

## A MICROCOMPUTER-BASED SYSTEM FOR THE RAPID IDENTIFICATION OF DRUG INTERACTIONS

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The tendency towards multiple prescribing, together with an increased awareness of the toxicity of drugs, has made the rapid identification of potentially dangerous drug interactions of paramount importance. We have developed a drug interaction identification system based on a Commodore 4032 microcomputer and disk drive, suitable for use by both hospital and retail pharmacists.

The database contains entries relating to previously reported interactions (e.g. acetohexamide-phenylbutazone), together with a multicharacter code which is used to generate specific messages concerning the interaction. Two message groups are used, each being selected independently by the code stored in the database. In the first group are messages referring to the interaction, ranging from "hazardous potentiation" to "hazardous inhibition". The second group of messages contain nineteen qualifying statements which attempt to further briefly describe the cause of the interaction. The database currently contains information on 155 generic drugs.

The program may be operated in three different modes:-

1. A direct search for an interaction between two generic drugs, or between a generic drug and a specific dietary factor. This mode returns a hard copy of the relevant interaction messages. If no interaction is on file, this fact is reported.
2. This mode is of more use to those requiring further information concerning the interaction. In addition to the interaction report, the output also prints a reference to the original paper reporting the interaction.
3. Mode 3 operation allows for the possibility of an interaction between a new drug and a patient's current medication. Patient details are stored on a "patient file". When the new prescription is entered, the patient's current medication is compared with the new drug and any interactions presented.

Use of the interaction retrieval system described makes the recall of drug-drug and drug-diet interactions very rapid, and we believe that the system described could form the basis of a pharmacy-based interaction monitoring system.