Medication errors: They continue

An important preventable medical error is the inadvertent administration of wrong medication. Medication errors are best seen as failure in the treatment process that lead to, or have the potential to lead to, harm to the patient.[1] The error can be classified as either a mistake in the planning or mistake while executing a well-planned therapy. Mistake in planning may be due to knowledge-based errors or rule-based errors, whereas execution errors may be action-based or memory-based errors.[2]

In this issue, Kaur *et al.* describe one such medication error due to an action-based execution mistake.[3] Literature is replete with reports of medication errors resulting in adverse drug reactions. Such events lead to an increase in the patient morbidity along with increased health care burden and litigations. While the patient in the concerned publication in this issue recovered uneventfully and was discharged from the hospital in 6 days,[3] this may not be the case at all times. Thus, it is imperative to eliminate or at least reduce the incidence of medication errors in day-to-day practice.

Despite advancements in medicine, medication errors have continued. According to a recent finding, the incidence of adverse drug events was as high as 82/1000 prescriptions in Delhi,[4] and the national figures report up to 5.2 million medical errors annually.[5]

One of the leading causes of medication errors is communication barrier.[6] It may be because of barrier during verbal transmission of orders, orders written in illegible handwriting, or look-alike sound-alike (LASA) drugs. The resultant mistakes could then involve wrong patient, incorrect dose, incorrect route, or incorrect medication itself.

Closed-loop communication is a key element of team concept advocated by the American Heart Association.[7] It is aimed at reducing medical errors related to poor communication during emergency situations such as cardiopulmonary resuscitation. It suggests that there should be bilateral talks between the ordering physician and the health care worker who is administering the drug, thus closing the communication loop. It ensures that the instructions that have been passed are clearly heard and correctly understood by the responder or team member. Any errors related to the name of the drug, the dose, and the route of administration can be minimized at this point. Most importantly, the health care worker should also communicate to the ordering physician after the orders have been executed. This simple yet highly effective approach could have avoided the error reported by Kaur *et al.* also.[3]

Another commonly identified reason of medication errors is using abbreviations and prescribing medications in illegible handwriting or passing verbal instructions for LASA drugs. To overcome this, computerized physician order entry system has been suggested. Besides avoiding abbreviations while prescribing drugs, bar-code medication administration, clinician and patient education, identification of "high-alert medications," and nonpunitive reporting systems are strategies that can be employed to target the four phases of medication use (prescribing, ordering/transcribing, dispensing, and administration) in an effort to reduce medication errors.[8]

Because the LASA medications are responsible for a large chunk of avoidable medication errors,[9] preventing this error was incorporated into the Joint Commission's National Patient Safety Goals.[10] World Health Organization member states have been advised to develop policies for handling LASA medications. These could include minimizing the availability of multiple medicines strengths, avoiding purchase of medicines with similar packaging and appearance, use of Tall Man lettering to emphasize differences in medications with sound-alike names (e.g. DOPamine and DOBUTamine; ADRenaline, and ATRopine), use of distinctly colored uniform warning labels for LASA and high-risk medications, and physically storing LASA medication separately from LASA pair. For dispensing phase, specifying the dose and directions for use, careful reading of medication labels, performing triangle check (i.e., checking actual medicines against the medicines' labels and against the prescription), double-checking during the dispensing and supply process, and specifying indications for use are also recommended. Finally, errors related to LASA medications should also be reported and audited, in an attempt to minimize their incidence.[11] For this last reason, we congratulate Kaur *et al.* for reporting the present scenario.[3]

Going a step ahead, it is also advisable that the institutions should identify a list of high-risk medications. This list could include all the drugs which have the propensity to cause serious harm. These drugs should be stored separately, with distinctly identified colored tapes. Use of medication in extremes of age and vulnerable populations should also be addressed separately during safety related to drug administration. This could involve use of tools such as the Beers' Criteria,[12] or Screening Tool of Older Persons' Prescriptions (STOPP),[13] or Screening Tool to Alert doctors to Right Treatment (START).[14]

What strikes us pertinently at the time of writing this editorial is the existence of a wide discrepancy between what should or could be done versus the probable reality at most of our workplaces. We hope this timely publication serves as a gentle reminder toward need for ongoing implementation of interventions needed to help prevent medication errors.

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Access this article online	
Quick Response Code:	Website: www.joacp.org
	DOI: 10.4103/joacp.JOACP_88_19

How to cite this article: Salhotra R, Tyagi A. Medication errors: They continue. J Anaesthesiol Clin Pharmacol 2019;35:1-2.