High-alert medication list

ISMP categories, tall man look-alike pairs, a practice register and a double-check log

High-alert medications carry a heightened risk of severe harm when an error reaches the patient. Page 1 is the reference, page 2 the register your practice fills in and approves, page 3 the log that evidences the policy in use.

1. ACUTE CARE CATEGORIES — ISMP, 2024 REVISION

CLASSES AND CATEGORIES

- Adrenergic agonists, IV (epinephrine, phenylephrine, norepinephrine)
- Adrenergic antagonists, IV (propranolol, metoprolol, labetalol)
- Anesthetic agents, general, inhaled and IV (propofol, ketamine)
- Antiarrhythmics, IV (lidocaine, amiodarone)
- Antithrombotic agents, including:
  - Anticoagulants (warfarin, LMWH, unfractionated heparin)
  - DOACs and factor Xa inhibitors (rivaroxaban, fondaparinux)
  - Direct thrombin inhibitors (argatroban, bivalirudin, dabigatran)
  - Glycoprotein IIb/IIIa inhibitors (eptifibatide)
  - Thrombolytics (alteplase, reteplase, tenecteplase)
- Cardioplegic solutions
- Chemotherapeutic agents, parenteral and oral
- Dextrose, hypertonic, 20% or greater
- Dialysis solutions, peritoneal and hemodialysis
- Epidural and intrathecal medications
- Inotropic medications, IV (digoxin, milrinone)
- Insulin, subcutaneous and IV
- Liposomal forms of drugs and their conventional counterparts (liposomal amphotericin B)
- Moderate and minimal sedation agents, oral, for children (chloral hydrate, midazolam, ketamine)
- Moderate sedation agents, IV (dexmedetomidine, midazolam, lorazepam)
- Neuromuscular blocking agents (succinylcholine, rocuronium, vecuronium)
- Opioids, all routes of administration
- Parenteral nutrition preparations
- Sodium chloride for injection, hypertonic, greater than 0.9%
- Sterile water for injection, inhalation and irrigation, containers of 100 mL or more
- Sulfonylurea hypoglycemics, oral (glimepiride, glipizide, glyburide)

SPECIFIC MEDICATIONS

- Epinephrine, IM and subcutaneous
- Epoprostenol, IV
- Insulin U-500 (special emphasis)
- Magnesium sulfate injection
- Methotrexate, oral, nononcologic use
- Nitroprusside sodium for injection
- Opium tincture
- Oxytocin, IV
- Potassium chloride for injection concentrate
- Potassium phosphates injection
- Promethazine injection
- Tranexamic acid injection (added in 2024)
- Vasopressin, IV and intraosseous

All forms of insulin are high-alert as a class. U-500 is singled out because it is five times the strength of U-100 and looks the same in a syringe.

2. COMMUNITY AND AMBULATORY CATEGORIES — ISMP, 2021 REVISION

CLASSES AND CATEGORIES

- Antithrombotic agents, oral and parenteral (anticoagulants; DOACs and factor Xa inhibitors; direct thrombin inhibitors)
- Chemotherapeutic agents, oral and parenteral (capecitabine, cyclophosphamide)
- Oral targeted therapy and immunotherapy (palbociclib, imatinib, bosutinib); hormonal therapy excluded
- Immunosuppressant agents, oral and parenteral (azathioprine, cyclosporine, tacrolimus)
- Insulins, all formulations and strengths (U-100, U-200, U-300, U-500)
- Medications contraindicated during pregnancy (bosentan, isotretinoin)
- Moderate and minimal sedation agents, oral, for children
- Opioids, all routes, including liquid concentrates, immediate- and sustained-release, and combination products
- Pediatric liquid medications that require measurement
- Sulfonylurea hypoglycemics, oral (chlorpropamide, glimepiride, glyburide, glipizide)

SPECIFIC MEDICATIONS

- Carbamazepine
- Epinephrine, IM and subcutaneous
- Insulin U-500 (special emphasis)
- Lamotrigine
- Methotrexate, oral and parenteral, nononcologic use
- Phenytoin
- Valproic acid

Nobody watches the patient take the dose outside a hospital. That is why this list leans on oral agents a practice dispenses and a patient self-administers.

