



**General Medicine
PAIN MANAGEMENT
Practice Guideline**

Patient Care Goals:
 1. Compassionately manage all patients with pain
 2. Minimize adverse events in the treatment of pain

Patient Presentation:
Inclusion Criteria
 All pts w/pain may benefit from non-pharmacological intervention
 All pts w/acute traumatic pain, cancer related pain, or sickle cell crisis with moderate or severe pain should be screened for analgesia administration
 Paramedic clinical judgment for other conditions
Exclusion Criteria
 None

Patient management
*** Fentanyl Treatment:**
 0.5 to 1 mcg/kg IN/IV/IO/IM, max single dose 100 mcg
 Repeat dosing up to maximum subsequent dose 100 mcg can be given every 10 minutes
 Maximum cumulative dose 300 mcg over duration of care
 Provider judgment and patient response should guide dosing strategy; caution with hypotension
Note: Fentanyl is indicated for ACS pain management when nitro is contraindicated, accompanied by saline bolus if hypotension concerns

§ Ketamine Treatment:
 0.1 mg/kg for IV/IO
 Dilute 100mg in 100mL; max dose 10mg
 0.5 mg/kg for IM
 Do not dilute; max dose 50mg
 May repeat q 10mins for a total of 3 doses
 Ideal for painful EMS procedure, pts with hypotension or at risk for hypoventilation; PRN alternative to opioids

Minor Pain or Adjunctive Treatment:
Acetaminophen
 10 to 15 mg/kg PO; max of 1,000 mg (can use tablets for larger patients)

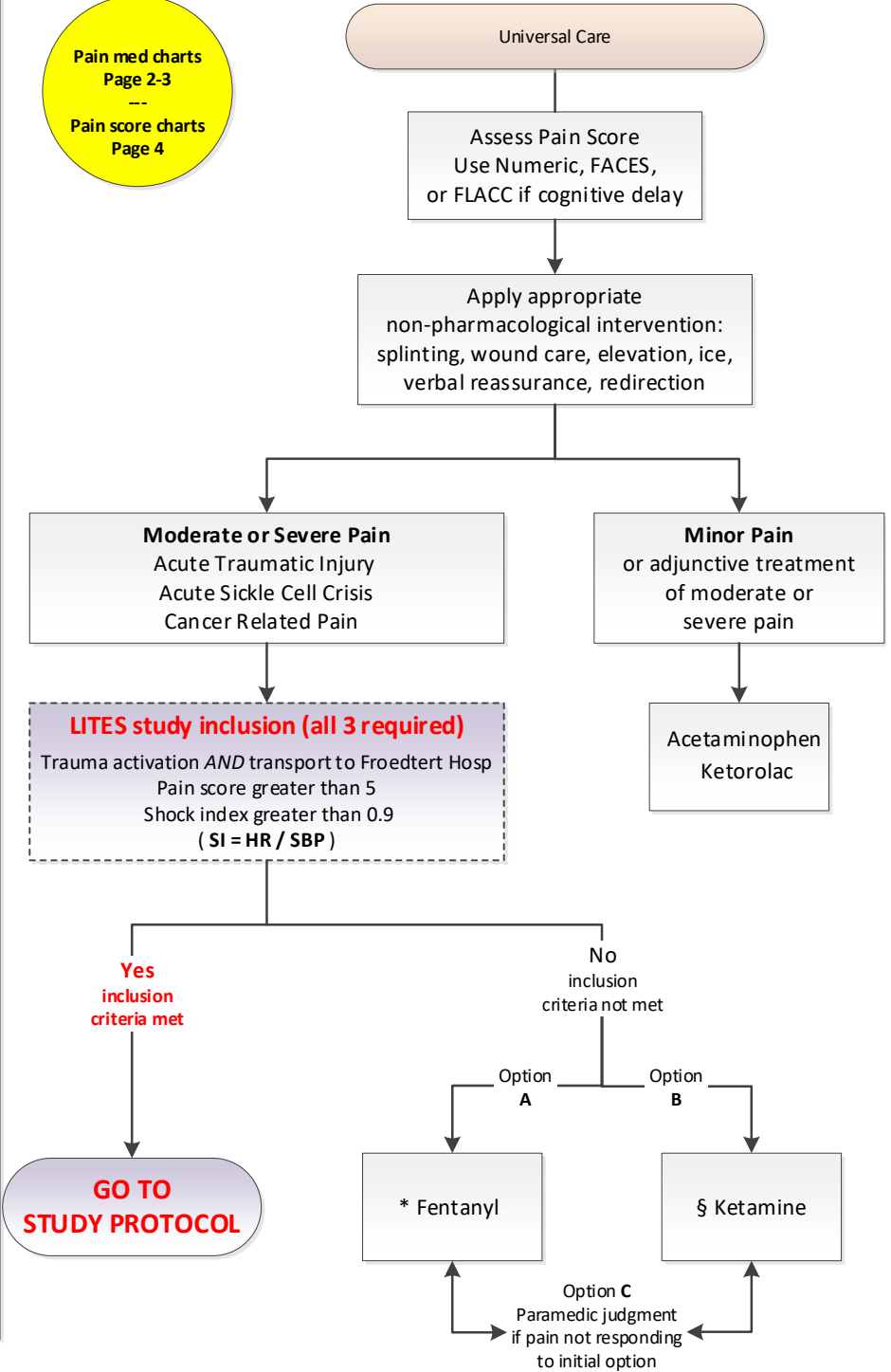
Ketorolac
 Adult dose: 15 mg IV/IO slow push
 1 mg/kg IM, max dose 60 mg
 Pediatric dose: 0.5 mg/kg IV/IO slow push, max of 15 mg
 1 mg/kg IM, max dose 60 mg
 Ketorolac is single dose administration

