BJWCH TALL-MAN Lettering
Drug Name List

Look for TALL-MAN lettering on Pyxis screens and on oral medications packaged by pharmacy. Look-alike/sound-alike (LASA) drugs have similar names and may be confused with each other. **TALL-MAN letters** are intended to attract your attention to the **DIFFERENT** parts of the pair or group of drug names. When you see TALL-MAN lettering, remember there is at least one other drug with a very similar name.

READ CAREFULLY! Be sure you have the correct drug!

Aceta**ZOL**amide
Aceto**HEX**amide

ALPRAZolam
LORazepam

Bu**PROP**ion
Bu**SPIR**one

Chlorpro**PAMIDE**
Chlorpro**MAZINE**

Clomi**PHENE**
Clomi**PRAMINE**

Cyclo**SPORINE**
Cyclo**SERINE**

Dia**ZEPAM**
Dil**TIAZEM**

Di**M**enhy**DRINATE**
Di**PH**enhydr**AMINE**

DOBUTamine
DOPamine

DULoxetine
FLUoxetine

e**PHED**rine
EPInephrine

FENTanyl
SUFENTanil

Glipi**ZIDE**
Gly**BURIDE**

Hydr**ALA**zine
Hydr**OXY**zine

Medroxy**PROGESTER**one
Methyl**PREDNIS**olone
Methyl**TESTOSTER**one

Met**FORMIN**
Met**RONIDAZOLE**

Ni**CAR**dipine
Ni**FED**ipine

Predni**SONE**
Predniso**LONE**

Qui**NIDINE**
Qui**NINE**

Risperi**DONE**
r**OPINIR**ole

Sulfa**DIAZINE**
Sulfi**SOXAZOLE**

Tia**GAB**ine
Ti**ZAN**idine

TOLAZamide
TOLBUTamide

Trimetho**BENZAMIDE**
Trimetho**PRIM**

BJWCH Look Alike/Sound Alike Medication List

1) Develop a list of look alike/sound alike medications.
2) Take action to prevent errors involving the interchange of the medications on the list of look alike/sound alike medications.
3) Annually review the list and revise as necessary.
4) Make all clinical staff involved in medication use, particularly frontline nurses, pharmacists, physicians and other prescribers, unit secretaries, and pharmacy technicians aware of this list, how the drug names were selected, how the list is updated, what it means, why it is important to patient safety, and what interventions are required to reduce errors.

Reference standard: MM.01.02.01

	Potential Problematic Drug Names	Brand Name (Boldface) & Generic Name	Potential Errors and Consequences	Specific Safety Strategies
1.	Concentrated liquid morphine products vs. conventional liquid morphine concentrations.	Concentrated: **ROXANOL, MSIR** Conventional: morphine oral liquid	Concentrated forms of oral morphine solution (20 mg/ml) have often been confused with the standard concentration (listed as 10 mg/5 ml or 20 mg/5 ml) leading to serious errors. Accidental selection of the wrong concentration, and prescribing/labeling the product by volume, not milligrams, contributes to these errors, some of which have been fatal. For example, "10 mg" has been confused with "10 ml." If concentrated product is used this represents a 20 fold overdose.	When available, the pharmacy purchases the **10 mg/5 ml** morphine oral solution product in unit dose cups. The cups are barcoded. Pharmacy prepares the concentrated oral solution in **10 mg/0.5 ml** oral syringes. Pharmacy extemporaneously barcodes the syringes containing the concentrated solution. Dose entry in the pharmacy computer system appears as _______ mg/ _______ ml and is generated by the product selection.

