Table 2. Specific Drug Information for Extended-Release and Long-Acting Opioid Analgesics (ER/LA Opioid Analgesics)

Avinza	**Morphine Sulfate ER Capsules, 30 mg, 45 mg, 60 mg, 75 mg, 90 mg, and 120 mg**
Dosing interval	Once a day
Key instructions	▪ Initial dose in opioid non-tolerant patients is 30 mg. ▪ Titrate using a minimum of 3-day intervals. ▪ Swallow capsule whole (do not chew, crush, or dissolve). ▪ May open capsule and sprinkle pellets on applesauce for patients who can reliably swallow without chewing; use immediately. ▪ Maximum daily dose: 1600 mg due to risk of serious renal toxicity by excipient, fumaric acid.
Specific drug interactions	▪ Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of morphine. ▪ PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold.
Use in opioid-tolerant patients	90 mg and 120 mg capsules are for use in opioid-tolerant patients only.
Product-specific safety concerns	None
Butrans	**Buprenorphine Transdermal System, 5 mcg/hr, 10 mcg/hr, 20 mcg/hr**
Dosing interval	One transdermal system every 7 days
Key instructions	▪ Initial dose in opioid non-tolerant patients when converting from less than 30 mg morphine equivalents, and in mild to moderate hepatic impairment - 5 mcg/hr dose. ▪ When converting from 30 mg to 80 mg morphine equivalents – first taper to 30 mg morphine equivalent, then initiate with 10 mcg/hr dose. ▪ Titrate after a minimum of 72 hours prior to dose adjustment. ▪ Maximum dose: 20 mcg/hr due to risk of QTc prolongation. Application: ▪ Apply only to sites indicated in the Full Prescribing Information. ▪ Apply to intact/non-irritated skin. ▪ Skin may be prepped by clipping hair, washing site with water only ▪ Rotate site of application a minimum of 3 weeks before reapplying to the same site. ▪ Do not cut. ▪ Avoid exposure to heat. ▪ Dispose of used/unused patches by folding the adhesive side together and flushing down the toilet.
Specific drug interactions	▪ CYP3A4 Inhibitors may increase buprenorphine levels. ▪ CYP3A4 Inducers may decrease buprenorphine levels. ▪ Benzodiazepines may increase respiratory depression. ▪ Class IA and III antiarrythmics, other potentially arrhythmogenic agents, may increase risk for QTc prolongation and torsade de pointe.
Use in opioid-tolerant patients	Butrans 10 mcg/hr and 20 mcg/hr transdermal systems are for use in opioid- tolerant patients only.
Drug-specific safety concerns	▪ QTc prolongation and torsade de pointe. ▪ Hepatotoxicity ▪ Application site skin reactions
Relative potency to oral morphine	Equipotency to oral morphine has not been established.

continued

Table 2. Specific Drug Information for Extended-Release and Long-Acting Opioid Analgesics (ER/LA Opioid Analgesics) continued

Dolophine	**Methadone Hydrochloride Tablets, 5 mg and 10 mg**
Dosing interval	Every 8 to 12 hours
Key instructions	■ Initial dose in opioid non-tolerant patients: 2.5 to 10 mg ■ Conversion of opioid-tolerant patients using equianalgesic tables can result in overdose and death. Use low doses according to the table in the Full Prescribing Information. ■ High inter-patient variability in absorption, metabolism, and relative analgesic potency. ■ Opioid detoxification or maintenance treatment shall only be provided in a federally certified opioid (addiction) treatment program (Code of Federal Regulations, Title 42, Sec 8).
Specific drug interactions	■ Pharmacokinetic drug-drug interactions with methadone are complex. ■ CYP 450 inducers may decrease methadone levels. ■ CYP 450 inhibitors may increase methadone levels. ■ Anti-retroviral agents have mixed effects on methadone levels. ■ Potentially arrhythmogenic agents may increase risk for QTc prolongation and torsade de pointe. ■ Benzodiazepines may increase respiratory depression
Use in opioid-tolerant patients	Refer to full prescribing information.
Product-specific safety concerns	■ QTc prolongation and torsade de pointe. ■ Peak respiratory depression occurs later and persists longer than analgesic effect. ■ Clearance may increase during pregnancy. ■ False positive urine drug screens possible.
Relative potency to oral morphine	Varies depending on patient's prior opioid experience.
Duragesic	**Fentanyl Transdermal System, 12, 25, 50, 75, and 100 mcg/hr**
Dosing interval	Every 72 hours (3 days)
Key instructions	■ Use product specific information for dose conversion from prior opioid ■ Use 50% of the dose in mild or moderate hepatic or renal impairment, avoid use in severe hepatic or renal impairment Application: ■ Apply to intact/non-irritated/non-irradiated skin on a flat surface. ■ Skin may be prepped by clipping hair, washing site with water only ■ Rotate site of application. ■ Titrate using no less than 72 hour intervals. ■ Do not cut. ■ Avoid exposure to heat. ■ Avoid accidental contact when holding or caring for children. ■ Dispose of used/unused patches by folding the adhesive side together and flushing down the toilet. **Specific contraindications:** ■ Patients who are not opioid-tolerant. ■ Management of acute or intermittent pain, or in patients who require opioid analgesia for a short period of time. ■ Management of post-operative pain, including use after out-patient or day surgery. ■ Management of mild pain.
Specific drug interactions	■ CYP3A4 inhibitors may increase fentanyl exposure. ■ CYP3A4 inducers may decrease fentanyl exposure.
Use in opioid-tolerant patients	All doses of Duragesic are indicated for use in opioid-tolerant patients only.
Product-specific safety concerns	■ Accidental exposure due to secondary exposure to unwashed/unclothed application site. ■ Increased drug exposure with increased core body temperature or fever. ■ Bradycardia ■ Application site skin reactions
Relative potency to oral morphine	See individual product information for conversion recommendations from prior opioid

