Acute Care Opioid Table painandpsa.org

Opioid [1]	Initial dosing [4]	Onset (mins)	Peak effect (hrs)	Duration (hrs)	Commonly used formulations	Comments
PO Morphine	7.5 or 15 mg po Q 4 hrs	15-20	0.5 - 1	3 - 5	15, 30 mg tablets	
PO Hydromorphone	2 mg PO Q 4 hrs	15-20	0.5 - 1	3 - 5	2, 4, 8 mg tablets	
PO Hydrocodone	5 - 10 mg PO Q 4-6 hrs	15-20	0.5 - 1	3 - 5	5, 7.5, 10 mg tablets	All IR preparations in US contain acetaminophen or ibuprofen
PO Oxycodone	5 mg PO Q 4-6 hrs	15-20	0.5 - 1	3 - 5	5, 15, 30 mg tablets	Often combined with acetaminophen Most euphoric commonly-used oral opioid
PO Codeine	30-60 mg PO Q 4 hrs	30 - 60	0.5 - 1	3-5	15, 30, 60 mg tablets	Often combined with acetaminophen Variable metabolism leads to unpredictable effects and toxicity Alternatives preferred Should not be used in children
PO Tramadol	50 mg PO Q 6 hrs	30 - 60	1.5	3 - 7	50 mg tablets	Risk of seizure even at therapeutic doses, serotonin syndrome, hypoglycemia, hyponatremia Alternatives preferred Maximum daily dose 400 mg
IV Morphine	0.05-0.1 mg/kg IV/SQ Q 3h	2 - 5	0.25 - 0.5	3 - 5	2, 4, 8, 10, 15 mg/mL	Toxic metabolites accumulate in renal failure
IV Fentanyl	0.01 - 0.02 mg/kg (1 - 2 mcg/kd) IV/SQ q 2h	2 -5	0.1 - 0.25	2 - 3	50 mcg/mL	High potency and unusual units (mcg) - use extra caution when dosing
IV Hydromorphone	0.2-1 mg IV/SQ Q 4 hrs	2 - 5	0.25 - 0.5	3 - 5	0.5, 1, 2 mg/mL	IV hydromorphone potency often underestimated Most euphoric of commonly used IV opioids Toxic metabolites accumulate in renal failure
IN Fentanyl	1.5-2 mcg/kg Q 15-30 min	5 - 10	0.5	1	50 mcg/mL	Use parenteral preparation of 50 mcg/mL for up to 50kg, and 100 mcg/mL for >50kg, goal is 0.2-0.5 mL per nostril Max 1 mL per nostril Dose should be divided between nostrils
BAN Fentanyl [2]	2-4 mcg/kg Q 15-30 min	10 - 15	0.5	1 - 2	50 mcg/mL	Use parenteral preparation of 50 mcg/mL with min dose 1 mL and max of 6 mL
BAN Morphine [2]	20 mg Q 15-30 min	15 - 20	0.5	1 - 2	2, 4, 8, 10, 15 mg/mL	Use parenteral preparation of 5 mg/mL with min dose 1 mL and max of 6 mL
IV/IM Buprenorphine	0.3 mg IV or 0.6 mg IM 2-3 mcg/kg IV in children	2 - 5	1	2-3	0.3 mg/mL	Caution that patient is not opioid dependent Maximum dose is 0.6 mg IV q6h
SL Buprenorphine [3]	0.5 mg SL	10 - 15	1 - 2	6	2, 4, 8 mg SL tablet or film	May precipitate opioid withdrawal in opioid dependent patients Dosing strategies for acute pain are widely variant
IV Ketamine	0.1 - 0.3 mg/kg (or 20 mg) infusion over 15-30 minutes	2 - 5	0.5	0.5 - 1	10, 50, 100 mg/mL	Continuous infusion: 0.1-0.3 mg/kg/hour Slower infusion times diminish psychoperceptual effects, allowing larger doses
IN Ketamine	0.75-1 mg/kg	10 - 15	1	1 - 2	10, 50, 100 mg/mL	Goal is 0.2-0.5 mL per nostril Max 1 mL per nostril Dose should be divided between nostrils

Reuben Strayer, Sergey Motov, & Lewis Nelson, eds.

[1] This table refers to immediate release preparations
[2] BAN = breath-actuated nebulizer. Values are based on scant, preliminary data
[3] Buprenorphine is not currently an accepted treatment for acute pain but has important advantages over alternatives and ED-based data are evolving. Analgesic dosing in opioid-naive patients is much lower than opioid agonist treatment dosing in opioid-dependent patients.
[4] Initial dosing applies to 60 kg, non-elderly, well, opioid-naive adult. Smaller patients, patients with organ dysfunction (especially renal, hepatic, or respiratory disease) and patients who are systemically ill should receive smaller doses and less frequent re-dosing. Larger patients may not require higher dosing.