



DRUG REGULATORY AUTHORITY OF PAKISTAN

NATIONAL PHARMACOVIGILANCE CENTRE (NPC)

High Alert Medications/ Drugs List.

High Alert Medications (HAMs) are medications that bear a heightened risk of causing significant patient when these medications/ drugs are used in error or inappropriately. The consequences of errors or inappropriate use of the following drugs can be more devastating and of serious concern:

S #	Class/Category	Drugs *
1.	Adrenergic agonists	IV form of Epinephrine, Phenylephrine, Norepinephrine etc.
2.	Adrenergic antagonists	IV form of Metoprolol, Labetalol
3.	Anaesthetic agents	General, Inhaled and IV form of drugs like Propofol, Ketamine, Isoflurane and Sevoflurane etc.
4.	Antiarrhythmics	IV form of Lidocaine and Amiodarone etc.
5.	Antithrombotic agents	Anticoagulants: Warfarin, low molecular weight heparin (Enoxaparin), Unfractionated heparin Direct oral anticoagulants and factor Xa inhibitors: Rivaroxaban, Fondaparinux Apixaban etc. Thrombolytics: Alteplase and Streptokinase.
6.	Chemotherapeutic agents	All parenteral and oral chemo
7.	Epidural and Intrathecal	Bupivacaine, Ropivacaine
8.	Inotropic drugs	IV form of Digoxin and Milrinone
9.	Insulins	All Insulins
10.	Liposomal forms of drugs	E.g. Liposomal Doxorubicin vs conventional Doxorubicin HCl
11.	Moderate sedation agents	IV form of Dexmedetomidine, Midazolam etc.
12.	Moderate and minimal sedation agents for children	Oral form of Chloral Hydrate, Midazolam, parenteral form of Ketamine etc.
13.	Opioids	All opioids including oral (liquid concentrate, immediate and sustained release formulations), Parenteral and transdermal form.
14.	Neuromuscular blocking agents	Succinylcholine, Rocuronium, Atracurium, Cis-Atracurium etc.
15.	Hypoglycemics agents, sulfonylurea	Oral form of Glimpiride, Glibenclamide, Glipizide etc.
16.	Anti-infective	Amphotericin, Vancomycin, Aminoglycosides.
17.	IV electrolytes	Undiluted Potassium Chloride for Inj, concentrate and injections of Magnesium Sulphate, Potassium Phosphate, IV form of Hypertonic saline.
18.	Parenteral Nutrition	Both commercial products and compounded within hospitals
19.	Dextrose Hypertonic 20% and above	Dextrose water 20% and above for parenteral use
20.	Cardioplegic agents	Both commercial products and compounded within hospitals
21.	Dialysis solutions	Both hemodialysis and peritoneal dialysis solutions
22.	Look alike and sound alike drugs	Each patient care facility to review and develop their own look alike (similar appearance) and sound alike (that sound similar or are read like) drugs pairs list based on their incident/ error data.
23.	Others	IV form of Oxytocin, Vasopressin, and Promethazine.

** Medicines and Drugs' availability status changes from time to time in market, hence, refer to the current registered and available drugs of this class in Pakistan*

Healthcare professionals are encouraged to actively monitor the safety of the above-mentioned high alert medications/ drugs by avoiding their inappropriate use. If any adverse drug reaction (ADR) occur with or without their inappropriate use, it should be managed properly and must be reported to National Pharmacovigilance Centre, DRAP through one of the following channels:

- ❖ Through DRAP, MED Vigilance E-Reporting System:
<https://primaryreporting.who-umc.org/PK>

OR

- ❖ Through Med Safety Mobile Application available both on Android and iOS platforms.

National Pharmacovigilance Centre (NPC), Drug Regulatory Authority of Pakistan (DRAP), Ministry of National Health Services Regulations & Coordination.

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