Peninsulas Emergency Medical Services Council, Inc.

Pharmacy Committee

Regular Session

AGENDA

Wednesday, May 04, 2016 at 15:00

Location in PEMS Office – (Dunston Room) or

* Please join my meeting from your computer, tablet or smartphone.

https://global.gotomeeting.com/join/781156677

1. Call to Order

2. Introductions: Suzi Hopkins SWRMC.

3. Approval of Minutes:
    a. 2-03-2016

4. Membership Change:
    a. RDH- Joshua Coffield is no longer the Director of Pharmacy. Heather Robbins will be the POC interim and June Javier hired March 2016.
    b. Memorial Regional Medical Center- Mechanicsville, VA Jonathan Lafrenaye Chief of Pharmacy and Mike Harmon BSHSI EMS Liaison.

5. Staff Report
    a. Contract Deliverables- Restocking Agreement
    b. Medication box program

6. Old Business
    a. Drug shortages (Haldol, normal saline, calcium chloride, magnesium sulfate, lidocaine, dextrose abboject, epinephrine and vasopressin).
    b. Potentially Adding Hospital Pharmacies from MCV/VCU, Norfolk General Medical Center, CHKD, and Henrico Doctor's Hospital to the PEMS Regional medication box program.
    c. PEMS office moved to Suite D 6876 Main Street.
    d. 3rd Annual Rural EMS Education Expo will be held May 15-17, 2016 at Rappahannock Community College in Glens, VA.
    e. PEMS website change. Website address will be the same. New look and more functional.

7. New Business
    a. New PEMS EMS Field Coordinator- Clinical Care is Randi Blymyer RN, Paramedic.
    b. PPP Committee sent Ketamine protocol for PEMS region to the Pharmacy Committee to review and comment on max dosage recommendations.
    c. Recall medication checks identification of boxes that have been checked. EG: Hospira Magnesium recall Mar 2016. Annotate in notes section of Clearly Inventory tracking system when changing status to sealed.

d. PEMS Regional RSI plan development and medication box addition for all pharmacies.
e. Medication labels placed inside PEMS medication box.
f. Memorial Regional Med. Center started PEMS medication box exchange on April 25, 2016.
g. PEMS annual EMS Education Expo May 20-22, 2016.
h. PEMS annual awards ceremony at Busch Gardens on May 28, 2016.

8. Good of the Order
    a. Next meeting: Wednesday, Aug 03, 2016, 1500-1630.
    b. Verify Attendance, check contact information.

9. Adjournment

If you should have any questions feel free Contact Jeff Bendit via phone or email @ 804-693-6234 / jbendit@vaems.org

*To join the audio portion of this meeting: Dial +1 (571) 317-3112, Access Code: 781-156-677 Audio PIN: Shown after joining the meeting, Meeting ID: 781-156-677.

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PEMS Pharmacy Committee Meeting Minutes

A Subcommittee of the Board of Directors

Meeting Date: 5-4-2016 **Meeting Location: PEMS and TC** **Chaired By: L. Enzor**

Begin Time: 3:05 PM **End Time: 3:44** **Minutes Submitted By: J. Bendit** **Draft ☐ Approved Date: 8-3-16**

Members Present:	Members Absent:	Staff:	Others:
Catherine Richwine (TC)	Cheryl Lawson	Jeffrey Bendit	Amy Merkle SCPH (TC)
Cindy Langley (TC)	Chris Bell (NV)		Rali Amin SNGH (TC)
Curtis Smith (TC)	Jeff Beasley (NV)		
Ed Elzarian (TC)	Jennifer Peters		
Greg Blake (TC)	Jessica Pothast		
Jonathan Lafrenaye (TC)	Jon Horton		
Lindsay Enzor (TC)	June Javier		
Maxine Luxton (TC)	Sharon Lyons		
Sal (Lorie) Messina (TC)	Terri Sim		
Wendy Bridges (TC)	Wayne Berry (NV)		
	Zachary Finney		

