

Pediatric Moderate Sedation in the ED Survey

Job Title of Survey Respondent(s) *Check all that apply*

- CQI Liaison
- ED Medical Director
- ED Nurse Manager
- ED Staff Nurse
- ED Physician
- ED Educator
- Anesthesiologist
- Chief/staff Department of Anesthesia
- Chief of Staff
- Other _____

Moderate Sedation Definition: 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.

Source: 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 –1017.

1. How does your emergency department define the pediatric population? *Check one answer only*

0 through 12 years old	0 through 18 years old
0 through 13 years old	0 through 19 years old
0 through 14 years old	0 through 20 years old
0 through 15 years old	0 through 21 years old
0 through 16 years old	Not defined specifically
0 through 17 years old	Other

2. What is the average volume of pediatric (defined as 0 through 15 years old) ED visits per year in your facility? *Check one answer only*

0 - 2,000/year	7,001 – 9,000/year
2,001 – 3,000/year	9,001 – 11,000/year
3,001 – 5,000/year	11,001 – 13,000/year
5,001 – 6,000/year	13,001 – 15,000/year
6,001 – 7,000/year	15,001+ /year

3. What is the average volume of ALL patient (adult and pediatric) ED visits per year in your facility? *Check one answer only*

0 - 1000/year	40,001 - 50,000/year
1001 - 10,000/year	50,001 - 60,000/year
10,001 – 20, 000/year	60,001 - 70,000/year
20,001 - 30,000/year	70,001 - 80,000/year
30,001 - 40,000/year	80,001+ /year

4. Does your hospital have a moderate sedation policy/clinical guideline?
- Yes (if yes, answer Q.4 a - c)
 - No (skip to Q.5)
- 4a. Does your hospital's moderate sedation policy/clinical guideline specifically address pediatrics?
- Yes
 - No
- 4b. Are NPO status guidelines included in your hospital's moderate sedation policy/clinical guideline?
- Yes
 - No
- 4c. How recently has your moderate sedation policy/clinical guideline been updated/reviewed?
- In the past 6 months
 - In the past 12 months
 - Has not been updated/reviewed in the past year
5. Does your hospital require an IV to be started on all pediatric patients undergoing moderate sedation?
- Yes
 - No
6. Does your hospital require physicians to undergo a credentialing process before being allowed to administer/perform sedation?
- Yes (if yes, answer Q.6a)
 - No (skip to Q.7)
- 6a. What is included in your hospital's sedation credentialing process for physicians? *Check all that apply*
- Minimal # years of experience
 - Minimal # of supervised procedures
 - PALS/APLS/NRP training
 - Pharmacology course
 - Practical competency test
 - Recommendation by Anesthesia department
 - Self-assessment
 - Self-study
 - Written competency test
 - Other _____
 - None
7. Does your hospital require other medical staff (e.g., RN, PA, APN) to undergo a sedation competency course/process before being allowed to assist with sedation?
- Yes
 - No

8. Does your hospital have a formal pediatric sedation service/team?
- Yes
 - No
9. Does your hospital conduct moderate sedation chart reviews for QI purposes?
- Yes (if yes, answer 9a & b)
 - No (skip to Q.10)

9a. What indicators are included in chart reviews? *Check all that apply*

QI Indicators	
a. Airway assessment/Mallampati Classification	0
b. Physical assessment	0
c. ASA Classification	0
d. Anesthetic plan	0
e. Immediate prior-to-sedation physical assessment	0
f. Time out/universal precaution	0
g. Site marking	0
h. Procedure	0
i. Consent signed	0
j. Equipment checklist	0
k. Drug calculations/preparation/med worksheet	0
l. Monitoring during/post sedation at appropriate intervals	0
m. Vital signs	0
n. Pain score	0
o. Pre-op meds	0
p. Aldrete score	0
q. Modified Ramsey score	0
r. Dept/Unit procedure was performed	0
s. Staff names/role in procedure	0
t. Procedure outcome	0
u. Complications (reversal agent given, recovery time > 90 min, unplanned admission, Oxygen desaturation, etc)	0
v. Discharge instructions	0
w. Patient/parent education (explanation of procedure)	0
x. Patient/parent education (explanation of moderate sedation)	0
Other _____	0

9b. What is done with that information? *Check all that apply*

- Implement staff education
- Review at staff meetings
- Review at ED QI meetings
- Review at hospital-wide QI meetings
- Nothing
- I Don't Know
- Other _____

10. Which of the following services/areas perform **pediatric** sedation? *Check all that apply*

- Burn unit
- ED
- EEG
- GI lab
- Outpatient center
- PACU
- Pediatric unit
- PICU
- Radiology/MRI/CT
- Urology
- None
- Other _____

11. Does your ED perform moderate sedation to **pediatric** patients in the ED?

- Yes (if yes, answer 11a)
- No (**if no, end survey here**)

11a. Does your ED restrict performing **moderate** sedation on any of the following age groups?

