Pharmaceutical Services Division
Ministry of Health Malaysia

Guide on

Handling

Look Alike, Sound Alike Medications

GUIDE ON HANDLING LOOK ALIKE, SOUND ALIKE MEDICATIONS

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Introduction

Look Alike Sound Alike (LASA) medications involve medications that are visually similar in physical appearance or packaging and names of medications that have spelling similarities and/or similar phonetics.

As more medicines and new brands are being marketed in addition to the thousands already available, many of these medication names may look or sound alike. Confusing medication names and similar product packaging may lead to potentially harmful medication errors.The increasing potential for LASA medication errors was also highlighted in the Joint Commission's Sentinel Event Alert[1].

In 2011, the Pharmaceutical Services Division, Ministry of Health Malaysia received a total of 5,003 reports on near misses and medication errors through its Medication Error Reporting System. Approximately 6% of the reports were associated with look like or sound alike medications. Examples of similar looking/sounding name pairs are listed in Appendix 1.

Emphasis on patient safety in the naming of medicines is now undertaken by national and international regulatory and advisory boards[2]. The World Health Organisation's International Non-proprietary Names Expert Group works to develop international non-proprietary names for pharmaceutical medicinal substances for acceptance worldwide. In Malaysia, the National Pharmaceutical Control Bureau, Ministry of Health in its Drug Registration Guidance Document, September 2011 Revision for Section D - Label (Mock-up) For Immediate Container, Outer Carton and Proposed Package Insert states that 'The colours of labels should be differentiated between strengths of products as well as between products containing different active ingredients which belongs to the same holder[3]'.

Healthcare organisations need to institute risk management strategies to minimise adverse events with LASA medications and enhance patient safety. To aid in this effort, a Guide on Handling of Look Alike Sound Alike Medications is published by the Ministry of Health. With this guideline, it is hoped that errors relating to LASA medications can be minimised, if not eliminated, through identification and implementation of safety precautions.

Common Risk Factors

Common risk factors associated with LASA medications includes:

- Illegible handwriting
- Incomplete knowledge of drug names
- Newly available products
- Similar packaging or labelling
- Similar strengths, dosage forms, frequency of administration
- Similar clinical use

Strategies to avoid errors with Look Alike Sound Alike Medications

1. Procurement
2. Storage
3. Prescribing
4. Dispensing/ Supply
5. Administration
6. Monitoring
7. Information
8. Patient Education
9. Evaluation

1. Procurement

(a) Minimise the availability of multiple medicines strengths.

(b) Whenever possible, avoid purchase of medicines with similar packaging and appearance. As new products or packages are introduced, compare them with existing packaging.

2. Storage

(a) Use Tall Man lettering to emphasise differences in medications with sound-alike names.

Tall Man lettering (or Tallman lettering) is the practice of writing part of a medicines name in upper case letters to help distinguish sound-alike, look-alike medications from one another to avoid medication errors[4].

Tall Man lettering involves highlighting the dissimilar letters in two names to aid in distinguishing between the two. The Institute for Safe Medication Practices (ISMP), U.S Food and Drug Administration (FDA), The Joint Commission and other safety conscious organisations have promoted the use of Tall Man lettering as one means of reducing confusion between similar medication names[4].

Examples of Tall Man lettering are met**FORMIN** and meto**PROLOL**.

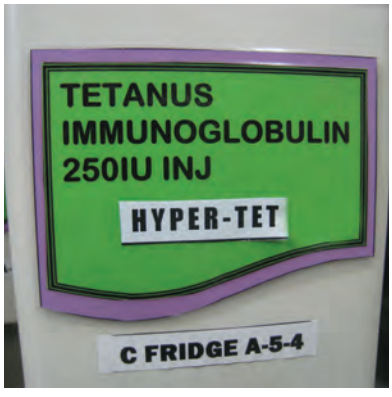
Refer *Appendix 2* for the list of Tall Man lettering.