Item	Discussion	Action Required	By Whom/When
Call to Order	At 3:05 PM by Lindsay Enzor.		
Introductions	June Javier (RDH) replaced Joshua Coffield as Director of Pharmacy at RDH. Jonathan Lafrenaye is the Dir. of Pharmacy at MRMC. Jon Horton is the Dir. of Pharmacy at SNGH and Rali Amin is the ED pharmacist at SNGH.		
Minutes	Motion to accept as written by C. Richwine, second by M. Luxton, approved unanimously.		
New Business	Memorial Regional Medical Center joined PEMS by signing the PEMS Regional Ambulance Restocking Agreement and started restocking our medication boxes on April 25, 2016. Sentara Norfolk General Hospital joined PEMS by signing the PEMS Regional Ambulance Restocking		

Item	Discussion	Action Required	By Whom/When
	Agreement and started restocking our medication boxes on May 2, 2016. RSI: Draft PEMS Regional RSI Plan sent for review by MAC RSI Workgroup and PEMS. PEMS recently moved from 6898 Main Street to 6876 Main Street. Move completed. The EMS Field Coordinator- Clinical Care, B. Beam has left PEMS. Randi Blymyer is now filling this position. The PEMS 3rd Annual Rural EMS Education Expo will be held May 20-22, 2016 at Rappahannock Community College ion Glens, VA. Please register. More to follow. PEMS has a new website. There is a new look and appears to be more functional. Please visit the new website and become familiar so that you can use as a resource with access to current documents. Website address: www.peninsulas.vaems.org.	Forward Recommendations from Pharmacy Committee to PPP	J. Bendit 6/9/2016
	PPP Committee sent Ketamine protocol for PEMS region to the Pharmacy Committee to review and comment on max dosage/ how carried recommendations. E. Elzarian stated that Sentara pharmacists had a meeting including Dr. Stewart Martin involved from TEMS region stating that Sentara does not want to consider adding ketamine to the PEMS medication boxes and state that it does not meet continuity of care. The continuity of care discussed included drawing minute amount for peds. from a large dose vial/container that would almost be impossible to manage in the field. They also state that the spirit of having these medication boxes is to be cost effective. Ketamine adds another unnecessary cost. The Pharmacy Committee unanimously recommends to not add ketamine to the PEMS medication box and Sentara does not plan to support the restocking of this medication along with Riverside Health system, Langley AFB, and Bon Secours unanimously. J. Bendit recommended that E. Elzarian, L. Enzor attend PPP to explain.	Forward recommendation to NOT add ketamine to PEMS medication boxes.	J. Bendit 6/9/2016
	PPP submitted request to Pharmacy Committee to review RSI Medication Box Plan and PEMS Regional RSI Plan. J. Bendit submitted pictures of proposed labeling including: Stickers- “PENINSULAS EMS COUNCIL MEDICATION BOX”, “PRSI0001”-“PRSI0125” scan labels, clear plastic pouch on the exterior of the black case that holds the PEMS medication RSI Plan Medication Box Plan was updated to include this new RSI medication box description and use. The PEMS Regional RSI Plan was drafted and sent to PEMS Executive Director and RSI program initiators from NNFD and YCFLS. Plans will be submitted to the MAC.	Forward design of Regional RSI medication box and Plans to MAC.	J. Bendit 6/9/2016
	All pharmacies are experiencing Vecuronium shortages according to L. Enzor. She states that over the past year that NNFD and other departments have asked to ensure their RSI program has priority in filling the Vecuronium in the RSI medication boxes currently in use to meet the needs during RSI events. Rocuronium is in the RSI medication box as an alternative.	Forward shortage to PPP.	J. Bendit 6/9/2016
Shortages	Update: L. Enzor states there are ongoing shortages for the following: Haldol, normal saline, calcium chloride, magnesium sulfate and lidocaine. These items are not affecting the PEMS medication box, but still reporting shortages. Epinephrine shortages are still affecting the stocking of our medication box. The pharmacies continue to only stock 6 epinephrine carpujet doses. There is an insert on the exterior pouch of the medication box stating this fact if the box is affected. PEMS requests no stickers placed on the medication box.		

Item	Discussion	Action Required	By Whom/When
	No other additions or updates.		
Next Meeting	Aug 3, 2016		
Adjournment	Motion to Adjourn by L. Enzor, Second by M. Luxton at 1544.		