Patient Safety Considerations:
 Non-invasive capnography to assess for hypoventilation; use escalation of stimulation, NPA/OPA airway adjunct, BVM and/or naloxone if hypoventilation occurs/continues

Quality Improvement:
 Key Documentation Elements
 1. Initial and recurring pain score; numeric, FACES, FLACC
 2. ETCO2 provider concern for respiratory depression
 3. Pulse Oximetry
 4. Subsequent need for BVM or naloxone

Pain med charts
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Pain score charts
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 Revision 12

Approved: Benjamin Weston, MD, MPH Medical Director
 Approved: Dan Pojar, BSEMS, FP-C, NRP EMS Division Director
 WI DHS EMS Approval: 03/18/2018

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FENTANYL															
FENTANYL	ADULT DOSE	PEDIATRIC DOSE				ADMINISTRATION GUIDELINE				INDICATIONS	CONTRA-INDICATIONS	MACC			
Analgesia IV/IO SLOW PUSH IM/IN	0.5-1 mcg/kg Max single dose 100 mcg Max total 300 mcg				IV/IO <u>slow</u> push given over 1 minute IM/IN				Analgesia Post airway sedation, given with Midazolam	Respiratory depression Refractory hypotension					
	Concentration: 100 mcg in 2 mL														
Analgesia	Weight (kg)	5	10	15	20	25	30	35	40	50	60	70	80	90	100
	Dose (mg)	5	10	15	20	25	30	35	40	50	60	70	80	90	100
	(1 mg/kg)	0.1 mL	0.2 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL	0.7 mL	0.8 mL	1 mL	1.2 mL	1.4 mL	1.6 mL	1.8 mL	2 mL

