

Procedural Sedation Card

Medication	Route	Adult Dose	Peds Dose	Dose Titration	Max IV Push Rate	Side Effects / Comments	Onset	Duration
Benzodiazepines								
Lorazepam (Ativan®)	IV	0.5-2 mg	0.03 - 0.05 mg/kg	Every 5-10 min prn	2 minutes		5-10 min	up to 6 hrs
Midazolam (Versed®)	IV	0.5-2 mg initial, then 0.5-1.0 mg boluses	0.05-0.1 mg/kg	Every 2-5 min prn	2-5 minutes	Combination with opioids increases risk of respiratory depression	1-3 min	20-30 min
	PO		0.25-1 mg/kg up to 20 mg	One time only		Paradoxical agitation possible. Use as a sole agent discouraged.	10-30 min	30-90 min
Reversal Agent Flumazenil (Romazicon®)	IV	0.2 mg	0.01 mg/kg IV up to 0.2mg	Every 1 minute prn (max 3mg)	15-30 seconds			
Opioids								
Fentanyl	IV	0.5-1 mcg/kg q 2-5 min	1 mcg/kg (Max 4 mcg/kg)	Every 1-5 min prn	3-5 minutes	Chest wall rigidity: (Narcan doesn't help, use BVM)	1-2 min	30-60 min
Hydromorphone (Dilaudid®)		0.5-1 mg increments q 5-10 min	0.015 mg/kg	Every 5-10 min prn	2-3 minutes	Respiratory depression for all opioids	1-3 min	up to 4 hr
Morphine		1-6 mg	0.05-0.1 mg/kg	Every 5-10 min prn	5 minutes		1-3 min	up to 4 hr
Reversal Agent Naloxone (Narcan®)	IV	0.4-2 mg	0.01 mg/kg (max 0.2)-Partial 0.1 mg/kg (max 2mg)-Full	Every 2-3 min prn	15 seconds			
Miscellaneous								
Propofol (Diprivan®)	IV	0.5-1 mg/kg bolus, then 0.5 mg/kg prn OR 10-20mg IV, boluses q 20 sec prn	0.5 - 1.5 mg/kg bolus then 0.25-0.5 mg/kg q3-5min	Every 1-2 min prn	20 mg/10 seconds	Apnea, hypotension. burns IV Add narcotic for painful procedures	<1 min	8-10 min
Etomidate (Amidate®)	IV	0.1-0.15 mg/kg, repeat 0.05 mg/kg	0.1-0.2 mg/kg	Every 1-5 min prn	30-60 seconds	Hypotension, N/V, myoclonus. Add narcotic for painful procedures	<1 min	5 -15 min
Ketamine (Ketalar®)	IV	0.5- 1 mg/kg, can repeat	1-1.5 mg/kg	Every 5-15 min prn	0.5 mg/kg/min	Secretions, Laryngospasm. Do not use < age 3 mo or in ↑ICP, emergence rxn in teens/adults	1 min	up to 1 hour
	IM		4mg/kg	Every 10-15 min			5-10 min	up to 2 hours
Nitrous Oxide	INH	up to 60% (minimal sedation)	up to 60% (minimal sedation)			Nausea/Vomiting	3-5 min	Sedation stops 3-5 min after mask removed
		>60% (moderate sedation)	>60% (moderate sedation)					
Barbiturates								
Methohexital (Brevital®)	IV	0.5-1.5 mg/kg		Every 3-5 min prn	20 mg/10 seconds	Hypotension, resp depression. Add narcotic for painful procedures	0.5-1 min	5-10 min
	PR		25 mg/kg (max 500 mg)	15 mg/kg in 20 min x 1 prn			10-15 min	45-60 min
Pentobarbital (Nembutal®)	IV	100 mg q 1-3 min, max dose 500 mg	2 mg/kg (max 100 mg)	1 mg/kg q 2-5 min prn	50 mg/min		1-5 min	15-45 min
Paralytics								
Vecuronium (Norcuron®)	IV	0.1 mg/kg	0.1 mg/kg				2-3 min	25-40 min
Rocuronium (Zemuron®)		1 mg/kg	age < 1 yr = 0.5 mg/kg age > 1 yr = 0.6 mg/kg				1-3 min	30 min
Succinylcholine		1.5 mg/kg	(Laryngospasm 0.1 mg/kg age < 1 yr = 2 mg/kg age > 1 yr = 1 mg/kg)				Hyperkalemia. Do not use if hx of neuromuscular disease, globe injury, and burns/paralysis/crush injury >24 hr old	30-60 sec