Ketamine

CLASS: Dissociative Anesthetic

ACTIONS: Non-Competitive NMDA receptor antagonist and dissociative, amnestic, analgesic anesthetic agent

INDICATIONS:
Severe Acute Pain with the use of Fentanyl (Sublimaze)
Excited Delirium
Behavioral Emerencies
Post-Intubation Sedation
Intracatable Pain Management (e.g. Burns)
Rapid Sequence Induction

CONTRAINDICATIONS: Hypersensitivity

PRECAUTIONS: Tachyarrhythmia

SIDE EFFECTS:
Emergence Reaction (Versed or Ativan should be available)
Hypersalavation (Suction and Atropine should be available)
Laryngospasm

DOSAGE:

Severe Acute Pain

IV/IO: 0.3mg/kg Max Dose 30mg

IM/IN: 0.5mg/kg Max Dose 50mg

Behaveral Emergencys/Excited Delirium

IV/IM/IN: 4mg/kg Max Dose 400mg

Post-Intubation Sedation/ Rapid Sequence Induction

IV/IO/IM/IN: 2mg/kg Max Dose 200mg

PEDIATRIC DOSAGE:

Severe Acute Pain

0.1-0.2 mg/kg IV max dose 10mg

Post-Intubation Sedation/ Rapid Sequence Induction

IV/IM 1mg/kg Max Dose 50mg

ROUTE: IV, IM, IN,and intraosseous infusion

HOW CARRIED: (Up to Pharmacy Committee)

Ketamine Protocols

All protocols will be at the Paramedic Level. The Adult Pain Management Protocol will be at the Paramedic Level for the first year. After review by the PEMS PI Committee, PPP Committee and the MAC Committee the Adult Pain Management Protocol may be opened up to the Intermediate Level.

Adult Protocols

Airway Management: In the Post Advanced Airway section, add Ketamine 2mg/kg IV/IN/IM/IO up to a maximum of 200mg titrated to effect. Add PEARL Stating this is the preferred drug with Intubation with causes of Sepsis, COPD, and Asthma.

Behavioral Emergencies: In the Combative Patients section, add Ketamine 4mg/kg IV/IM/IN up to a maximum of 400mg titrated to effect.

Excited Delirium: Add Ketamine 4mg/kg IV/IM/IN up to a maximum of 400mg titrated to effect.

Pain Management: Below Pain from Non-Cardiac Cases, add a section labeled Intractable Pain Management (e.g. Long Bone Fracture, Burns etc.) with it stating Administer Ketamine 0.3mg/kg IV/IO, 0.5mg/kg IM/IN Maximum dose of 30mg with Fentanyl (Sublimaze) titrated to pain relief, repeat dose in 10 minutes if necessary.

Pediatric Protocols

Pain Management: Under Morphine add or Ketamine 0.1-0.2 mg/kg IV/IO/IM

Procedures

Endotracheal Intubation: In the consider sedation for post intubation when indicated under Versed add or Ketamine 2mg/kg IN/IM/IV/IO up to a single maximum dose of 200 mg titrated to effect for adults and 1mg/kg IV/IM/IO up to a single maximum dose of 50 mg titrated to effect for pediatrics.

Intranasal Medication Delivery: Add Ketamine to the Drugs which can be given by Intranasal Route.

Ketamine

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Emergence Reaction (Versed or Ativan should be available)
Hypersalavation (Suction and Atropine should be available)
Laryngospasm

DOSAGE:

Severe Acute Pain

IV/IO: 0.3mg/kg

IM/IN: 0.5mg/kg

Excited Delirium

IV/IM/IN: 4mg/kg

Rapid Sequence Induction

IV/IO/IM/IN: 2mg/kg

PEDIATRIC DOSAGE:

Severe Acute Pain

0.1-0.2 mg/kg IV

ROUTE: IV, IM, IN,and intraosseous infusion

HOW CARRIED: (Up to Pharmacy Committee)

Quantity:	2 each of 5mL
Form:	Vial
Concentration:	100mg/1mL

Pems Airway Protocol Draft

9914001 Airway, 9914995 Airway – Obstruction/Foreign Body

CRITERIA

- Adult patients where airway and ventilatory support are required
- This includes both medical and trauma conditions

