SIM 3-Drug Cards

Generic & Trade Name of Drug: Morphine Sulfate *Func. Class: Opioid analgesic ; Chem. Class: Alkaloid*	
Indications/ Therapeutic Effects:	**Action:** depresses pain impulse transmission at the spinal cord level by interacting with opioid receptors **USES:** moderate to severe pain; **Unlabeled uses:** agitation, bone/dental pain, dyspnea in end-stage cancer or pulmonary disease, sedation induction, rapid-sequence intubation
Routes of Administration:	PO; IV; IM; SUBCUT; Epidural; Rectal
Pharmacokinetics:	**PO:** onset variable, peak 60 mins, duration 4-5 hours; **IM:** onset ½ hr, peak 30-60 mins, duration 4-5 hours; **SUBCUT:** onset 15-20 mins, peak 50-90 mins, duration 4-5 hours; **IV:** peak 20 mins, duration 4-5 hours; **Rectal:** peak ½ hour, duration 4-5 hours; **Intrathecal:** onset rapid, duration less than/equal to 24 hours; metabolized by the liver, crosses the placenta, excreted in urine and breast milk, half-life (IM) 3-4 hours, (Kadian) 11-13 hours
Nursing Implications/ Assessments:	**Pain:** location, intensity, type, character, check for pain relief 20 mins following IV, 1 hour following PO/IM/SUBCUT, titrate to relieve pain, give dose before pain becomes severe; **Bowel status:** constipation common, use stimulant laxative if needed, provide increased bulk, fluids in diet; **I&O ratio:** check for decreasing output, may indicate urinary retention, monitor serum sodium; BP, pulse and respirations (character, depth, rate); **CNS changes:** dizziness, drowsiness, hallucinations, euphoria, LOC, pupil reaction; **Abrupt discontinuation:** gradually taper to prevent withdrawal symptoms, decrease by 50% q1-2days, avoid use of narcotic antagonists; **Allergic reaction:** rash, urticaria
Side/ Adverse Effects:	**CNS:** drowsiness, dizziness, confusion, headache, sedation, euphoria, insomnia, seizures **CV:** palpations, bradycardia, change in BP, shock, cardiac arrest, chest pain, hypo/hypertension, edema, tachycardia **EENT:** blurred vision, miosis, diplopia **ENDO:** gynecomastia **GI:** nausea, vomiting, anorexia, constipation, cramps, biliary tract pressure **GU:** urinary retention, impotence, gonadal suppression **HEMA:** thrombocytopenia **INTEG:** rash, urticaria, bruising, flushing, diaphoresis, pruritus **RESP:** respiratory depression, respiratory arrest, apnea
Contraindications:	Hypersensitivity, addiction (opioid/alcohol), hemorrhage, bronchial asthma, increased intracranial pressure, paralytic ileus, hypovolemic shock, MAOI therapy; **Precautions:** pregnancy, breastfeeding, children < 18 yrs, geriatric patients, addictive personality, acute MI, severe heart disease, renal-hepatic disease, bowel impaction, abrupt discontinuation, seizures
Client Teaching:	To avoid driving, hazardous activities until response is known; to turn, cough and deep breathe is on bed rest; to report constipation, as other products will need to be used; to change position slowly, orthostatic hypotension may occur; to report any symptoms of CNS change to allergic reactions; that physical dependency may result from long-term use; to avoid the use of alcohol, CNS depressants; that withdrawal symptoms may occur (nausea, vomiting, cramps, fever, faintness, anorexia) to take exactly as directed, do not crush, break, chew, or dissolve caps or tabs
OTHER	**Treatment of overdose:** Naloxone (Narcan) 0.2-0.8 mg IV (caution with opioid-tolerant individuals), O2, IV fluids, vasopressors

Generic & Trade Name of Drug: Glycopyrrolate (Robinul)	
Func. Class: Anticholinergic	
Indications/ Therapeutic Effects:	Inhibits salivation and excessive respiratory secretions when given preoperatively. Reverses some of the secretory and vagal actions of cholinesterase inhibitors used to treat nondepolarizing neuromuscular blockade (cholinergic adjunct). Adjunctive management of peptic ulcer disease.
Routes of Administration:	PO, IV, IM
Pharmacokinetics:	**Absorption:** Incompletely absorbed (10%) after oral administration. Well absorbed after IM administration. **Distribution:** Distribution not fully known. Does not significantly cross the blood-brain barrier or eye. Crosses the placenta. **Metabolism and Excretion:** Eliminated primarily unchanged in the feces, via biliary excretion. **Half-life:** 1.7 hr (0.6–4.6 hr).
Nursing Implications/ Assessments:	Assess heart rate, ECG, and heart sounds, especially during exercise (See Appendices G, H). Report a rapid heart rate (tachycardia) or signs of other arrhythmias, including palpitations, chest discomfort, shortness of breath, fainting, and fatigue/weakness. Assess blood pressure (BP) when patient assumes a more upright position (lying to standing, sitting to standing, lying to sitting). Document orthostatic hypotension and contact physician when systolic BP falls >20 mm Hg or diastolic BP falls >10 mm Hg. If used to treat peptic ulcer, monitor any changes in symptoms (i.e., decreased abdominal pain, improved appetite) to help document whether drug therapy is successful.
Side/ Adverse Effects:	**CNS:** confusion, drowsiness **EENT:** blurred vision, cycloplegia, dry eyes, mydriasis **CV:** tachycardia, orthostatic hypotension, palpitations **GI:** dry mouth, constipation **GU:** urinary hesitancy, retention.
Contraindications:	Patients with glaucoma, trouble urinating (eg, bladder neck obstruction), certain stomach or bowel problems (eg, stomach or bowel blockage, bowel muscle problems, severe ulcerative colitis, toxic megacolon), certain esophagus problems (eg, achalasia, reflux), or myasthenia gravis, and hypersensitivity.
Client Teaching:	Instruct patient and family/caregivers to report other troublesome side effects such as severe or prolonged drowsiness, confusion, vision problems, problems with urination, or GI problems (constipation, dry mouth)
OTHER	

