POTENTIAL DRUG TO DRUG INTERACTIONS DETECTED IN PRESCRIPTIONS DISPENSED AT A COMMUNITY PHARMACY IN CÓRDOBA, ARGENTINA.

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INTRODUCTION
Drug to drug interactions (DDIs) are defined as the modifications in the action of one or more concurrently administered medications (1-5). DDIs may result in either increased or decreased efficacy, in treatment failure, or in an increased toxicity of medications (1-5). Pharmacists play an important role in protecting the patients from potential DDIs, especially in the case of drugs with a narrow therapeutic index (1-3,6).

While there is a lack of an effective screening system for detecting DDIs at dispensing in community pharmacies in Argentina, potential DDIs causing serious risks to patients’ health has not been studied extensively.

Consequently, the objectives of this study were to evaluate the nature, type and frequency of potential DDIs in prescriptions dispensed at a community pharmacy in Córdoba (Argentina), over a 3-month period.

MATERIALS AND METHODS
A database was developed with all the dispensations covered by the State Administration of Health Insurance (APROSS) between October and December 2009, yielding to a random population of 400 patients, excluding those who only used a medication at the time of the study. The information collected included date of the prescription, age, gender, prescribing physician’s ID, and the medications dispensed (name, quantity and composition). Potential DDIs were detected using the Drug Interaction Checker within www.medscape.com database and classified as severe, moderate or minor, depending on their severity of clinical significance, and according to their production mechanism in pharmacodynamic or pharmacokinetic. Data analysis was performed using SPSS 15.0.

RESULTS
A total of 36,441 medications were dispensed to 7,798 patients during the study. From a total of 400 patients, 93 DDIs (23.3%) were detected in 67 different patients, 15 were severe (16.1% of all interactions) and the remaining 78 DDIs (83.9%) were moderate while a 59,6% of cases involved pharmacokinetic interaction.

Finally, 48.4% of the total DDIs detected involved different prescribers.

CONCLUSIONS
The present study revealed that the overall rate of potential DDIs in prescriptions dispensed was 23,3%, a number that should raise some concern and awareness in both, the medical and pharmaceutical community (1,7). A putative limitation of this study may be related to a certain degree of underreporting of potential DDIs, given that data was analyzed considering only the APROSS prescription, which did not include neither over-the-counter medications nor herbal preparations (1,2,5). A larger study including other community or hospital pharmacies may give more reliable results (1,3,5,7).

These results provide a panoramic view of the DDIs problem, and demonstrate the need of the implementation of a reliable screening system for DDIs at the time of dispensing (1,4,7-9). Identifying and preventing potentially harmful DDIs is a critical component of a pharmacist’s mission, shifting the pharmacist’s role from drug-oriented to patient-oriented (1,7).

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