3. APINCH — THE SIX CLASSES WORTH MEMORIZING

	GROUP	EXAMPLES	WHERE THE ERROR USUALLY STARTS
A	**Antimicrobials**	Aminoglycosides (gentamicin, tobramycin, amikacin), vancomycin	Prescribing — dose set against the wrong weight or kidney function
P	**Potassium and other electrolytes**	Concentrated potassium chloride at 2 mEq/mL or greater, hypertonic sodium chloride	Dispensing — a concentrated vial picked up instead of a premixed bag
I	**Insulin**	Every formulation and route, with U-500 handled separately	Administration — U-100 and U-500 mixed up in the syringe
N	**Narcotics (opioids) and other sedatives**	Morphine, hydromorphone, fentanyl, methadone, midazolam	Ordering — the daily total or the patch strength
C	**Chemotherapeutic agents**	Methotrexate, vincristine, cisplatin, oral targeted agents	Ordering — the protocol or the cycle interval
H	**Heparin and other anticoagulants**	Unfractionated heparin, LMWH, warfarin, DOACs	Prescribing — dose set against a stale INR or weight

Four of the six fail before the drug is handled, so a control at the prescribing screen catches more than one at the bedside. Australia's ACSQHC now writes it **APINCHS**, where S stands for the systems around the drug rather than a drug group.

4. LOOK-ALIKE PAIRS WITH TALL MAN LETTERING

bu**PROP**ion — bus**PIR**one	**CARBO**platin — **CIS**platin	chlorpro**MAZINE** — chlorpro**PAMIDE**
clomi**PHENE** — clomi**PRAMINE**	cyclo**SERINE** — cyclo**SPORINE**	**DAUNO**rubicin — **DOXO**rubicin
dimenhy**DRINATE** — diphenhydr**AMINE**	**DOBUT**amine — **DOP**amine	glipi**ZIDE** — gly**BURIDE**
hydr**ALAZINE** — **HYDRO**morphone — hydr**OXY**zine	medroxy**PROGESTER**one — methyl**PREDNIS**olone — methyl**TESTOSTER**one	mig**ALA**stat — mig**LU**stat
ni**CAR**dipine — **NIFE**dipine	predniso**LONE** — predni**SONE**	risperi**DONE** — r**OPINIR**ole
tra**MAD**ol — tra**ZOD**one	vin**BLAS**tine — vin**CRIS**tine	mito**XANTRONE** (no pair specified)

FDA-approved tall man list (Name Differentiation Project); pairs for products no longer marketed in the US are omitted. **Sources:** ISMP high-alert lists, acute care 2024 and community/ambulatory 2021, and the FDA and ISMP look-alike name lists. Work from the originals at ismp.org.

5. PRACTICE HIGH-ALERT REGISTER

List only the high-alert drugs your practice actually stocks or prescribes. A register naming drugs you have never held trains staff to ignore the flags.

Practice or site: _____ **Version:** _____

DRUG OR CLASS	STRENGTH STOCKED	SAFEGUARD ASSIGNED	STORAGE LOCATION	OWNER

Safeguards to assign: independent double check, standing protocol, segregated storage, auxiliary label, tall man labeling, prescribing alert, pharmacist verification, restricted access.

Policy governance

Policy owner (name and role): _____ **Date adopted:** _____ mm / dd / yyyy

Annual review due: _____ mm / dd / yyyy **Last reviewed:** _____ mm / dd / yyyy

_____ _____ _____

Approval signature | Printed name and role | Date

6. INDEPENDENT DOUBLE-CHECK LOG

The second clinician receives the prepared medication and the order, but not the first clinician's conclusion. They read the label, check the chart, and work out the dose on their own. Only then are the two answers compared. A check that starts from the first answer confirms it rather than testing it.

Practice or site: _____ **Page:** _____

DATE	PATIENT / MRN	DRUG	DOSE	ROUTE	PREPARER	CHECKER	MATCH	ACTION TAKEN
							Y / N	
							Y / N	
							Y / N	
							Y / N	
							Y / N	
							Y / N	
							Y / N	
							Y / N	
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							Y / N	
							Y / N	
							Y / N	
							Y / N	
							Y / N	

A mismatch is reworked before anything reaches the patient, and the action column records what happened. Keep completed logs for the retention period your accrediting body and state law require. This is the evidence the Joint Commission asks to see when it tests whether your high-alert policy is in use rather than on file.

This template is a clinical reference and a documentation aid. It does not replace the ISMP and FDA source lists, your own clinical judgment, or your accrediting body's requirements.