Lorazepam (Ativan)	
BENZODIAZEPINES	
Indications/ Therapeutic Effects:	Ativan is used to treat anxiety and panic disorders by acting on the central nervous system to produce a calming effect. It works by enhancing the effects of the neurotransmitter GABA which is responsible for reducing abnormal excitement in the brain.
Dosage Range:	The usual range is 2 to 6 mg/day given in divided doses, the largest dose being taken before bedtime, but the daily dosage may vary from 1 to 10 mg/day. Tablets normally contain 0.5 mg, 1 mg, or 2 mg of Lorazepam. Injections contain 2-4 mg of lorazepam per milliliter.
Routes of Administration:	PO, IV, IM
Pharmacokinetics:	Lorazepam is readily absorbed with a bioavailability of 90 percent. Peak concentrations in plasma occur approximately 2 hours following administration. The mean half-life is about 12 hours and for its major metabolite, lorazepam glucuronide, about 18 hours. Lorazepam is hepatically metabolized by CYP450 isoenzymes and is rapidly conjugated at its 3-hydroxy group into lorazepam glucuronide which is then excreted in the urine. There is no evidence of accumulation of lorazepam on administration up to six months.
Nursing Implications/ Assessments:	Hypersensitivity to benzodiazepines, propylene glycol, polyethylene glycol or benzyl alcohol, psychoses, acute narrow-angle glaucoma, shock, coma, acute alcoholic intoxication with depression of vital signs, pregnancy, lactation, impaired liver or renal function, debilitation. Physical assessments include; skin color, lesions, orientation, reflexes, affect, ophthalmologic examination, vital signs, adventitious sounds, liver evaluation, abdominal examination, bowel sounds, normal output, CBC, LFTs, renal function tests
Side/ Adverse Effects:	Drowsiness, dizziness, loss of coordination, headache, nausea, blurred vision, change in sexual interest/ability, constipation, heartburn, or change in appetite may occur. Unlikely but serious side effects, including: mental/mood changes, slurred speech or difficulty talking, vision changes, unusual weakness, trouble walking, memory problems, signs of infection. Very rare but very serious side effects, including: yellowing eyes or skin, seizures, slow/shallow breathing. Taking lorazepam with opioid medications may increase the risk of serious side effects, including death.
Contraindications:	Lorazepam is contraindicated in patients with hypersensitivity to benzodiazepines or to any components, in those with acute narrow-angle glaucoma, low amount of albumin proteins in the blood, suicidal thoughts, alcohol intoxication, drug abuse, chronic lung disease, liver problems, severe liver disease, sleep apnea, pregnancy, impaired brain function due to liver disease, and kidney disease with likely reduction in kidney function.
Client Teaching:	To assure the safe and effective use of lorazepam, patients should be informed that, since benzodiazepines may produce psychological and physical dependence, it is advisable that they consult with their physician before either increasing the dose or abruptly discontinuing this drug.

Generic & Trade Name of Drug: Ondansetron (Zofran, Ondissolve, Zuplenz)	
Func. Class: Antiemetic	
Indications/ Therapeutic Effects:	Prevents nausea, vomiting by blocking serotonin peripherally, centrally, and in the small intestine **Uses**: Prevention of nausea, vomiting associated with cancer chemotherapy, radiotherapy; prevention of postoperative nausea, vomiting **Unlabeled uses:** Pruritus (rectal use), alcoholism, severe vomiting in pregnancy, gastroenteritis, postoperative nausea/vomiting
Routes of Administration:	IV, PO, IM
Pharmacokinetics:	IV: Mean elimination half-life 3.5-4.7 hr, plasma protein binding 70%-76%, extensively metabolized in the liver, excreted 45%-60% in urine
Nursing Implications/ Assessments:	Absence of nausea, vomiting during chemotherapy Hypersensitivity reactions: rash, bronchospasm (rare) EPS: shuffling gait, tremors, grimacing, rigidity periodically Pregnancy/breastfeeding: identity whether pregnancy is planned or suspected; avoid use in pregnancy, cardiac malformations, oral clefts may occur if used in 1st trimester; cautious use in breastfeeding QT prolongation: monitor ECG in those with hypokalemia, hypomagnesemia, cardiac disease or in those receiving other products that increase QT Serotonin syndrome: occurs when other products are given that increase CNS or peripheral serotonin levels; assess for agitation, confusion, dizziness, diaphoresis, flushing, tremor, seizures, nausea, vomiting, diarrhea; product should be discontinued
Side/ Adverse Effects:	**CNS:** Headache, dizziness, drowsiness, fatigue, EPS **GI:** Diarrhea, constipation, abdominal pain, dry mouth **MISC:** Rash, bronchospasm (rare), musculoskeletal pain, wound problems, shivering, fever, hypoxia, urinary retention
Contraindications:	Hypersensitivity; phenylketonuric hypersensitivity (oral disintegrating tab), torsade's de pointes **Precautions:** Pregnancy, breastfeeding, children, geriatric patients, granisetron hypersensitivity, QT prolongation, torsade's de pointes
Client Teaching:	To report diarrhea, constipation, rash, changes in respirations, discomfort at insertion site, serotonin symptoms, EPS symptoms That headache requiring analgesic is common Drink with whole glass of water (PO) Oral disintegrating tabs: remove strip from pouch, place on tongue, and allow to dissolve; drink water
OTHER	