



# Drug interaction a common problem in the clinical setting: Scenario of developing countries

Dear Editor,

A small proportion of drug-drug interactions (DDIs) may cause clinically significant pharmacokinetic changes and can produce potential adverse effect. These DDIs depend on the number of prescribed medications used by the patients in comorbid conditions and chronic diseases, etc. Polypharmacy continue to be a difficult problem in modern healthcare despite continuous efforts to reduce their occurrence. Inappropriate use of medications is a very common and crucial problem in every Department of Clinical setting, especially in developing nations and may endanger the patient's health.<sup>[1-6]</sup> For instance, in Pakistan the prevalence of DDIs ranges from 45% to 77.5%.<sup>[1-3]</sup> The least amount of DDIs observed in pulmonary ward (45%)<sup>[1]</sup> and mostly significant in cardiology ward (77.5%),<sup>[3]</sup> which is comparatively higher than India (30.6%),<sup>[4]</sup> where at least one potential DDIs (pDDIs) was observed regardless of type of severity. Similarly, in medicine ward, the prevalence of DDIs was found to be 52.8% in Pakistan<sup>[2]</sup> and 66% in India with average drugs per prescription was 7.8/patient. Whereas among all, a significantly higher value was observed in Ethiopia (78%) with an average 1.44 pDDIs/patient.<sup>[6]</sup> On the basis of these facts and evidences, it is anticipated that population from the developing countries are at higher risk of DDIs, and concurrent use of multiple drugs for the treatment of different or the same diseases can increase the risks of impaired treatment efficacy and further increases drug-related toxicity. The outcomes of DDIs may alter desired therapeutic outcome or a unique response that does not occur with either agent alone. Close monitoring of each prescription by the clinical pharmacists using computer-based software in assisting the clinical decision-making. Further, careful selection of drugs before administration to patients

is recommended in order to avoid the consequences of DDIs.

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## REFERENCES

1. Ismail M, Iqbal Z, Khattak MB, Javaid A, Khan TM. Prevalence, type and predictors of potential drug-drug interactions in pulmonary ward of a tertiary care hospital. *Afr J Pharm Pharmacol* 2011;5:1303-9.
2. Ismail M, Iqbal Z, Khattak MB, Khan MI, Arsalan H, Javaid A, *et al.* Potential drug-drug interactions in internal medicine wards in hospital setting in Pakistan. *Int J Clin Pharm* 2013;35:455-62.
3. Ismail M, Iqbal Z, Khattak MB, Javaid A, Khan TM. Potential drug-drug interactions in cardiology ward of teaching hospital. *Health Med* 2012;6:1618-24.
4. Patel VK, Acharya LD, Rajakannan T, Surulivelrajan M, Guddattu V, Padmakumar R. Potential drug interactions in patients admitted to cardiology wards of a south Indian teaching hospital. *Australas Med J* 2011;4:9-14.
5. Soherwardi S, Chogtu B, Fizal P. Surveillance of the potential drug-drug interactions in medicine department of a tertiary care hospital. *J Clin Diagn Res* 2012;6:1258-61.
6. Bhagavathula AS, Berhanie A, Tigstu H, Yishak A, Getachew Y, Khan TM, *et al.* Prevalence of potential drug-drug interactions among internal medicine ward in University of Gondar teaching hospital, Ethiopia. *Asian Pac J Trop Biomed* 2014;4 Suppl 1:S204-8.

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