

## Prevalence of drug interactions in hospitalized elderly patients: a systematic review

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**Supplementary Table 3:** Number of patients with interaction, number of DDI per patient with at least one DDI, drugs or drug classes mostly involved with DDI and drug combinations mostly involved with DDI. In cases which prevalence were described, we reported the three drugs mostly involved with drug interactions or the three drug combinations (or drug classes) mostly involved with DDI. ACE: angiotensin-converting enzyme. NA: not available. NSAID: non-steroidal anti-inflammatory drugs. PPI: proton-pump inhibitors.

| First autor                 | # of patients with interactions                    | # of DDI per patient with interaction | Drugs or drug classes mostly involved with DDI   | Drug combinations mostly involved with DDI   |
|-----------------------------|--|---------------------------------------|--|--|
| Barak-Tsarfir O, et al (61) | Unclear: around 56 patients                        | NA                                    | NA   | NA   |
| Blix HS, et al (29)         | 70 (evaluated only serious or contraindicated DDI) | NA                                    | Warfarin; digitoxin; prednisolone<br>antithrombotic agents; non-steroidal anti-inflammatory agents; angiotensin converting enzyme inhibitors | N/A  |
| Castilho ECD (30)           | NA   | NA                                    | NA   | Serious: chlorpromazine + promethazine; chlorpromazine + haloperidol; haloperidol + promethazine; diazepam + phenobarbital; risperidone + haloperidol; carbamazepine + ketoconazole; carbamazepine + chlorpromazine; haloperidol + ketoconazole; chlorpromazine + ketoconazole; chlorpromazine + sodium phosphate.<br>Contraindicated: ketoconazole + simvastatin; ketoconazole + amiodarone; chlorpromazine + metoclopramide; promethazine + metoclopramide; ketoconazole |

|                                  |  |  |  |   |
|----------------------------------|--|--|--|---|
|                                  |  |  |  | + fluconazole; ziprasidone + chlorpromazine; ziprasidone + haloperidol; biperiden + potassium chloride; + risperidone metoclopramide; citalopram + ketoconazole; citalopram + selegiline; carbamazepine + selegiline; amitriptyline + ziprasidone; fluconazole + haloperidol; fluconazole + ziprasidone   |
| Chahin RC (31)                   | 83   | NA   | NA   | NA  |
| Correia LM, et al (32)           | NA   | NA   | NA   | Aspirin + dipiridamol; clopidogrel + fluoxetine; diazepam + morphine; clopidogrel + omeprazole; diazepam + fluoxetine; diltiazem + phenytoin.   |
| Costa, SC (33)                   | 144  | 4.5  | Dipyrrone; captopril; furosemide; metoclopramide; propranolol.   | Dipyrrone + captopril; dipyrrone+furosemide; digoxin+metoclopramide.  |
| Cuentro VS (34)                  | NA   | 8.6  | Aspirin; captopril; enoxaparin; furosemide; insulin; spironolactone.   | Captopril + insulin; captopril + enoxaparin; captopril + spironolactone.  |
| de Oliveira, LR (42)             | NA   | NA   | NA   | Allpurinol + hydrochlorothiazide; potassium chloride + enalapril; potassium chloride + spironolactone; digoxin + aluminum dioxide; digoxine + amiodarone; digoxin + enalapril / digoxin + furosemide; digoxin + metoclopramide; enalapril + spironolactone; furosemide + amikacyn + furosemide + gentamicin; haloperidol + promethazine; metoclopramide + venlafaxine; omeprazole + phenytoin; omeprazole + diazepam. |
| Danisha P, et al (36)            | 200  | 2.95   | NA   | NA  |
| Devarapalli P et al (37)         | 58   | 1.35   | NA   | Albuterol + doxofylline; albuterol + digoxin; amikacin + furosemide; aspirin + diclofenac.  |
| Doan J, et al (15)               | 221  | NA   | NA   | NA  |
| dos Santos RM, et al (35)        | NA   | NA   | NA   | Captopril + dipyrrone; dipyrrone + insulin; digoxin + furosemide; captopril + digoxin; captopril + spironolactone; dipyrrone + glyburide ; dipyrrone + metoclopramide   |
| Egger T, et al (38)              | NA   | NA   | NA   | NA  |
| George AS, et al (39)            | 659  | 3.022  | NA   | NA  |
| Ghibelli S, et al (40)           | 67 at admission; 65 at discharge   | 4.49 at admission; 5.08 at discharge   | NA   | Warfarin + canrenone; ramipril + canrenone; digoxin + furosemide; aspirin + clopidogrel; amlodipine + simvastatin; amiodarone + simvastatin; simvastatin + diltiazem  |
| Gutierrez-Valencia M, et al (41) | 165  | NA   | Antidepressants; antiparkinsonians; benzodiazepines; diuretics; proton-pump inhibitors; vitamin K antagonists; drugs for cardiac therapy; buprenorphine. | NA  |
| Jankovic SM, et al (60)          | Using Medscape® Drug Interaction Checker: 145;<br>Using Epocrates® Interaction Check: 140; | Using Medscape® Drug Interaction Checker: 30.56;<br>Using Epocrates® Interaction Check: 17.47; | NA   | Midazolam + tramadol  |