Check all that apply

- Neonate (< month)
- Infant
- Toddler
- Preschool
- School age
- Preadolescent
- Adolescent
- No age restrictions

If you answered *YES* to Question #11, please continue to the
Sedation Scenario section of this survey.

If you answered *NO* to Question #11, you have completed the survey.

Sedation Scenarios

Please respond to the questions based on your institution's common practices, standards, and guidelines

Case #1

A 3-year-old male is brought in by his mother after he fell playing in the park about 2 hours ago. He has a 2cm hematoma on the right side of his head.

The mother states he was unresponsive for about 5 minutes and threw up 3 times initially, but has not thrown up in the last 90 minutes or during the car ride to the ED.

There are no focal findings.

He will require moderate sedation for a CT of the brain.

The child is very anxious and the mother states he will not hold still during the head CT.

Sedation is discussed with the mother and she agrees to this.

His vital signs are: Temp: 37.3/99.1 HR: 114 RR: 22 BP: 98/62 O₂ saturation: 99% on RA

**Assuming he has no other injuries or contraindications to sedation,
please answer the 8 related questions.**

1. What would be included in the pre-sedation assessment of this patient? *Check all that apply*

- Aldrete score
- Allergies
- Anesthetic plan
- ASA classification
- Body habitus
- Drug calculations/preparation/medication worksheet
- Equipment checklist
- History of anesthesia
- History & Physical
- Mallampati classification/Airway assessment
- Modified Ramsey score
- NPO Status
- Pain Score
- Physician credential check
- Time out/universal precautions
- Vital signs
- Other _____
- None

2. For the following items, how long would you routinely wait before sedating this patient?

Apple Juice	Full Lunch
<input type="radio"/> 0 hours since consumption	<input type="radio"/> 0 hours since consumption
<input type="radio"/> 1 hour	<input type="radio"/> 1 hour
<input type="radio"/> 2 hour	<input type="radio"/> 2 hour
<input type="radio"/> 4 hours	<input type="radio"/> 4 hours
<input type="radio"/> 6 hours	<input type="radio"/> 6 hours
<input type="radio"/> Nothing after midnight	<input type="radio"/> Nothing after midnight

3. In this scenario, where would you routinely sedate this patient? *Check one answer only*

- In the ED (using a portable CT)
- In the ED, then transport to Radiology
- In Radiology
- Other _____

3a. Based on where this patient would be sedated, what monitoring equipment, supplies & medications would be required at the bedside (or taken with you during transport)? *Check all that apply*

Pulse oximeter	0
End-tidal CO ₂ monitor/detector	0
BP monitor	0
Thermometer	0
Defibrillator	0
IV equipment	0
IV access	0
Suction equipment	0
Oxygen	0
Stethoscope	0
ETT (correct patient size)	0
Bag – valve mask (correct size)	0
Nasal cannula	0
Naloxone (dose calculated)	0
Flumazenil (dose calculated)	0
Crash cart/respiratory box	0
Cardiac monitor	0
Other _____	0
None	0

4. In this scenario, is the person responsible for monitoring the sedated patient allowed to perform or assist with the procedure?

- Yes
- No

5. Which of the following medication(s) would you typically use to **moderately** sedate this patient?

Check all that apply

- Ativan (Lorazepam)
- Brevital (Methohexital)
- Chloral Hydrate
- Clonidine
- Demerol (Meperidine)
- Diprivan (Propofol)
- Droperidol
- Etomidate
- Fentanyl
- Haldol
- Ketamine
- Morphine
- Nembutal (Pentobarbital)
- Nitrous Oxide
- Phenergan (Promethazine)
- Precedex (Dexmedetomidine)
- Thorazine (Chlorpromazine)
- Valium (Diazepam)
- Versed (Midazolam)
- Other: _____

6. **DURING** the CT, what monitoring/charting would be required? *Check all that apply*

- Head position check/re-check
- Heart rate
- Respiratory rate
- Oxygen saturation
- Blood pressure
- Temperature
- Skin color
- Capnography
- Level of Consciousness (LOC)
- Modified Ramsey score
- Protective reflexes
- Aldrete score
- I&O
- Pain score
- Med dosage/route
- Other _____
- None

7. **DURING** the CT, how often would patient assessment be performed? *Check one answer only*

