MEDICATION	EQUIANALGESIC DOSE (for chronic dosing)		USUAL STARTING DOSES for ADULT>50kg* (◆1/2 dose for elderly or severe renal or liver disease)		COMMENTS
	IM/IV onset 15-30 min	**PO** onset 30-60 min	**PARENTERAL**	**PO**	
MORPHINE	10 mg	30 mg	2.5-5 mg SC/IV q3-4h (◆1.25–2.5 mg)	5-15 mg q3-4h IR or Oral Solution (◆2.5-7.5 mg)	IR tablets (15,30mg); Rectal suppository (5,10,20,30mg) Oral solution (2mg/ml, 4 mg/ml); Concentrate (20mg/ml) can give buccally ER tablets (15,30,60,100,200mg) q8-12h (MS Contin) ER capsules (10,20,30,40,50,60,70,80,100,130,150,200mg) q12-24h (Kadian) Morphine/Naltrexone capsules (20/0.8, 30/1.2, 50/2, 60/2.4, 80/3.2, 100/4mg) q12-24h – Designed with abuse-deterrent properties (Embeda) **Use carefully in renal failure.**
HYDROCODONE	Not available	30 mg	Not Available	5 mg q3-4h (◆2.5 mg)	APAP combo tablets - 2.5-10mg hydrocodone with 300-325mg APAP; APAP combo solution - 2.5mg hydrocodone with 108mg APAP per 5ml IBU combo tablets - 2.5-10mg hydrocodone with 200mg ibuprofen ER capsules (10,15,20,30,40,50) ER tablets (20,30,40,60,80,100mg) – designed with abuse-deterrent properties **Use carefully in renal failure.**
OXYCODONE	Not Available	20 mg	Not Available	5-10 mg q3-4h IR or Oral Solution (◆2.5 mg)	IR capsule (5mg); IR tablets (5,10,15,20,30mg) Oral solution (5mg/5ml) Concentrate (20mg/ml) ER tablets (10,15,20,30,40,60,80mg) q8-12h (Oxycontin) - designed with abuse-deterrent properties APAP combo - 2.5-10mg oxycodone combined with 300-325mg APAP; Ibuprofen combo and ASA combo also available. **Combos generally not recommended for chronic use.** **Not enough literature regarding dosing in renal failure. Use caution.**
FENTANYL	100 mcg (single dose) t ½ and duration of parenteral doses variable	24 hour MS dose / Initial patch dose 30-59 mg / 12 mcg/h 60-134 mg / 25 mcg/h 135-224 mg / 50 mcg/h 225-314 mg / 75 mcg/h 315-404 mg / 100 mcg/h	25-50 mcg IM/IV q1-3h (◆12.5-25 mcg)	Transdermal patch 12 mcg/h q72h (use with caution in opioid naïve and in unstable patients because of 12h delay in onset and offset)	Transdermal patch (12,25,37.5,50,62.5,75,87.5,100mcg) If transitioning from IV fentanyl to patch, hourly rate is the patch dose; eg. if patient is on 50mcg/h IV, start with 50mcg patch. **N.B. Incomplete cross-tolerance already accounted for in conversion to fentanyl; when converting to other opioid from fentanyl, generally reduce the equianalgesic amount by 50%.** IV: very short acting; associated with chest wall rigidity. IR: Buccal tablet, Nasal solution, SL tablet, Lozenge; SL spray **- Indicated for breakthrough cancer pain only.** **Seek consult.** **Acceptable in renal failure, monitor carefully if using long term.**
HYDROMORPHONE	1.5 mg	7.5 mg	0.2-0.6 mg SC/IV q2-3h (◆0.2 mg)	1-2 mg q3-4h (◆0.5-1 mg)	Tablets (2,4,8mg); Oral solution (1mg/ml); Suppository (3mg) ER tablets (8,12,16,32mg) **Use carefully in renal failure.**
OXYMORPHONE	1 mg	10 mg	1-1.5 mg IM/SQ q4-6h (◆0.5 mg)	10 mg q4-6h IR TABLE (◆5 mg)	IR tablets 5,10mg ER tablets 5,7.5,10,15,20,30,40mg – designed with abuse-deterrent properties **Use carefully in renal failure and liver impairment.**
BUPRENORPHINE	Not available	24 hour MS dose / Initial patch dose <30 mg / 5 mcg/h 30-80 mg / 10 mcg/h	Not Available	5 mcg/h patch q7 days (opiod-naïve) (no adjustment) 75 mcg buccally q12-24h (37.5 mg severe hepatic failure only)	Transdermal patch (5,7.5,10,15,20mcg/h) q7 days (Butrans) Maximum dose 20mcg/h for patch Buccal film (75,150,300,450,600,750,900mcg) q12-24h (Belbuca) Initiate treatment with 75mcg film qd or q12h as tolerated, before increasing dose. Half-life of 20-70 hours. Caution for risk of QTc prolongation. **No dosage adjustment required for renal failure.**
CODEINE (information provided for conversion to opioids only)	130 mg	200 mg	15-30 mg IM/SC q4h (◆7.5-15 mg) IV Contraindicated	30-60 mg q3-4h (◆15-30 mg)	Tablets (15,30,60mg); Solution (30mg/5ml); APAP combo solution (12mg with 120mg APAP/5ml) APAP combo tablets (15,30,60mg codeine w/300mg APAP) **Monitor total acetaminophen dose.**
METHADONE (see separate sheet with detailed dosing information)	1/2 oral dose 2 mg PO methadone = 1 mg parenteral methadone	Seek Consult	1.25-2.5 mg q8h (◆1.25 mg) Consider Palliative Care or Pain Service Consult	2.5-5 mg q8h (◆1.25-2.5 mg) Consider Palliative Care or Pain Service Consult	Tablets (5,10mg); Solution (1mg/ml, 2mg/ml); Concentrate (10 mg/ml) Usually q12h or q8h; Long variable t½; and high interpatient variability. Small dose change makes big difference in blood level. Tends to accumulate with higher doses; always write "hold for sedation." **Because of long half-life, do not use methadone prn unless experienced.** **Acceptable with renal disease.**

