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Overlapping of the Clinically Significant Adverse Reactions of Drugs in the Poly-pharmacy

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A drug can cause several adverse reactions and the known effects are listed in the Package Inserts. Ordinarily drug therapy is performed by poly-pharmacy, and co-administered drugs in a prescription may have same adverse effects. Since overlapping of adverse effects might increase the possibility of adverse-effects, we investigated such actual overlapping using computed data of about eighty thousand instances of medical treatment per patient.

Overlapping was found in about half of all prescriptions including two or more orally administered drugs and the mean value of 3.4 adverse-effects-overlapping per prescription were observed. Frequent overlapping adverse-effects were acute circulation failure, Stevens Johnson syndrome, agranulocytosis, toxic epidermal necrosis, liver abnormalities and so on. It is found that seven distinct drugs demonstrate the same adverse-effect in one prescription.