PROTOCOL

EMR	Follow *Universal Patient Care Protocol*	EMR
	FOREIGN BODY AIRWAY OBSTRUCTION	
EMT	If suspected Obstructed Airway, perform obstructed airway sequences in accordance with current American Heart Association guidelines. • Continue sequence until obstruction is cleared or patient becomes unconscious • Then perform obstructed airway sequences in accordance with American Heart Association guidelines while preparing airway equipment	**EMT**
A	Perform laryngoscopy and remove any visible foreign bodies with Magill forceps if unable to ventilate	**A**
EMT	Reassess compliance with BVM: • If adequate oxygenation/ventilation, **continue to BVM or NPA/OPA/Blind Insertion Airway Device (BIAD).**	**EMT**
I	**Attempt Endotracheal Intubation [I- only if patient is over 12 years old]** • **Confirm tube placement and ventilate at 8-10 breaths per minute** • If unsuccessful after 3 attempts or anatomy inconsistent with intubation attempts: **Continue with protocol**	**I**
P	If there is significant facial trauma or airway swelling with inadequate oxygenation/ventilation: **Consider Surgical Cricothyrotomy** or **Needle Cricothyrotomy**	**P**
EMT	Consider spinal immobilization	**EMT**
	Post Advanced Airway	
[I]	If patient is conscious and agitated, reassess patient and confirm advanced airway placement, then consider administration of ***Midazolam (Versed) 2 mg IN or Slow IV/IO, may repeat as needed within 5 minutes after initial dose up to maximum dose of 5 mg*** (including any doses administered during intubation) or ***Ketamine 2mg/kg Slow IV/IO/IM/IN, may repeat as needed within 10 minuites.***	**[I]**
EMT	Reassess tube placement and quality of ventilation frequently during transport and after patient movement	**EMT**

PEARLS

- ✱ Ventilatory rate should be 8-10 breaths per minute during cardiac arrest with an advanced airway in place to maintain $EtCO_2$ of 35 to 45mmHg
- ✱ Use suction to remove blood, secretions and vomitus
- ✱ DO NOT suction for more than 10 seconds between ventilations
- ✱ An intubation attempt is defined as: 30 seconds of non-ventilatory support to include visualization, suctioning of the airway, and tube placement
- ✱ Use of a continuous $EtCO_2$ monitoring device is required to monitor correct tube placement

Airway Device	Ventilations During Cardiac Arrest	Ventilations During Respiratory Arrest
Bag-mask	2 ventilations after every 30 compressions	**1 ventilation every 5 to 6 seconds** (10 to 12 breaths per minute)
Any advanced airway	**1 ventilation every 6 to 8 seconds** (8 to 10 breaths per minute)	

Behavioral Emergencies

9914053 General – Behavioral/Patient Restraint

CRITERIA

- Patients with signs and symptoms of behavioral emergencies that may cause harm to themselves or others

PROTOCOL

EMR	Follow *Universal Patient Care Protocol*, use de-escalation guidelines	**EMR**
EMT	Obtain blood glucose level	**EMT**
	Combative Patients	
EMT	Restrain patient (see *Patient Restraint*, Policies & Procedures)	**EMT**
[I]	If chemical restraint is required, administer ***Lorazepam (Ativan) 1mg IV/IM*** ✱ ***If patient still requires chemical restraint, administer Midazolam (Versed) 5mg IN/IM or 2.5mg IV or Ketamine 4mg/kg IV/IM/IN***, then restrain patient. ✱ If continued chemical restraint is required, consider ***Haloperidol***	**[I]**
A	If patient shows signs of dystonic reaction after Haldol administration, consider ***Diphenhydramine (Benadryl) 25 mg IM or slow IV/IO***	**A**

PEARLS

Consider alternative causes for altered mental status, such as but not limited to:

- **Hypoglycemia**
- **Stroke**
- **Overdose**
- **Head injury**
- **Encephalitis or other CNS infection**

Contact Law Enforcement early

If patient is capable of refusing treatment and/or transport, document all events meticulously. Documentation must be complete, including a description of the patient's mental status and your rationale for obtaining a refusal.

De-Escalation Guidelines:

- Remain calm and friendly. Be aware of your emotions.
- Be mindful of your body language.
- Position yourself between the patient and your exit.
- Maintain a safe distance and refrain from touching patient.
- Keep your hands in front of your body (non-threatening manner).
- Only one provider should communicate with the patient.
- Maintain a soothing tone of voice.
- Listen to the patient's concerns.
- Empathize. Use positive feedback.
- Be reassuring. Outline the patient's choices.
- Be willing to slow down and disengage if appropriate.
- Calmly set boundaries of acceptable behavior.

