



Prescribers' Knowledge of Drug Interactions

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The ability of prescribers to accurately identify and manage potential drug-drug interactions has not been well defined. At least 2 studies have attempted to assess prescriber knowledge about drug interactions, however.^{1,2} The first study reported on physicians, nurse practitioners, and physician assistants (n = 168) in the California Veterans Affairs health system. The second report included a sample drawn from the same types of practitioners (n = 950) but included all parts of the United States and non-Veterans Affairs prescribers. Both studies listed drug pairs and asked the prescribers to identify those that are "contraindicated," "may be used with monitoring,"

or that represented noninteracting drug pairs. A majority of respondents in both studies reported that their knowledge of drug interactions affected their ability to select safe drug combinations.

The Table lists the interacting drug pairs and the percentage of respondents who either did not think an interaction was possible or simply did not know if the drug pair interacted. It is of interest that one of the oldest known interactions (warfarin-cimetidine) and most recently described interactions (sildenafil-isosorbide in study 2) were relatively well known to prescribers.

A majority of respondents were not aware of the interactions involving the object drugs alprazolam, cyclosporine, and methotrexate. Each of these interactions can produce severe adverse patient outcomes. Perhaps the relative infrequency of prescribing methotrexate or cyclosporine by general practitioners contributes to their lack of knowledge. Unfortunately, both of these studies demonstrate a poor understanding of

drug interactions among the sampled practitioners. Of the 12 separate drug combinations tested, only one was recognized correctly by >80% of the respondents. Due to the limited number of interactions assessed in these studies, neither can be considered a definitive assessment of prescribers' knowledge about drug interactions; however, the results do not provide much assurance that prescribers are well-equipped to integrate drug interaction potential into their therapeutic decision process.

Both studies noted that prescribers turned to outside resources for assistance with potential drug interactions. Pharmacists were identified as the most common source that identified a potential interaction, and the prescribers were more likely to respond to a pharmacist's contact than one originated from an alternative source. Information regarding drug interactions was often reported to be associated with changes in prescribing choices.

Although a majority of practitioners understand the importance of recognizing potential drug interactions, they do not appear to have the knowledge to achieve the desired outcome. Fortunately, they are quite willing to be assisted in the identification of potential drug interactions. Pharmacists should not assume a prescriber knows of a potential interaction and has done a complete risk-benefit assessment prior to ordering the drugs. Even if the prescriber is aware of the interaction, his or her knowledge may be limited to a few words in the drug labeling. Providing a brief overview of the potential interaction and methods of avoiding patient harm will give the prescriber knowledge that they will be able to draw upon the next time they consider the drug combination. ^R

 For a list of references, go to: www.PharmacyTimes.com.

Table

Prescriber Response to Potential Drug Interaction Pairs		
Object Drug	Precipitant Drug	Did Not Know of Interaction (%)
Alprazolam	Itraconazole	56
Cisapride	Erythromycin	30
Cyclosporine	Rifampin	58
Digoxin	Amiodarone	35
Digoxin	Clarithromycin	35
Lovastatin	Gemfibrozil	26
Methotrexate	Cotrimoxazole	53
Sertraline	Phenelzine	47
Sildenafil	Isosorbide	29 (study 1)
Sildenafil	Isosorbide	16 (study 2)
Theophylline	Cimetidine	26
Warfarin	Cimetidine	18
Warfarin	Cotrimoxazole	32

Adapted from references 1 and 2.