- Continuously
- Every 5 minutes
- Every 15 minutes
- Every 30 minutes
- Not standardized
- Other _____

8. What discharge criteria would this patient need to meet before disposition? *Check all that apply*

- Returned to pre-sedation mental status (e.g., able to talk if age appropriate)
- Returned to pre-sedation activity level (e.g., awake, able to sit up unaided if age-appropriate)
- After a specified length of stay
- Able to take fluids
- Stable vital signs
- Oxygen saturation > 95% on room air or at patient's baseline
- Cardiovascular function and airway patency are satisfactory and stable
- Easily arousable
- Pain adequately controlled
- Physician discretion
- After a specified length of stay when a reversal agent was given
- Able to be discharged to responsible adult and/or second adult to monitor child on trip home
- Patient/parent discharge instructions given
- Patient is provided a 24-hour emergency telephone contact
- Other _____
- None

Case #2

A six-year-old female has suffered a severely angulated wrist fracture in a fall. The child is very agitated and cries when any stranger comes near her.

The orthopedist will perform a fracture reduction, and the child will need moderate sedation to undergo the procedure.

Her vital signs are: Temp: 36.4/97.5 HR: 110 RR: 28 BP: 108/70 O₂ saturation: 99% on RA

**Assuming no other injuries or contraindications to sedation,
please answer the 7 related questions.**

1. What would be included in the pre-sedation assessment of this patient? *Check all that apply*

- Aldrete score
- Allergies
- Anesthetic plan
- ASA classification
- Body habitus
- Drug calculations/preparation/med worksheet
- Equipment checklist
- History of anesthesia
- History & Physical
- Mallampati classification/Airway assessment
- Modified Ramsey score
- NPO Status
- Pain Score
- Physician credential check
- Time out/universal precautions
- Vital signs
- Other _____
- None

2. What monitoring equipment, supplies & medication would be required at the bedside for this patient? *Check all that apply*

Pulse oximeter	0
End-tidal CO ₂ monitor/detector	0
BP monitor	0
Thermometer	0
Defibrillator	0
IV equipment	0
IV access	0
Suction equipment	0
Oxygen	0
Stethoscope	0
ETT (correct patient size)	0
Bag – valve mask (correct size)	0
Nasal cannula	0
Naloxone (dose calculated)	0
Flumazenil (dose calculated)	0
Crash cart/respiratory box	0
Cardiac monitor	0
Other _____	0
None	0

3. In this scenario, is the person responsible for monitoring the sedated patient allowed to perform or assist with the procedure?

- Yes
- No

4. Which of the following medication(s) would you typically use to **moderately** sedate this patient?

Check all that apply

- Ativan (Lorazepam)
- Brevital (Methohexital)
- Chloral Hydrate
- Clonidine
- Demerol (Meperidine)
- Diprivan (Propofol)
- Droperidol
- Etomidate
- Fentanyl
- Haldol
- Ketamine
- Morphine
- Nembutal (Pentobarbital)
- Nitrous Oxide
- Phenergan (Promethazine)
- Precedex (Dexmedetomidine)
- Thorazine (Chlorpromazine)
- Valium (Diazepam)
- Versed (Midazolam)
- Other: _____

5. **DURING** the procedure, what monitoring/charting would be required? *Check all that apply*

- Head position check/re-check
- Heart rate
- Respiratory rate
- Oxygen saturation
- Blood pressure
- Temperature
- Skin color
- Capnography
- Level of Consciousness (LOC)
- Modified Ramsey score
- Protective reflexes
- Aldrete score
- I&O
- Pain score
- Med dosage/route
- Other _____
- None

6. **DURING** the procedure, how often would patient assessment be performed?

Check one answer only

- Continuously
- Every 5 minutes
- Every 15 minutes
- Every 30 minutes
- Not standardized
- Other _____

7. What discharge criteria would this patient need to meet before disposition? *Check all that apply*

- Returned to pre-sedation mental status (e.g., able to talk if age appropriate)
- Returned to pre-sedation activity level (e.g., awake, able to sit up unaided if age-appropriate)
- After a specified length of stay
- Able to take fluids
- Stable vital signs
- Oxygen saturation > 95% on room air or at patient's baseline
- Cardiovascular function and airway patency are satisfactory and stable
- Easily arousable
- Pain adequately controlled
- Physician discretion
- After a specified length of stay when a reversal agent was given
- Able to be discharged to responsible adult and/or second adult to monitor child on trip home
- Patient/parent discharge instructions given
- Patient is provided a 24-hour emergency telephone contact
- Other _____
- None

Thank you for your participation!!