Make every attempt to ***not*** aggravate or worsen existing injuries or medical conditions.
To determine a patient's mental capacity, consider the following:

- Is the patient in danger of hurting himself or others?
- Could a potential underlying medical emergency exist that might lead to death or which could worsen considerably if not treated soon?
- Is a medical intervention required to avoid deterioration in the patient's condition?
- Has the patient been advised about, and does he understand, the risks of refusing these treatments or interventions?
- Do not place patients who are restrained in the prone position.

Endotracheal Intubation

CRITERIA

- Respiratory failure and/or arrest
- Acute or impending airway loss
- Consider in comatose patient

PROCEDURE

Open airway and begin ventilations
Inspect and prepare ET tube, laryngoscope and suction
Initiate SPO_2 monitoring
Preoxygenate with 100% O_2 for 30 seconds consider Apneic Oxygenation with either a Nasal Cannula or a Smart Cannula at 15 LPM
Intubate the patient: • **Oral: (I or P provider skill only)** Unconscious, absent gag reflex • **Nasal: (P Provider skill only)** Non-apneic patient with gag reflex present • **Pediatrics less than 12: P Provider skill only**
Consider sedation for **post intubation when indicated**: ***Midazolam (Versed) 2 mg IN or Slow IV to maximum dose of 5 mg for adults or 0.2 mg/kg for pediatrics up to a maximum total dose of 5 mg.*** OR ***Ketamine 2mg/kg IN/IM/IV/IO for adults or 1mg/kg for pediatrics***
Apply approved secondary confirmation device (capnography preferred)
Begin ventilations
Confirm tube placement by auscultation
Secure ET tube using a commercial device
Confirm quality of ventilations by observing chest rise and fall
Monitor tube placement with capnography device
Continue ventilations at appropriate rate
Consider spinal immobilization

Excited Delirium

9914169 Excited Delirium

CRITERIA

- Signs and symptoms of excited delirium (ExDS) have a median age of 36 years old but occur in all populations from pediatric to geriatric
- Use of an electronic control device (ECD) such as the Tazer, Oleoresin Capsicum (OC)/Pepper spray, or other less-lethal law enforcement methods to gain control of the patient may have been employed by law enforcement
- Prior history of psychosis or mental illness
- Stimulant drug use, including cocaine, methamphetamines (Meth), synthetic drugs and PCP demonstrates a well established association with ExDS and is usually associated with cases of ExDS death

PROTOCOL

EMR	Follow *Universal Patient Care Protocol*	**EMR**
EMR	Contact Law Enforcement early, scene safety is paramount	**EMR**
EMR	Obtain patient history for: • Evidence of excited delirium prior to application of ECD, OC spray, or other less-lethal law enforcement methods that may have been used to gain control of the patient • Known or suspected stimulant drug use including but not limited to: cocaine, methamphetamines, synthetic drugs or PCP • Known failure to comply with prescribed medications for mental illness • Cardiac history Obtain further assessment for: • Altered level of consciousness • Evidence of hyperthermia by either touch (hot to touch away from direct sunlight) or tympanic/temporal temperature more than 38.8°C/102°F. Abnormal complaints including: shortness of breath, chest pain, nausea, or headache • Diaphoresis unexplained by environment • Suspected cervical spine or other significant musculoskeletal injury (Immobilize appropriately as soon as it is safe to do so)	**EMR**
EMR	Initial Care: • If ECD (Tazer) utilized, prior to patient contact, ensure that the ECD cartridge is not attached to the device. *See Tazer Barb Removal procedure* • Patient should be in supine or lateral recumbent position. **DO NOT** place patient in prone position • Administer high flow oxygen regardless of pulse oximetry reading • Obtain blood glucose level	**EMR**
	*See Patient Restraint Policy*	
	*See Behavioral Emergency*	
	*See Altered Level of Consciousness*	
I	If patient still combative or exhibiting signs of excited delirium, Administer ***Versed (Midazolam) 5 mg IN/IM*** titrated to effect OR Administer ***Versed (Midazolam) 2 mg IV,*** titrated, to a ***maximum dose of 5mg***	**I**