	Potential Problematic Drug Names	Brand Name (Boldface) & Generic Name	Potential Errors and Consequences	Specific Safety Strategies
2.	EPInephrine ePHEDrine	**ADRENALIN** (EPInephrine) ePHEDrine	The names of these two medications look very similar, and their clinical uses make storage near each other likely. Both products are available in similar packaging (1 ml amber ampuls and vials).	This pair of drugs is included in BJWCH's tall-man lettering project. Pyxis screens display tall-man lettering to differentiate these two drug names. Pharmacy stock areas display tall-man lettering and Look Alike/Sound Alike labels. In Pharmacy, ePHEDrine is stored in the CII safe which affords physical separation from EPInephrine, which is stored in the regular injectables area of the Pharmacy. Additional Pyxis clinical alerts (requiring nursing responses) were added for removal of these medications from Pyxis. [These alerts have NOT been sent to ANESTHESIA Medstations.] Pharmacy has evaluated the necessity of storing both products in specific areas. Products have been removed from any areas where storage is not currently warranted.
3.	Hydromorphone injection and morphine injection	**DILAUDID** (hydromorphone) **ASTRAMORPH, DURAMORPH, INFUMORPH** (morphine)	Some health care providers have mistakenly believed that hydromorphone is the generic equivalent of morphine; however, these products are not interchangeable. Fatal errors have occurred when hydromorphone was confused with morphine. Based on equianalgesic dose conversion, this may represent significant overdose, leading to serious adverse events. Storage of the two medications in close proximity to one another and in similar concentrations may contribute to such errors. Confusion has resulted in episodes of respiratory arrest due to potency differences between these drugs.	Inpatient areas have bar-coding capability to differentiate hydromorphone and morphine products. ASC Pediatric Pyxis has morphine, but does not have hydromorphone in stock. Hydromorphone is not on the Pyxis Basic Override List. Inpatient orders would have to be prospectively reviewd by a pharmacist.

	Potential Problematic Drug Names	Brand Name (Boldface) & Generic Name	Potential Errors and Consequences	Specific Safety Strategies
4.	Insulin products Humalog and Humulin Novolog and Novolin Humulin and Novolin Humalog and Novolog Novolin 70/30 and Novolog Mix 70/30	**HUMULIN** (human insulin products) **HUMALOG** (insulin lispro) **HUMALOG Mix 75/25** (75% insulin lispro protamine suspension, 25% insulin lispro injection) **NOVOLIN** (human insulin products) **NOVOLOG** (human insulin aspart) **NOVOLIN 70/30** (70% isophane insulin [NPH] and 30% insulin injection [regular]) **NOVOLOG MIX 70/30** (70% insulin aspart protamine suspension and 30% insulin aspart)	Similar names, strengths, and concentration ratios of some products (e.g. 70/30) have contributed to medication errors. Mix-ups have also occurred between the 100 unit/ml and 500 units/ml insulin concentrations.	Pharmacy limits the number of insulin products stocked in Pyxis to the most commonly used products in each area. Other insulins ordered for patients on a particular unit are sent as patient specific vials and the vials are placed in the non-Pyxis bin. Pharmacy stock bins display Look-alike/Sound-alike stickers. Pharmacy affixes a HIGH ALERT medication sticker to each vial of insulin at the time it is sent to a patient care area. (Vials are not large enough to include both a high alert sticker and a LASA sticker, without covering essential information on the label.) Inpatient areas have bar-coding capability to differentiate between insulins. U-500 insulin is only stocked in the pharmacy and must be dispensed by the pharmacy in tuberculin syringes at the time of use. If a patient's own supply must be used when U-500 insulin is unavailable in the pharmacy, the patient's supply must be stored in the pharmacy and brought to the floor for patient dispensing. This procedure is only continued until the pharmacy can obtain a hospital supply.
5.	metFORMIN metRONIDAZOLE	**GLUCOPHAGE** (metFORMIN) **FLAGYL** (metRONIDAZOLE)	look-alike/sound-alike generic name pair	This pair of drugs is included in BJWCH's tall-man lettering project. Pharmacy uses tall-man lettering when packaging medications not available in unit-dose packaging. Pyxis screens display tall-man lettering to differentiate these two drug names. Inpatient areas have bar-coding capability to differentiate between these two drugs. Pharmacy stock areas display Look Alike/Sound Alike labels.

