

HACKETTSTOWN REGIONAL MEDICAL CENTER
Administrative Policy and Procedure

SECTION: PATIENT CARE SERVICES

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TITLE: LOOK-ALIKE/SOUND-ALIKE MEDICATIONS

PURPOSE

To describe the special precautions used to minimize errors with medications that have similar names or pronunciations.

SCOPE

Applies to all inpatient and outpatient services of Hackettstown Regional Medical Center.

DEFINITIONS

1. Look-Alike/Sound-Alike (LASA) –medications that are consider high risk for error by virtue of their similar spelling or pronunciations with other medications.
2. TALL-MAN LETTering – special lettering format to highlight unique letters in drug names

POLICY

Special precautions for medications designated as LASA (Appendix A) will be implemented by the Pharmacy and followed wherever medications are used or store to facilitate accurate recognition by staff minimize the potential for error.

ROLES AND RESPONSIBILITIES

1. Pharmacy Department
 - a. When adding new products to formulary, the possibility of name confusion to be considered and implements special precautions as appropriate
 - b. Completes yearly review to determine new possible LASA medications and makes recommendations to the Pharmacy and Therapeutics Committee
2. Pharmacy and Therapeutics Committee – reviews and approves a minimum of 10 medications to be included in the hospital LASA list
3. Clinical staff – Follow precautions as outlined

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PROCEDURE

1. Precautions taken for all listed medications wherever medications are stored:
 - a. Red Sticker: 'CAUTION! LOOK-ALIKE, SOUND-ALIKE MEDICATION' placed at storage location.
 - b. LASA are physically separated from each other, and are never stored in the same bin
 - c. TALL-MAN LETTering is used as appropriate in pharmacy computer systems and automated dispensing machines.
2. Precautions taken in clinical areas and nursing units
 - a. LASA is posted in all clinical areas
 - b. Questionable physician orders or prescriptions are clarified for dosage, drug strength, and directions for administration prior to dispensing or administration
 - c. Verbal orders are discouraged and are NEVER accepted for anti-neoplastic medications.
 - d. Whenever possible, the purpose of the medication to be determined before dispensing/administering.
 - e. When possible brand and generic names to be listed on medication labels, administration records, and Pyxis® screens

SPECIAL CONSIDERATIONS

1. Specific medications may have additional safety precautions implemented as appropriate
2. When adding new products to formulary, the possibility of name confusion should be considered.
3. A yearly review of the list will be completed to determine new possible look alike/sound alike medication names.

REFERENCES

Joint Commission National Patient Safety Goal 3C
Pharmacy/Nursing Policy # PN.010a

APPENDIX A: Look Alike / Sound Alike Medications

	Potential Problematic Medication Names	Generic (lowercase) & Brand name (UPPERCASE)	Potential Errors and Consequences	Specific Safety Strategies
1	CLONIDINE & CLONAZEPAM (Klonopin)	CATAPRES (clonidine) KLONOPIN (clonazepam)	The generic name for clonidine can be easily confused as the trade or generic name for clonazepam	Storage: Klonopin (clonazepam) is stored separately from clonidine, in the narcotic safe. Also separated on the floors in the Pyxis® automated dispensing machine. See general recommendations
2	CELEBREX, CELEXA & CEREBYX	CELEBREX (celecoxib) CELEXA (citalopram) CEREBYX (fosphenytoin)	Patients affected by a mix-up between these three drugs may experience a decline in mental status, lack of pain or seizure control, or other serious adverse events	Storage: Cerebyx is stored in a refrigerator, and is available only in an injectable form (vial). See general recommendations
3	CISPLATIN & CARBOPLATIN	PLATINOL PARAPLATIN	Doses appropriate for carboplatin usually exceed the maximum safe dose of cisplatin. Severe toxicity and death has been associated with accidental cisplatin overdose	Maximum dose warnings installed on computer system - Cisplatin doses greater than 100mg/m ² once every 3 to 4 weeks are rarely used. Safe handling recommendations and safety stickers provided by manufacturer to be utilized. Storage: agents separated from each other on storage shelf. See general recommendations. TALLman lettering applied in the Computer System.
4	EPHEDRINE & EPINEPHRINE	ADRENALIN (epinephrine) Ephedrine	The names of these two medications look very similar, and their clinical uses make storage near each other likely, especially in OB areas. Both packages available in similar packages (1mL amber ampuls & vials)	Storage: ephedrine kept in narcotic safe, as per NJ law, and therefore separated from epinephrine TALLman lettering applied in the Pyxis® to help differentiate the products: ePHEDrine; EPINEPHrine See general recommendations
5	HYDROCODONE & OXYCODONE	LORCET (hydrocodone) OXY-CONTIN (oxycodone)	The names of these two medications look very similar, are both used in pain management, yet their doses are frequency of use are different.	Ensure that health care providers are aware that these two products are note interchangeable. TALLman lettering applied in the Pyxis® system to help diffentiate the products.

