

What's New in the Patient Safety World

March 2023

ISMP Updates Tall Man Letter List

Hard to believe it's been almost 7 years since we did a column on "tall man" lettering to prevent LASA (look-alike/sound-alike) drug errors. Though some meta-analyses have questioned the effectiveness of tall man lettering ([Lambert 2016](#), [Zhong 2016](#), [Wang 2021](#)), we remain advocates for its use.

An interesting simulation study ([Lohmeyer 2023](#)) gave 30 nurses 10 successive tasks involving the presentation of a drug name and its selection from a dedicated set of 10 labelled syringes that included look-alike and sound-alike drug names, half of which had tall man lettering-coded labels. They used eye tracking technology to analyze nurses' responses. TML coding of syringe labels led to a significant decrease in the error rate (from 5.3% to 0.7%). Eye tracking further showed that TML affects visual attention, resulting in longer dwell time, more and longer fixations on the drug name as well as more frequent revisits compared with non-TML-coded labels. These effects were stronger for labels using TML in the mid-to-end position of the drug name. The researchers concluded that TML in drug names changes visual attention while identifying syringe labels and supports critical care nurses in preventing medication errors.

In a commentary on the Lohmeyer study, Lambert et al. ([Lambert 2023](#)) note that the study adds to a growing literature that shows benefits of mixed case lettering in terms of error reduction in laboratory or simulated settings and that use of eye tracking also adds value by shedding light on potential mechanisms by which the text enhancements have their effects. But they go on to say that future studies should expand beyond mixed case lettering to study other forms of text enhancement in real clinical settings. They also note that multimodal strategies to reduce the risk of wrong drug errors at every stage of the drug use process are desirable.

ISMP ([ISMP 2023a](#)) has just updated its list of drug names with tall man (mixed case) letters, following a survey of relevant constituents. It acknowledges the questions about effectiveness with the following statement:

"Although there are still questions to be answered, tall man lettering is done at little or no cost, has little or no downside, and is not known to be associated with any potential risk for patient harm. Considering past research showing it may be an effective way to

prevent mix-ups, and the overwhelming support for tall man lettering shown by survey respondents, ISMP strongly encourages continued use by FDA, pharmaceutical manufacturers, outsourcers and compounders, hospitals, and other practice locations, while we conduct further research to answer questions about the most effective way to differentiate look-alike drug name pairs.”

The overwhelming number of respondents to the survey (conducted between October and December 2022) use tall man lettering and felt that the use of tall man lettering helped reduce the risk of errors among medications with look-alike names. Only 18% used tall man lettering for drug pairs not included in either the FDA or ISMP lists of drug pairs for which tall man lettering conventions existed.

ISMP evaluated several drug names or pairs and searched its error-reporting databases to see how often reports were received of mix-ups with a similar-looking drug name. Based on this assessment, the following drug names were added to the ISMP list:

- cyclo**PHOS**phamide (confused with cyclo**SPORINE** and cyclo**SERINE**, already on FDA list)
- dro**PER**idol and dro**NAB**inol
- dex**AMETH**asone and dexmede**TOMID**ine
- py**RID**ostigmine and **PHYS**ostigmine
- **AL**fentanil (confused with **SUF**entanil and fenta**NYL**, already on the ISMP list)
- **BUP**ivacaine and **ROP**ivacaine
- oxy**BUTY**nin (confused with oxy**CODONE**, Oxy**CONTIN**, and oxy**MOR**phone, already on the ISMP list)

ISMP also removed from the list several drugs that are no longer available or had been listed by brand name.

ISMP actually publishes 2 lists on its website ([ISMP 2023b](#)):

- FDA-Approved List of Generic Drug Names with Tall Man (Mixed Case) Letters
- ISMP List of Additional Drug Names with Tall Man (Mixed Case) Letters

We remain advocates for use of tall man lettering. In fact, we’ve even sometimes suggested our own “tall man” lettering schemes for certain LASA drug pairs. Our prior columns “[Ophthalmology: Blue Dye Mixup](#)” and “[Another Blue Dye Eye Mixup](#)” described ophthalmology cases in which methylene blue was inadvertently used instead of trypan blue, leading to dire consequences. We are unaware of any “tall man” lettering conventions for this drug pair. A logical one might be “**METHYLENE** blue” and “**TRYPAN** blue” but you’d have to make sure that these choices are not confused with any other drugs or substances you stock.

In its article “Adopt Strategies to Manage Look-Alike and/or Sound-Alike Medication Name Mix-Ups” ([ISMP 2022](#)), ISMP includes tall man lettering as one of the strategies and has recommendations about the formatting:

- For problematic look-alike medication names, use tall man lettering on electronic prescribing drug selection screens, order sets, ADC screens, smart infusion pump

- screens, MARs, and any other drug communication tool, to draw attention to the key differences in similar drug names.
- To standardize the letters presented in uppercase and bold font, follow the recommendations on the US Food and Drug Administration (FDA) and ISMP Lists of Look-Alike Drug Names with Recommended Tall Man Letters.

ISMP notes it is currently serving as a co-investigator in a research project, led by one of the authors noted previously (Bruce Lambert, PhD), to assess the comparative effectiveness of various methods of tall man lettering, text enhancements, and their ability to reduce errors during drug selection. So, stay tuned!

See our previous columns on “tall man” lettering:

- December 2010 “[ISMP Updates Tall Man Lettering List](#)”
- December 2015 “[TALLman Lettering: Does It Work?](#)”
- July 2016 “[ISMP Updates TALLman Lettering List](#)”
- October 2016 “[More on Tallman Lettering and LASA Drug Pairs](#)”

References:

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<https://qualitysafety.bmj.com/content/32/1/6>

ISMP (Institute for Safe Medication Practices). ISMP Updates Its List of Drug Names with Tall Man (Mixed Case) Letters Based on Survey Results. *ISMP Medication Safety Alert! Acute Care Edition* 2022; 28(2): January 26, 2023

<https://www.ismp.org/resources/ismp-updates-its-list-drug-names-tall-man-mixed-case-letters-based-survey-results>

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<https://www.ismp.org/recommendations/tall-man-letters-list>

ISMP (Institute for Safe Medication Practices). Adopt Strategies to Manage Look-Alike and/or Sound-Alike Medication Name Mix-Ups. *ISMP Medication Safety Alert! Acute Care Edition* 2022; 27(11): June 2, 2022

<https://www.ismp.org/resources/adopt-strategies-manage-look-alike-andor-sound-alike-medication-name-mix-ups>



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