I	OR Administer ***Ketamine 4mg/kg IV/IM/IN*** titrated to effect	I
MC	Contact Medical Control if patient remains combative	MC
EMR	Obtain tympanic/temporal temperature if practical.	EMR
I	If temperature is more than 38.8°C/102°F or patient is hot to the touch, administer ***Sodium Bicarbonate 50 mEq*** by mixing in one (1) liter of ***0.9% Normal Saline*** and infuse wide open. In addition, cool hyperthermic patient by use of cool water, Apply ice packs to the axillae, neck and groin , or by removing layers of clothing Cold fluid may be painful in the conscious patient If cooled solution is not available, do not withhold administration of normal saline	I
I	Obtain a 12-Lead ECG, Right-sided ECG and 15-Lead ECG; pulse oximetry; end-tidal CO2 devices; monitor cardiac and respiratory status throughout transport	I
MC	Once the maximum dose of ***Versed*** has been reached and the signs of excited delirium persist, contact Medical Control	MC

PEARLS

- Consider encephalitis or other Central Nervous System (CNS) infections
- Consider sepsis
- Excited Delirium is a condition in which a patient is in a psychotic state and extremely agitated. Mentally, the patient is unable to focus and process any rational thought or focus his attention to any one thing. Physically the organs within the patient are functioning at such an excited rate that they begin to shut down. These two factors occurring at the same time cause the patient to act erratically. They become a danger to themselves and to the public. This is typically where law enforcement comes into contact with the patient. Possible causes of excited delirium may include, but are not limited to:
    - Overdose on stimulant (typically cocaine) or hallucinogenic drugs. NOTE: This is the cause in the majority of cases where an ECD is needed.
    - Drug withdrawal
    - Psychiatric patient off medication
    - Illness/sepsis
    - Low blood sugar
    - Psychosis/mental illness
    - Head trauma
- Symptoms of excited delirium include:
    - Bizarre and aggressive behavior
    - Dilated pupils
    - High body temperature

- Incoherent speech
- Inconsistent breathing patterns
- Fear and panic
- Profuse sweating
- Shivering
- Nakedness

* High body temperature is a key finding in predicting a high risk of sudden death. Another key symptom to impending death while experiencing excited delirium is "instant tranquility". This is when the person has been very violent and suddenly becomes quiet and docile.

TABLE 1
Potential Prehospital ExDS Features and Frequencies

FEATURE	FREQUENCY % (95% CI)
Pain Tolerance	100 (83-100)
Tachypnea	100 (83-100)
Sweating	95 (75-100)
Agitation	95 (75-100)
Tactile Hyperthermia	95 (75-100)
Police Noncompliance	90 (68-99)
Lack of Tiring	90 (68-90)
Unusual Strength	90 (68-90)
Inappropriately Clothed	70 (45-88)
Mirror/Glass Attraction	10

TABLE 2
AEIOU TIPS Mnemonic for Abbreviated Differential Diagnosis of Altered Mental Status

Letter	Description
A	Alcohol
E	Endocrine, Encephalopathy, Electrolytes
I	Insulin (hypoglycemia)
O	Oxygen (hypoxia), Opiates (drugs of abuse)
U	Uremia
T	Toxins, Trauma, Temperature
I	Infection
P	Psychiatric, Porphyria
S	Stroke, Shock, Subarachnoid Hemorrhage, Space-Occupying CNS Lesion