|                                 | Using Drug-Reax System®:<br>137 | Using Drug-Reax System®:<br>11.03 |   |   |
|---------------------------------|---------------------------------|-----------------------------------|---|---|
| Juárez-Cedillo T,<br>et al (56) | 69                              | 3.1                               | Dipyrrone, furosemide, enoxaparin, enalapril, lysine<br>clonixinate, losartan.  | Heparin + NSAID; digoxin + calcium gluconate; clopidogrel + ciprofloxacin; phenytoin<br>+ nimodipine  |
| Kashyap M, et al<br>(58)        | 126                             | 1.198                             | NA  | Anticoagulant drugs + clopidogrel + aspirin; clopidogrel + PPI; ramipril +<br>spironolactone.   |
| Locatelli, J (43)               | NA                              | NA                                | Warfarin  | Warfarin + omeprazole; warfarin + levothyroxine; warfarin + enoxaparin  |
| Matanovic SM, et<br>al (44)     | 149                             | NA                                | ace inhibitors; anticoagulants; antiplatelet agents;<br>ATII blockers; benzodiazepins; potassium spare<br>diuretics; potassium supplements; opiates;<br><br>Atorvastatin; methyldigoxin; simvastatin; warfarin. | NA  |
| Melo DO, et al (45)             | 247                             | NA                                | NA  | Anticoagulants + antiplatelet drugs; aspirin + heparin; clopidogrel + omeprazole  |
| Mohammed S, et<br>al (46)       | NA                              | NA                                | NA  | NA  |
| Narvekar RS, et al<br>(59)      | NA                              | NA                                | Clobazam; diazepam; lorazepam; nitrofurantoin   | NA  |
| Parreira RBC (57)               | 8                               |                                   | NA  | Losartan + valsartan; metoprolol + ranitidine; omeprazole + metoprolol; enoxaparin<br>+ aspirin.  |
| Pedroso, FM (47)                | NA                              | 23.59                             | NA  | NA  |
| Radosevic N, et al<br>(49)      | 36                              | NA                                | NA  | ACE inhibitors + potassium supplement; heparin + aspirin; heparin + coumarin<br>anticoagulant; amiodarone + coumarin anticoagulant+ coumarin anticoagulant +<br>aspirin; methyldigoxin + hydrochlorothiazide; ACE inhibitor + potassium-sparing<br>diuretic; coumarin anticoagulant + quinolone; Potassium-sparing diuretic +<br>potassium supplement; benzodiazepine-tranquilizer + benzodiazepine-hypnotic;<br>amiodarone + methyldigoxin; NSAID + diuretic; amiodarone + phenytoin; ACE<br>inhibitor + allopurinol |
| Rafiei H, et al (50)            | NA                              | NA                                | Dexamethasone; heparin; phenytoin, ranitidine.  | NA  |
| Sapkota S, et al<br>(48)        | NA                              | NA                                | NA  | Meperidine + promethazine; ketorolac + diclofenac; gentamicin + cefotaxime;<br>isoniazid + rifampin   |
| Senín, LD (52)                  | 13                              | 1.69                              | Acenocoumarol; omeprazole.  | Omeprazole + acenocumarol; acenocumarol + levothyroxine   |
| Rosas-Carrasco O,<br>et al (51) | 317                             | 11.15                             | NA  | Fluoroquinolone + antidiabetic drugs; low molecular weight heparin +<br>anticoagulants; low molecular weight heparin + NSAID.   |
| Schuler J, et al (53)           | 356                             | NA                                | NA  | Benzodiazepine + opioid; amiodarone + betablocker; tramadol and selective<br>reuptake inhibitors.   |
| Teka F, et al (54)              | 87                              | NA                                | NA  | Heparin + aspirin; spironolactone + enalapril; aspirin + clopidogrel  |
| Yong TY, et al (55)             | NA                              | NA                                | NA  | NA  |