(b) Use additional warning labels for look-alike medicines. Warning labels should be uniform throughout the respective facility to facilitate identification.

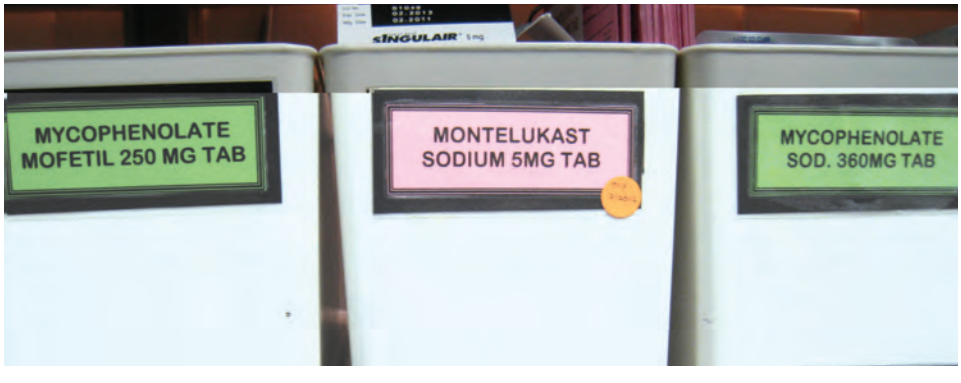
The following are examples of warning labels on storage bins, medication trolleys or emergency trolleys that can be used.

(c) For sound-alike medications where Tall Man lettering is not applicable, proprietary (brand or trademarked) names may be added to distinguish between the medications.

The non-proprietary names should be in larger font size than the brand names.



(d) Store LASA medications separately from their LASA pair. Whenever possible, avoid storing the products in immediate proximity to one another.



3. Prescribing

(a) Write legibly. Write clearly whether on an inpatient order or on a prescription.

(b) Prescription should clearly specify name of medication, dosage form, dose and complete direction for use.

(c) Include the diagnosis or medication's indication for use. This information helps to differentiate possible choices in illegible orders.

(d) Whenever possible, drug names in computerised prescriber order entry (CPOE) should incorporate Tall Man lettering.

(e) Communicate clearly. Take your time in pronouncing the drug name whenever an oral order has to be made. Ask that the recipient of the oral communication repeat the medication name and dose. Verbal orders should be limited to emergency situations only.

4. Dispensing/Supply

(a) Identify medicines based on its name and strength and not by its appearance or location.

(b) Check the appropriateness of dose for the medicines dispensed.

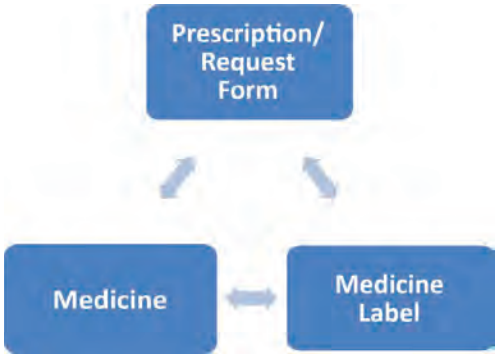
(c) READ medication labels carefully at all dispensing stages and perform triangle check. Triangle check is to check actual medicines against the medicines' labels and against the prescription.

(d) Double checking should be conducted during the dispensing and supply process.

(e) Highlight changes in medication appearances to patients upon dispensing.

5. Administration

(a) READ medication labels carefully during the administration process and perform triangle check. Triangle check is to check actual medicines against the medication labels and against the prescription.



(b) Emphasize the need to read labels rather than relying on visual recognition or location.

(c) Make read back clarification of verbal orders a requirement. The staff receiving the verbal orders must repeat the orders and ensure that they are verified.

6. Monitoring

(a) All facilities need to identify medications that look alike or sound alike in its organisation. The LASA list needs to be reviewed and updated periodically at least once a year.

(b) Implement feedback mechanism to inform on look-alike medications.