ASA Classification					Physician Checklist	Equipment Checklist	
ASA I	- Normal healthy patient - No organic, physiologic, or psychiatric disturbance - Healthy with good exercise tolerance	- Excludes the very young and the very old			<input type="checkbox"/> Patient assessment <input type="checkbox"/> MAC Sedation PowerPlan completed <input type="checkbox"/> Verify medication and dosing <input type="checkbox"/> Pre-medications (PRN) <input type="checkbox"/> Consent Signed <input type="checkbox"/> RT at bedside/ETCO2 if MAC sedation other than ketamine <input type="checkbox"/> Consent Signed <input type="checkbox"/> Perform "Time-Out"	<input type="checkbox"/> Cardiac monitoring, Pulse oximetry <input type="checkbox"/> Working suction <input type="checkbox"/> Crash cart <input type="checkbox"/> Oxygen (nasal cannula, NRB, BVM with appropriate mask) <input type="checkbox"/> Oral/NP airways <input type="checkbox"/> ETCO2 - Propofol, OSA, High Risk Patient, Inpatient sedations	
ASA II	- Patients with mild systemic disease - No functional limitations; has a well-controlled disease of one body system	- Controlled HTN - Controlled diabetes without systemic effects - Smoker without COPD - Mild obesity - Age <1 or >70 yrs - Pregnancy					
ASA III	- Patient with severe systemic disease - Some functional limitation - Has a Controlled disease of more than one body system or one major system - No immediate danger of death	- Controlled CHF - Stable angina - Old MI - Poorly controlled HTN - Morbid Obesity - Bronchospastic disease with intermittent symptoms - Chronic renal failure			Dictation Requirements		
ASA IV	- Patients with severe systemic disease that is a constant threat to life - Has at least one severe disease that is poorly Controlled or at end stage - Possible risk of death	- Unstable angina - Symptomatic COPD - Symptomatic CHF - Hepato-Renal failure			VMS sedation: Work type 23 1. Title: VMS ED or VMS Hospital Procedural Sedation Consult Note 2. Indication/Procedure 3. Diagnosis- Be specific "distal right radius fracture" 4. Location (ER, OBS, MRI, HDVCH, Burn Unit, etc) 5. Brief HPI 6. ASA status 7. History: PMH, Anesth hx/complications, OSA?/Snore? 8. Social Hx: Tob, alcohol, drug use 9. Meds/Allergies 10. NPO status 11. Exam- Airway,neck, CV, Resp, Neuro 12. Mallampati Score 13. Risks, benefits, possible complications discussed 14. Consent for "Procedural Sedation" 15. Monitoring:tele, cont pulse ox, EtCO2 capnography 16. Time out performed 17. Start / End time 18. Post sedation exam 19. Post sedation instructions *PowerNote - Title (VMS Sedation Consult)		
ASA V	- Moribund Patients who are not expected to survive without the operation - Not expected to survive > 24 hours without surgery - Imminent risk of death	- Multi-organ failure - Sepsis syndrome with hemodynamic instability - Hypothermia - Poorly controlled coagulopathy					
Key Phone Numbers - Emergency Department					Inpatient Charge RN Numbers		
	BW ED	HDVCH ED	Blodgett ED	ED OBS Clerk	Butterworth		Blodgett
ED Pharmacy	75755	70167	47410	391-1455	6S 267-5080	2S 267-5530	1E 267-3010
Charge RN	75757	76465	73222		5N 267-5060	5S 267-5170	Acute Rehab 267-3444
RT	75567	76414	479-7850	Hospital Supervisor	267-5999		267-3336
Anesthesia	Anesth Float: 267-4834	76511 (7a-5p)	OR Front desk 47870	Charge RT	267-5556		267-3369