* - "Usual starting doses" applies to opioid naïve patients, not for patients who have been on opioids and whose starting dose should take their usual consumption into account.

HALF LIFE (hours)	DURATION (hours)
1.5-2	3-7
3.3-4.5	4-6
3-4	4-6
13-22 (Patch) 7 (Lozenge) 12-22 (Buccal) 15-25 (Intranasal)	48-72 (Patch) 60+ min (Lozenge) 120+ min (Buccal) 120+ min (Intranasal)
2-3	4-5
7-10	4-6
26 (Patch) 27.6 ± 11.2 (Buccal)	168 (Patch) 12-24 (Buccal)
3	4-6
15-190 (N.B. Huge Variaton)	6-12

GUIDELINES

1. Assess and manage pain in adult patients using the CPPM Adult Guide.

   N.B. Opioids are not first line for chronic pain, even moderate to severe pain, which should be managed with an active approach and non-opioid pain relievers whenever possible. When opioids are indicated, based on a careful risk assessment, combine with an active approach and other measures. Be wary of dose escalation over time due to tolerance.
2. How to dose opioids:
   A. Give baseline medication around the clock.
   B. For breakthrough pain order 10% total daily dose as a PRN given q 1-2h for oral and q 30-60 min for SC/IV.
   C. For continuous infusion, PRN can be either the hourly rate q 15 min or 10% of total daily dose q 30-60 min.
   D. Adjust baseline upward daily in amount roughly equivalent to total amount of PRN.
   E. Balance function vs. acceptable control of pain.
3. In general, oral route is preferable, then trans-cutaneous > subcutaneous > intravenous.
4. If parenteral medication is needed for mild to moderate pain, use half the usual starting dose of morphine or equivalent.
5. Use a short-acting medication for acute pain exacerbation. Switch to long-acting preparations when pain is chronic and the total daily dose is determined.
6. Avoid multiple agents of similar duration.
7. When converting from one opioid to another, some experts recommend reducing the equianalgesic dose by 1/3 to 1/2, then titrate as in #2 above.
8. Older adults, or those with severe renal or liver disease, should start on half the usual starting dose. Watch carefully for toxicity from accumulation.
9. Use care with combinations. Ensure total consumption of APAP from ALL sources & ALL purposes does not exceed 3 g/day (2-3 g for frail elders).
10. Patients with substance abuse history may need a higher starting dose due to tolerance. Monitor urine drug screenings. Consider abuse-deterrent opioids.
11. Refer to product information fentanyl use. Review CPPM methadone and buprenorphine guidelines.
12. Refer to Bassett protocol for naloxone use.
13. Avoid codeine and tramadol if breastfeeding.

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Equianalgesic Table for Adults

Half-life, Duration, Dosing and Guidelines

(Tailor care to individual needs.)

Community Principles of Pain Management

Adapted by Specialty Advisory Group, 2002
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Approved in April 2017.
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Additional pain management resources are available at CompassionAndSupport.org

Compassion and Support
at the End of Life
CompassionAndSupport.org