7. Information

(a) All relevant personnel have access to the LASA list.

(b) Staff are informed on new medications listed as LASA in the hospital or clinic. Example: Displaying information on LASA in the facility's website.

Picture courtesy of Pharmacy Department, Selayang Hospital

8. Patient Education

(a) Inform patients on changes in medication appearances.

(b) Educate patients and their caregivers to alert healthcare providers whenever a medication appears to vary from what is usually taken or administered.

(c) Encourage patients and their caregivers to learn the names of their medications.

9. Evaluation

Evaluate medication errors related to LASA medications.

References

1. Look-alike,sound-alike drug names. Sentinel Event Alert, Issue 19, May 2001 The Joint Commission.
2. Look-Alike, Sound-Alike Medication Names. WHO Collaborating Centre for Patient Safety Solutions
3. Drug Registration Guidance Document, National Pharmaceutical Control Bureau, Ministry of Health, Malaysia.
4. Institute for Safe Medication Practices, US
5. Aurora Health Care System Interdisciplinary Clinical Policy Manual
6. Health Products and Food Branch, Canada

APPENDIX 1

Appendix 1

Medications with similar looking/sounding name pairs reported through the Medication Error Reporting System in 2011

1	madopar	methyldopa
2	lovastatin	loratadine
3	chlorpromazine	carbamazepine
4	cotrimoxazole	clotrimazole
5	carbimazole	cotrimoxazole
6	amlodipine	felodipine
7	Difflam	Daflon
8	enalapril	perindopril
9	Neurobion	Neurontin
10	cycloserine	cyclosporine
11	Glucophage XR	Glucovance
12	gliclazide	glibenclamide
13	imipenem	meropenem
14	lovastatin	simvastatin
15	losartan	valsartan
16	Progyluton	Progynova

APPENDIX 2

Appendix 2

Medication Names with Tall Man Lettering

No.	Medication names	Reference
1	ATRAcurium	3
2	BISOprolol	2
3	BUPIvacaine	3
4	carBAMAZepine	2
5	carBIMazole	2
6	cefOTAXime	2
7	cefTAZIDime	2
8	cefTRIAXone	1
9	chlorproMAZINE	1
10	chlorproPAMIDE	1
11	COzaar	3
12	DAUNOrubicin	1
13	DOBUTamine	1
14	DOXOrubicin	1
15	DOPamine	1
16	DuphASTON	3
17	DuspaTALIN	3
18	ENALApril	3
19	ESOMEprazole	3
20	FORTzaar	3
21	gliBENclamide	2
20	gliCLAzide	2
21	LANSOprazole	3
22	LIGNOcaine	3
22	LOsartan	3
23	LOVAstatin	3
24	metFORMIN	1
25	METOprolol	2
26	NEostigmine	3
27	NeuroBION	3
28	NeuroNTIN	3
29	niFEDipine	2
30	niMODipine	1
31	nitroGLYCERINe	3
32	nitroPRUSSIDe	3
33	PANcuronium	3
34	PANTOprazole	3
35	PERINDOpril	2

36	ProgyLUTON	3
37	ProgyNOVA	3
38	ProSCAR	3
39	PROzac	3
40	ROcuronium	3
41	ROPIvacaine	3
42	SETRAline	3
43	STELLAzine	3
44	VEcuronium	3
45	vinBLAStine	1
46	vinCRIStine	1
47	XalaTAN eye drop	3
48	XalaCOM eye drop	3

References:

1. FDA and ISMP Lists of Look-Alike Drug Name Sets with Recommended Tall Man Letters, Institute for Safe Medication Practices, 2008.

2. Gerrett D, Gale A, Darker I, Filik R, Purdy K. Final Report of the Use of Tall Man Lettering to Minimise Selection Errors of Medicine Names in Computer Prescribing and Dispensing Systems. National Health Services, United Kingdom. Loughborough University Enterprises Ltd.

3. Recommendations by Pharmaceutical Services Division, Ministry of Health Malaysia.

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