4CPS-237

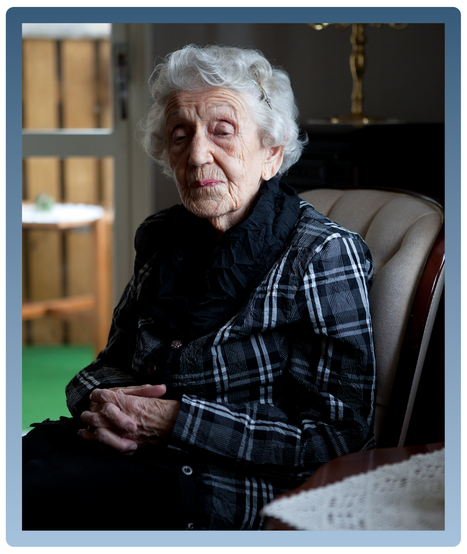
# CLINICALLY-RELEVANT DRUG-DRUG INTERACTIONS AMONG ELDERLY PEOPLE WITH DEMENTIA LIVING IN NORTHERN SWEDEN

Eva Sönnerstam MSc Pharm, Maria Sjölander PhD, Maria Gustafsson PhD

## Objectives

To assess the occurrence and characteristics of clinically relevant drug-drug interactions among old people with dementia.

To investigate factors associated with clinically relevant drug-drug interactions among old people with dementia.



## Method

Medical records of 458 people aged ≥65 years, with dementia or cognitive impairment that were admitted to two hospitals in Northern Sweden were reviewed retrospectively.

Information on medication use at the time of admission was collected.

Clinically relevant drug-drug interactions requiring either dose adjustments or avoidance of concomitant use, were identified using the Janusmed interactions database.

Identified interactions were classified regarding pharmacological mechanism according to Stockley's classification system.

## Results

**43.2%** of included persons had at least one clinically relevant drug-drug interaction.

**401** drug-drug interactions were identified (distribution shown in figure 1-4):

! **95.8%** of DDIs require dose adjustment
**42.6%** of study sample affected

! **4.2%** of DDIs should be avoided
**3.3%** of study sample affected

Citalopram and warfarin were the most common drug substances.

Increased risk of bleeding and reduced efficacy were the most common potential clinical consequences.

There was an increased risk of clinically relevant DDI(s) when having higher number of medications prescribed (OR 1.312, 95% CI 1.227-1.403).

### Patient Characteristics

| | |
|---|---|
| Cases, n | 458 |
| Sex, n (%) | |
| Female | 286 (62.4) |
| Male | 172 (37.6) |
| Age (years), mean ± SD, (range) | 83.2 ± 6.6 (65-99) |
| Number of medications at admission, mean ± SD, (range) | 7.7 ±3.5 (0-20) |
| MMSE (0-30), mean ± SD, (range) | 19.8 ± 4.7 (7-29) |
| Type of accommodation, n (%) | |
| Nursing home | 151 (33.0) |
| Living at home | 307 (67.0) |
| Geographic location, n (%) | |
| Skellefteå | 120 (26.2) |
| Umeå | 338 (73.8) |

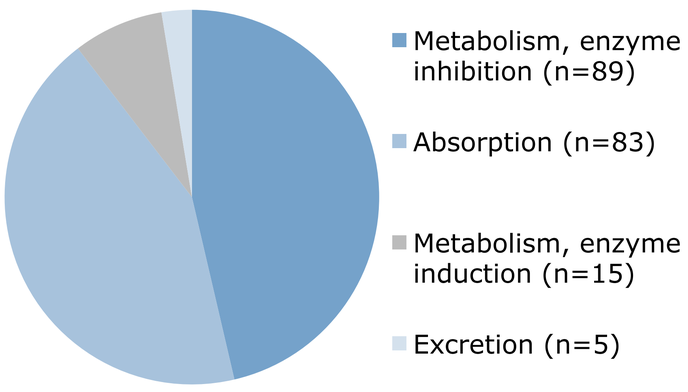



**Figure 1.** Distribution of pharmacokinetic drug-drug interactions, 47.9% (192/401).

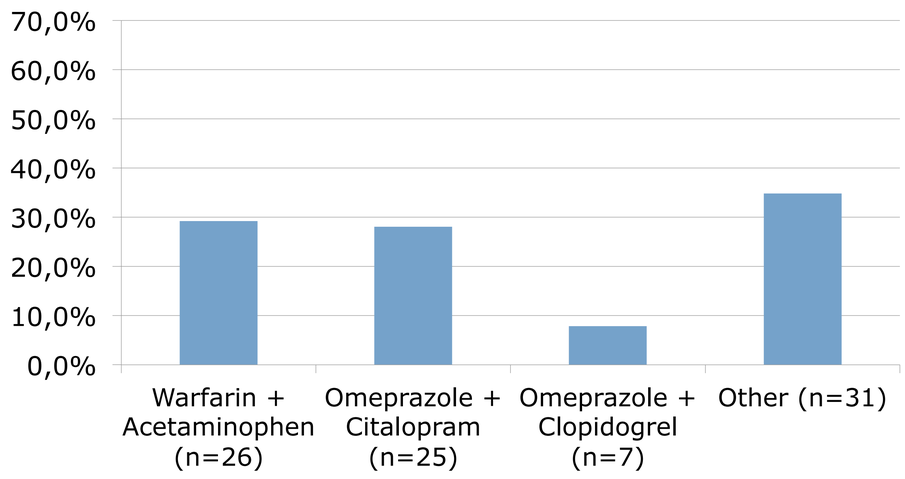



**Figure 2.** The most common pharmakokinetic interactions: metabolism, enzyme inhibition.

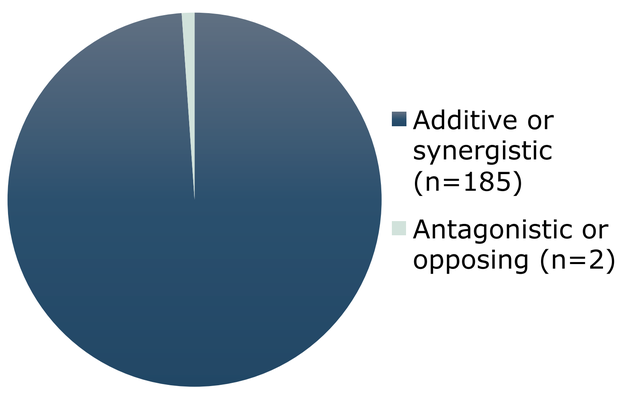



**Figure 3.** Distribution of pharmacodynamic drug-drug interactions, 46.6% (187/401).




**Figure 4.** The most common pharmacodynamic interactions: additive or synergistic.

## Discussion

Prevalence of affected people in the middle compared to other studies.

Average drug intake higher compared to other studies, a risk factor associated to the risk of experiencing DDI(s).

Citalopram and warfarin most commonly involved drug substances in identified DDI(s), which warrants concern due to potential clinical consequences, e.g. increased risk of bleeding.

## Conclusions

Clinically relevant drug-drug interactions are prevalent among old people with dementia living in Northern Sweden.

Identification and assessment of drug-drug interactions are important to avoid adverse drug reactions in present study population. Especially when having many medications prescribed.

UMEÅ UNIVERSITY

Department of Pharmacology and Clinical Neuroscience, Division of Pharmacology, SE-901 87 Umeå, www.umu.se