TABLE 3
SMASHED 2 Mnemonic for Differential Diagnosis For Altered Mental Status

Letter	Title	Description
S	Substrates	glucose (high/low), thiamine deficiency
	Sepsis	
M	Meningitis	all CNS infections, AIDS dementia, encephalitis, brain abscess or toxoplasmosis
	Mental illness	acute psychosis, medication noncompliance, mania, depression, malingering, rage, suicide intent (via police)
A	Alcohol	intoxication, withdrawal
	Accident	head trauma, CVA, cerebral contusion, subdural or epidural hematoma
S	Seizing	or postictal
	Stimulants, hallucinogens, anticholinergics	Cocaine, amphetamines, caffeine, PCP, LSD, ketamine, psilocybin, antihistamines, atropine, scopolamine, jimson weed
H	Hyper	hypertension, hyperthyroidism, hypercarbia, hyperthermia
	Hypo	hypotension, hypothyroidism, hypoxia, hypothermia
E	Electrolytes	hyper/hyponatremia, hypercalcemia
	Encephalopathy	hepatic, HIV, uremic, hypertensive, lead, Reye's syndrome, CNS tumor
D	Drugs	intoxication or withdrawal
	Don't forget other drugs	carbon monoxide, lithium, steroids, salicylates, designer/street drugs, theophylline, MDMA, antipsychotics, toxins not on routine drug screen, others

Intranasal Medication Delivery

CLINICAL INDICATIONS

- Patients needing medication delivery where IV may be difficult or delayed
- Patients needing medication delivery where IO may not be suitable

PRECAUTIONS

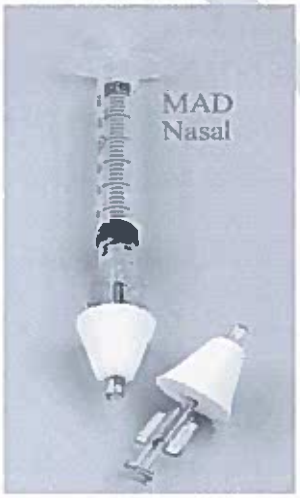
- **DO NOT** administer more than 1mL of medication/substance per nostril within a 10-15 minute period
- **DO NOT** exceed maximum doses of medication when utilizing Intranasal (IN) in combination with any other delivery method of the same medication such as IV/IO

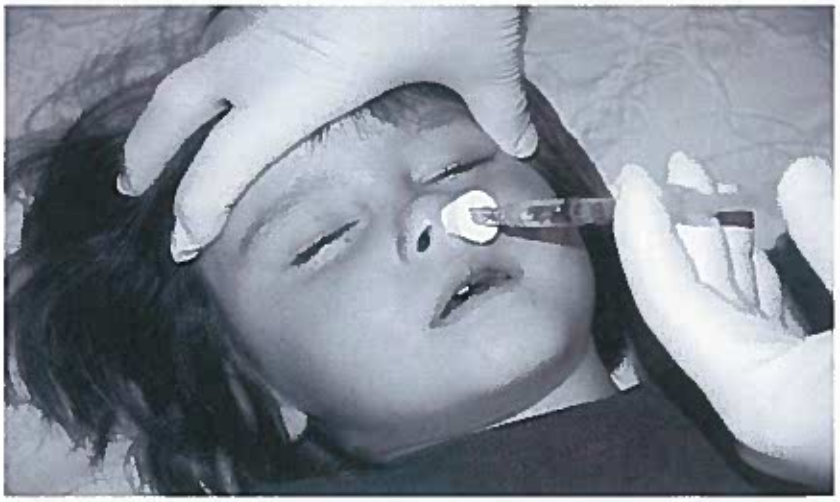
CONTRAINDICATIONS

- **DO NOT** administer IN medications with any nasal trauma or bleeding from the nose

PROCEDURE

Identify the need for IN medication delivery
Prepare the delivery device and medication according to the manufacturer's recommendation
Explain the procedure to the patient
Use a method that fragments the medication into fine particles so maximal nasal mucosal surface is covered and minimal volume runs out the nose or into the throat
Utilize both nostrils to double the surface area for absorption and halve the volume delivered per nostril
Deliver medication in the nostril; **DO NOT** exceed more than 1mL per nostril in any 10-15 minute period; verify you are not exceeding maximum doses
Document time of medication delivery, nostril(s) used to deliver medication, and response
Drugs which can be given by intranasal route (IN): Glucagon, Ketamine, Midazolam (Versed), Naloxone (Narcan), Sublimaze (Fentanyl)





Pems Pain Management Draft

9914071 General – Pain Control

CRITERIA

Non-cardiac pain from causes such as, but not limited to:

- Suspected kidney stones
- Sickle-cell crisis
- Isolated extremity injuries
- Cancer