continued

Table 2. Specific Drug Information for Extended-Release and Long-Acting Opioid Analgesics (ER/LA Opioid Analgesics) continued

Embeda	**Morphine Sulfate ER-Naltrexone Capsules, 20 mg/0.8 mg, 30 mg/1.2 mg, 50 mg/2 mg, 60 mg/2.4 mg, 80 mg/3.2 mg, 100 mg/4 mg**
Dosing interval	Once a day or every 12 hours
Key instructions	■ Initial dose as first opioid: 20 mg/0.8 mg. ■ Titrate using a minimum of 3-day intervals. ■ Swallow capsules whole (do not chew, crush, or dissolve) ■ Crushing or chewing will release morphine, possibly resulting in fatal overdose, and naltrexone, possibly resulting in withdrawal symptoms. ■ May open capsule and sprinkle pellets on applesauce for patients who can reliably swallow without chewing, use immediately.
Specific drug interactions	■ Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of morphine. ■ PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold.
Use in opioid-tolerant patients	Embeda 100 mg/4 mg capsule is for use in opioid-tolerant patients only.
Product-specific safety concerns	None
Exalgo	**Hydromorphone Hydrochloride Extended-Release Tablets, 8 mg, 12 mg, 16 mg or 32 mg**
Dosing interval	Once a day
Key instructions	■ Use the conversion ratios in the individual product information. ■ Start patients with moderate hepatic impairment on 25% dose that would be prescribed for a patient with normal hepatic function. ■ Start patients with moderate renal impairment on 50%, and patients with severe renal impairment on 25% of the dose that would be prescribed for a patient with normal renal function. ■ Titrate using a minimum of 3 to 4 day intervals. ■ Swallow tablets whole (do not chew, crush, or dissolve). ■ Do not use in patients with sulfite allergy–contains sodium metabisulfite.
Specific drug interactions	None
Use in opioid-tolerant patients	All doses of Exalgo are indicated for opioid-tolerant patients only.
Drug-specific adverse reactions	Allergic manifestations to sulfite component.
Relative potency to oral morphine	Approximately 5:1 oral morphine to hydromorphone oral dose ratio, use conversion recommendations in the individual product information.
Kadian	**Morphine Sulfate Extended-Release Capsules, 10 mg, 20mg, 30 mg, 40mg, 50 mg, 60 mg, 70 mg, 80 mg, 100 mg, 130 mg, 150 mg, and 200 mg**
Dosing interval	Once a day or every 12 hours
Key instructions	■ Product information recommends not using as first opioid. ■ Titrate using a minimum of 2-day intervals. ■ Swallow capsules whole (do not chew, crush, or dissolve). ■ May open capsule and sprinkle pellets on applesauce for patients who can reliably swallow without chewing, use immediately.
Specific drug interactions	■ Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of morphine. ■ PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold.
Use in opioid-tolerant patients	Kadian 100 mg, 130 mg, 150 mg, and 200 mg capsules are for use in opioid-tolerant patients only.
Product-specific safety concerns	None
MS Contin	**Morphine Sulfate Controlled-Release Tablets, 15 mg, 30 mg, 60 mg, 100 mg, and 200 mg**
Dosing interval	Every 8 hours or every 12 hours
Key instructions	■ Product information recommends not using as first opioid. ■ Titrate using a minimum of 2-day intervals. ■ Swallow tablets whole (do not chew, crush, or dissolve).
Specific drug interactions	PGP inhibitors (e.g. quinidine) may increase the absorption/exposure of morphine sulfate by about two-fold.
Use in opioid-tolerant patients	MS Contin 100 mg and 200 mg tablet strengths are for use in opioid-tolerant patients only.
Product-specific safety concerns	None