KETAMINE - ANALGESIA															
KETAMINE	ADULT DOSE	PEDIATRIC DOSE				ADMINISTRATION GUIDELINE				INDICATIONS	CONTRA-INDICATIONS	MACC			
Analgesia IM	0.5 mg/kg Max Dose 50 mg				Do not dilute				Pain Control						
	Concentration: 500 mg in 5 mL														
Analgesia	Weight (kg)	5	10	15	20	25	30	35	40	50	60	70	80	90	100
	Dose (mg)	0	5	8	10	13	15	18	20	25	30	35	40	45	50
	(0.5mg/kg)	0 mL	0.1 mL	0.1 mL	0.1 mL	0.1 mL	0.2 mL	0.2 mL	0.2 mL	0.3 mL	0.3 mL	0.4 mL	0.4 mL	0.5 mL	0.5 mL
Analgesia IV/IO SLOW PUSH	0.1 mg/kg Max Dose 10 mg				Dilute 100 mg into 100 mL bag <i>Draw off weight-based dose</i> Slow push given over 2 minutes				Pain Control						
	Concentration: Dilute 100 mg in 100 mL														
Analgesia	Weight (kg)	5	10	15	20	25	30	35	40	50	60	70	80	90	100
	Dose (mg)	0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
	(0.1mg/kg)	0.5 mL	1 mL	1.5 mL	2 mL	2.5 mL	3 mL	3.5 mL	4 mL	5 mL	6 mL	7 mL	8 mL	9 mL	10 mL

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KETOROLAC														
KETOROLAC	ADULT DOSE		PEDIATRIC DOSE		ADMINISTRATION GUIDELINE					INDICATIONS	CONTRA-INDICATIONS	MACC		
Analgesia IV/IO SLOW PUSH	15 mg		0.5 mg/kg Max dose 15 mg		IV/IO <u>slow</u> push given over 2-3 minutes Single dose medication					Pain Control	NSAID use within 6hr Anticoagulation use Known pregnancy Major bleeding			
	Concentration: 30 mg in 1 mL													
Weight (kg)	5	10	15	20	25	30	35	40	50	60	70	80	90	100
Dose (mg)	2.5	5	7.5	10	12.5	15	15	15	15	15	15	15	15	15
Analgesia (0.5mg/kg)	0.1 mL	0.2 mL	0.3 mL	0.3 mL	0.4 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL
Analgesia IM	1 mg/kg Max dose 60 mg		1 mg/kg Max dose 60 mg		IM Single dose medication					Pain Control	NSAID use within 6hr Anticoagulation use Known pregnancy Major bleeding			
	Concentration: 30 mg in 1 mL													
Weight (kg)	5	10	15	20	25	30	35	40	50	60	70	80	90	100
Dose (mg)	5	10	15	20	25	30	35	40	60	60	60	60	60	60
Analgesia (0.1mg/kg)	0.2 mL	0.3 mL	0.5 mL	0.7 mL	0.8 mL	1 mL	1.2 mL	1.3 mL	2 mL	2 mL	2 mL	2 mL	2 mL	2 mL

ACETAMINOPHEN														
ACETAMINOPHEN	ADULT DOSE		PEDIATRIC DOSE		ADMINISTRATION GUIDELINE					INDICATIONS	CONTRA-INDICATIONS	MACC		
Analgesia PO	1 g (2 tablets)		10-15 mg/kg 1 g max Liquid only		PO					Pain Management	Known liver disease Impaired swallowing			
	Concentration: Tablets: 500 mg each Liquid Suspension: 160 mg in 5 mL													
Weight (kg)	5	10	15	20	25	30	35	40	50	60	70	80	90	100
Dose (mg)	64	128	224	288	352	416	480	576	1000	1000	1000	1000	1000	1000
Analgesia (0.1mg/kg)	2 mL	4 mL	7 mL	9 mL	11 mL	13 mL	15 mL	18 mL	2 tabs	2 tabs	2 tabs	2 tabs	2 tabs	2 tabs

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0



2



4



6



8



10

FLACC Pain Scale

Criteria	Score = 0	Score = 1	Score = 2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, uninterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting, back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or being talked to, distractible	Difficult to console or comfort

Numeric Pain Scale