PROTOCOL

EMR	Follow *Universal Patient Care Protocol*	**EMR**
EMR	Assess/measure baseline pain level using scale below	**EMR**
EMR	Assess for systolic blood pressure greater than 90 mmHg	**EMR**
	Pain from Non-Cardiac Causes	
I	Administer ***Zofran (Ondansetron) 4mg IV/IO/IM***	**I**
I	***Fentanyl (Sublimaze) 25-100 mcg IN, IM, or IV/IO over 2 minutes as*** initial dose; may repeat ***25 mcg every 5 minutes*** titrated to pain relief, ***up to maximum dose of 100 mcg*** as long as systolic blood pressure is greater than 90 mmHg and patient remains conscious ***or*** ***Morphine Sulfate 5 mg IV/IO, IM over 1 minute,*** repeat ***2 mg every 5 minutes,*** titrated to pain relief ***(maximum dose 10 mg)*** as long as patient's systolic blood pressure is greater than 90 mmHg	**I**
	Intractable Pain Management (e.g. Long Bone Fracture, Burns)	
I	Administer ***Ketamine 0.3 mg/kg IV/IO, 0.5mg/kg IM/IN with Fentanyl (Sublimaze)*** titrated to pain relief, repeat dose in 10 minutes if necessary.	**I**

PEARLS

- Exercise caution with patients who have used medication, alcohol, or illicit drugs prior to your arrival.
- Pain management medication options are available for the provider to select the medication that best meets the needs of the patient and assessment findings (allergies, etc.)
- If too much pain management medication is administered and the patient's mental status deteriorates, the provider may consider the use of Narcan to reverse the effects

	0	1	2	3	4	5
	NO HURT	HURTS LITTLE BIT	HURTS LITTLE MORE	HURTS EVEN MORE	HURTS WHOLE LOT	HURTS WORS
Alternate coding	0	2	4	6	8	10

Wong-Baker FACES Pain Rating Scale

Pediatric Pain Management

9914071 General – Pain Control

CRITERIA

Consider the totality of circumstances utilizing patient assessment, pain assessment tools, overall impression, and nature of the call from causes such as, but not limited to:

- Sickle-Cell crisis
- Isolated extremity injuries
- Cancer

PROTOCOL

EMR	Follow *Universal Patient Care Protocol*	**EMR**
EMR	Assess/measure baseline pain level using scale below	**EMR**
EMR	Assess for systolic blood pressure within normal limits	**EMR**
I	For pediatric patients greater than one year of age and less than 40 kg administer ***Zofran (Ondansetron) 0.15 mg/kg slow IV/IO up to a maximum dose of 4 mg*** as necessary for nausea/vomiting For pediatric patients greater than one year of age and greater than 40 kg administer ***Zofran (Ondansetron) 4 mg slow IV/IO*** as necessary for nausea/vomiting	**I**
[I]	***Morphine Sulfate 0.1mg/kg IV/IO/IM*** up to **maximum dose of 5 mg** OR ***Ketamine 0.1-0.2mg/kg IV/IO/IM*** up to a **maximum dose of 10 mg**	**[I]**

PEARLS

✱ Consider ***Narcan (Naloxone) 0.1 mg/kg IV/IO, IN or IM*** to a **maximum dose of 2 mg** if respiratory depression occurs

Wong-Baker Faces Scale

FLACC SCALE (FACE, LEGS, ACTIVITY, CRY, CONSOLABILITY)			
FACE	**0** No particular expression or smile	**1** Occasional grimace or frown, withdrawn, disinterested	**2** Frequent to constant frown, clenched jaw, quivering chin
LEGS	**0** Normal position Or relaxed	**1** Uneasy, Restless, Tense	**2** Kicking, Or Legs drawn up
ACTIVITY	**0** Lying quietly Normal position Moves easily	**1** Squirming Shifting back/forth Tense	**2** Arched Rigid Or Jerking
CRY	**0** No Cry (Awake or Asleep)	**1** Moans or Whimpers Occasional Complaint	**2** Crying Steadily Screams or Sobs Frequent Complaints
CONSOLABILITY	**0** Content Relaxed	**1** Reassured by occasional touching, hugging, or 'talking to.' Distractible	**2** Difficult to console or comfort.

The **FLACC** is a behavior pain assessment scale for use in non-verbal patients unable to provide reports of pain.

Instructions:
1. Rate patient in each of the five measurement categories
2. Add Together
3. Document total pain score