	Potential Problematic Drug Names	Brand Name (Boldface) & Generic Name	Potential Errors and Consequences	Specific Safety Strategies
6.	**Effexor XR** **Effexor**	venlafaxine extended release *(once-daily dosage form)* venlafaxine *(2-3 times daily dosage form)*	Manufacturers make both extended release and immediate release products in the same doses.	Pre-set reminder notes in Pyxis ask nurses whether they intended to remove immediate release or extended release products. Inpatient areas have bar-coding capability to differentiate between these two drugs. Pharmacy stock areas display Look Alike/Sound Alike labels.
7.	Phenytoin Fosphenytoin	DILANTIN (phenytoin) CEREBYX (fosphenytoin)	look-alike/sound-alike generic name pair Dosing can be confusing because the amount and concentration of fosphenytoin is expressed in terms of mg of phenytoin sodium equivalents (PE); fosphenytoin sodium 1.5 mg is equivalent to 1 mg phenytoin sodium, and is referred to as 1 mg PE	For injectable products we carry only fosphenytoin. We would order injectable phenytoin only if fosphenytoin was unavailable.
8.	hydrOXYzine hydrALAzine	**VISTARIL, ATARAX** (hydrOXYzine) hydrALAzine	Because the first four letters of their names are identical, they are frequently stored next to one another on pharmacy shelves and in automated dispensing cabinets and listed adjacently on computer screens. Their similar dosage strengths (10, 25, 50 and 100 mg) and tablet dosage forms also contribute to confusion. Confusion between the antihistamine (hydroxyzine) and the antihypertensive agent (hydralazine) could lead to serious adverse drug events.	This pair of drugs is included in BJWCH's tall-man lettering project. Pharmacy uses tall-man lettering when packaging medications not available in unit-dose packaging. Pyxis screens display tall-man lettering to differentiate these two drug names. Inpatient areas have bar-coding capability to differentiate between these two drugs. Pharmacy stock areas display Look Alike/Sound Alike labels.

	Potential Problematic Drug Names	Brand Name (Boldface) & Generic Name	Potential Errors and Consequences	Specific Safety Strategies
9.	**WELLBUTRIN SR** **WELLBUTRIN XL**	**WELLBUTRIN SR** (buPROPion HCl sustained-release) *twice-a-day dosage form after initial treatment* **WELLBUTRIN XL** (buPROPion HCl extended-release) *once daily dosage form*	Manufacturer makes two different extended release formulations with different recommended dosing frequencies.	A pre-set reminder note generated in the pharmacy computer warns nurses not to confuse the SR product with the XL product. For pharmacy extemporaneous unit dose packaging, both the generic and the trade name include the XL or the SR designation. Pharmacy stock areas display Look Alike/Sound Alike labels.
10.	tiaGABine tiZANidine	**GABITRIL** (tiaGABine) **ZANAFLEX** (tiZANidine)	look-alike/sound-alike generic name pair	This pair of drugs is included in BJWCH's tall-man lettering project. Pharmacy uses tall-man lettering when packaging medications not available in unit-dose packaging. Pyxis screens display tall-man lettering to differentiate these two drug names. Inpatient areas have bar-coding capability to differentiate between these two drugs. Pharmacy stock areas display Look Alike/Sound Alike labels.
11.	Additional drugs with tall-man lettering	See page 1 of this document for the tall-man lettering list.	look-alike/sound-alike drug name pairs or groups	The hospital maintains an additional list of look-alike/sound alike drug pairs/groups that are included in BJWCH's tall-man lettering project. Pharmacy uses tall-man lettering when packaging any of these medications not available in unit-dose packaging. Pyxis screens display tall-man lettering to differentiate between drug names. Inpatient areas have bar-coding capability to differentiate between drugs. Pharmacy stock areas display Look Alike/Sound Alike labels.