continued

Table 2. Specific Drug Information for Extended-Release and Long-Acting Opioid Analgesics (ER/LA Opioid Analgesics) continued

Nucynta ER	**Tapentadol Extended-Release Tablets, 50 mg, 100mg, 150 mg, 200 mg, and 250 mg**
Dosing interval	Every 12 hours
Key instructions	■ Use 50 mg every 12 hours as initial dose in opioid nontolerant patients ■ Titrate by 50 mg increments using a minimum of 3-day intervals. ■ Maximum total daily dose is 500 mg ■ Swallow tablets whole (do not chew, crush, or dissolve). ■ Take one tablet at a time and with enough water to ensure complete swallowing immediately after placing in the mouth. ■ Dose once daily in moderate hepatic impairment with 100 mg per day maximum ■ Avoid use in severe hepatic and renal impairment.
Specific drug interactions	■ Alcoholic beverages or medications containing alcohol may result in the rapid release and absorption of a potentially fatal dose of tapentadol. ■ Contraindicated in patients taking MAOIs.
Use in opioid-tolerant patients	No product-specific considerations.
Product-specific safety concerns	■ Risk of serotonin syndrome ■ Angioedema
Relative potency to oral morphine	Equipotency to oral morphine has not been established.
Opana ER	**Oxymorphone Hydrochloride ER Tablets, 5 mg, 7.5 mg, 10 mg, 15 mg, 20 mg, 30 mg, and 40 mg**
Dosing interval	Every 12h dosing, some may benefit from asymmetric (different dose given in AM than in PM) dosing.
Key instructions	■ Use 5 mg every 12 hours as initial dose in opioid non-tolerant patients and patients with mild hepatic impairment and renal impairment (creatinine clearance < 50 mL/min) and patients over 65 years of age ■ Swallow tablets whole (do not chew, crush, or dissolve). ■ Take one tablet at a time, with enough water to ensure complete swallowing immediately after placing in the mouth. ■ Titrate using a minimum of 2-day intervals. ■ Contraindicated in moderate and severe hepatic impairment.
Specific drug interactions	Alcoholic beverages or medications containing alcohol may result in the absorption of a potentially fatal dose of oxymorphone.
Use in opioid-tolerant patients	No product specific considerations.
Product-specific safety concerns	None
Relative potency to oral morphine	Approximately 3:1 oral morphine to oxymorphone oral dose ratio
OxyContin	**Oxycodone Hydrochloride Controlled-Release Tablets, 10 mg, 15 mg, 20 mg, 30 mg, 40 mg, 60 mg, and 80 mg**
Dosing interval	Every 12 hours
Key instructions	■ Opioid-naïve patients: initiate treatment with 10 mg every 12 hours. ■ Titrate using a minimum of 1 to 2 day intervals. ■ Hepatic impairment: start with one third to one half the usual dosage ■ Renal impairment (creatinine clearance <60 mL/min): start with one half the usual dosage. ■ Consider use of other analgesics in patients who have difficulty swallowing or have underlying GI disorders that may predispose them to obstruction. Swallow tablets whole (do not chew, crush, or dissolve). ■ Take one tablet at a time, with enough water to ensure complete swallowing immediately after placing in the mouth.
Specific drug interactions	■ CYP3A4 inhibitors may increase oxycodone exposure. ■ CYP3A4 inducers may decrease oxycodone exposure.
Use in opioid-tolerant patients	■ Single dose greater than 40 mg or total daily dose greater than 80 mg are for use in opioid-tolerant patients only.
Product-specific safety concerns	■ Choking, gagging, regurgitation, tablets stuck in the throat, difficulty swallowing the tablet. ■ Contraindicated in patients with gastrointestinal obstruction.
Relative potency to oral morphine	Approximately 2:1 oral morphine to oxycodone oral dose ratio.

For detailed information, refer to prescribing information available online via DailyMed at www.dailymed.nlm.nih.gov or Drugs@FDA at www.fda.gov/drugsatfda.