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6	HYDRO-MORPHONE Injection & MORPHINE injection	DILAUDID (hydromorphone) ASTRAMORPH DURAMORPH, MORPHINE	Some health care workers have mistakenly believed that hydromorphone is the generic equivalent of morphine. Fatal errors have occurred when hydromorphone was confused with morphine. Based on equianalgesic dose conversion, this may represent significant overdose, leading to serious adverse effects.	Ensure that health care providers are aware that these two products are not interchangeable. Additionally, orders for Hydromorphone injection > 2 mg shall require reverification with the provider. TALLman lettering shall be employed in the computer and Pyxis @system.
7	KEPPRA & KEFLEX	KEPPRA (levetiracetam) KEFLEX (cephalexin)	The names of these medications look very similar, as well as the doses (250mg, 500mg). Frequencies are usually different, however (BID vs QID)	Storage: agents separated from each other on storage shelf, by generic (l & c) See general recommendations
8	MORPHINE concentrated liquid morphine products & conventional liquid morphine concentrations	Concentrated: Roxanol, MSIR [20mg/mL]; Conventional: Morphine oral liquid [10mg/5mL]	Concentrated oral morphine can be confused with standard morphine concentrations, leading to severe over- or under-doses (20x). Prescribing/labeling by volume(mL), not (mg) contributes to these errors.	Concentrated [20mg/ml] oral morphine only to be dispensed for specific patients, not available on floors (Pyxis). Storage in narcotic safe: products in separate compartments. Concentrated oral morphine dispensed only in dropper bottle, to help prevent dose measurement errors and differentiate products. See general recommendations

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9	MUCINEX & MUCOMYST	MUCINEX (guaifenesin) MUCOMYST (acetylcysteine)	Both agents are prescribed in 600mg doses and frequency causing confusion.	Ensure that health care providers are aware that these two products are for different indications. See general recommendations.
10	REMERON & RESTORIL	REMERON (mirtazapine) RESTORIL (temazepam)	Handwritten orders for Remeron and Restoril can look very similar. Both may be dosed in 15mg increments (usually 15mg or 30mg), and dosed at bedtime.	Storage: Restoril kept in narcotic safe, and separate in the Pyxis® automated dispensing machines See general recommendations
11	SERZONE & SEROQUEL	SERZONE (nefazodone) SEROQUEL (quetiapine)	Both available in 100mg and 200mg strengths; similar instructions and dosage ranges; similar clinical settings. Many potentially dangerous drug interactions with Serzone (MAOI's)	Storage: agents separated from each other on storage shelf See general recommendations
12	TAXOL & TAXOTERE	TAXOL (paclitaxel) TAXOTERE (docetaxel)	Confusion between these two drugs can result in serious adverse outcomes since they have different dosing recommendations and use in various types of cancer	Maximum dose warnings installed into computer system. Storage: agents separated from each other on storage shelf. See general recommendations
13	TOPROL-XL, TOPAMAX & TEGRETOL	TOPROL-XL (metoprolol) TOPAMAX (topiramate) TEGRETOL (carbamazepine)	Verbal and written prescriptions incorrectly interpreted due to name similarities. Possible consequences include seizures, hallucinations, suicide attempts, hypertension, or bradycardia.	Storage: agents separated from each other on storage shelf See general recommendations. Added 11/05

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14	TRAMADOL & TRAZADONE	ULTRAM (tramadol) DESYREL (trazadone)	Confusion between these two drugs can occur due to similar names and dosages.	Ensure that health care providers are aware that these two products are for different indications. TALLman lettering will be utilized in the Pyxis® MedStation Formulary. See general recommendations
15	VINBLASTINE & VINCRISTINE	VELBAN (vinblastine) ONCOVIN (vincristine)	Fatal errors have occurred when vincristine was administered at the higher vinblastine dose. Vincristine: usually 1.4mg/m ² weekly Vinblastine: 5.5-7.4mg/m ² weekly	Maximum dose warnings installed on computer system to alert staff of mix-ups during order entry (Vincristine usually max of 2mg/dose) Storage: agents separated from each other on storage shelf See general recommendations
16	ZANTAC & XANAX	ZANTAC (ranitidine) XANAX (alprazolam)	Brand names sound similar when verbal/telephone orders taken. Patients receiving Xanax instead of Zantac could experience extreme sedation.	Storage: Xanax kept in narcotic safe, and in a single pocket drawer in a separate carousel in the Pyxis® automated dispensing machines See general recommendations

TALL-MAN LETTERing

ESTABLISHED NAME	TALL-MAN NAME	ESTABLISHED NAME	TALL-MAN NAME
Acetohexamide Acetazolamide	AcetoHEXAMIDE AcetaZOLAMIDE	Hydralazine Hydroxyzine	HydrALAZINE HydrOXYzine
Bupropion Buspirone	BuPROPion BusPIRone	Medroxyprogesterone	MedroxyPROGESTERone
Chlorpromazine	ChlorproMAZINE	Methylprednisolone Methyltestosterone	MethylPREDNISolone MethylTESTOSTERone
Clomiphene Clomipramine	ClomiPHENE ClomiPRAMINE	Nicardipine Nifedipine	NiCARDipine NIFEdipine
Cyclosporine Cycloserine	CycloSPORINE CycloSERINE	Prednisone Prednisolone	PredniSONE PrednisoLONE
Daunorubicin Doxorubicin	DAUNOrubicin DOXOrubicin	Sulfadiazine Sulfisoxazole	SulfADIAZINE SulfISOXAZOLE
Dimenhydrinate Diphenhydramine	DimenhyDRINATE DiphenhydrAMINE	Tolazamide Tolbutamide	TOLAZamide TOLBUTamide
Dobutamine Dopamine	DOBUTamine DOPamine	Vinblastine Vincristine	VinBLAStine VinCRIStine
Glipizide Glyburide	GlipiZIDE GlyBURIDE		