0	Bp +/-50 mm hg of Pre – Op = 0

Patient Discharge time: ☐ In –patient ☐ To Home

Post Anesthesia Care Unit Nurse Name:_____ **No&Signature:**_____ **Date:**___/___/___ **Time** ____

Physician Name:_____ **Stamp&Signature:**_____ **Date:**___/___/___ **Time** ____