

TARGETING HIGH-RISK PATIENTS TO OPTIMISE CLINICAL PHARMACIST INTERVENTIONS IN A TRAUMA DEPARTMENT

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Background:

Drug-related problems (DRPs) are common among hospitalised trauma patients and pose a significant threat to medication safety. Clinical pharmacists play a key role in identifying and resolving DRPs; however, the growing shortage of the clinical pharmacist workforce across Europe poses an increasing challenge to ensuring optimal pharmaceutical care. Efficient allocation of limited pharmacist resources — both in terms of personnel and time — has therefore become essential.

Objective:

This study aimed to identify patient groups at higher risk of DRPs in a trauma department, using the categorisation and analysis of DRPs and associated pharmacist interventions as a tool to support targeted allocation of clinical pharmacy resources.

Methods:

A prospective observational study was conducted in June 2024 in a 30-bed trauma department. DRP types, causes, and pharmacist-led interventions were classified according to the Pharmaceutical Care Network Europe (PCNE) classification V9.1 system. Demographic characteristics and active ingredients (recorded at the 7th level of the Anatomical Therapeutic Chemical Classification) were collected. Student's t-test was used to compare continuous variables, and the chi-square test was used for categorical variables.

Results:

A total of 131 patients (men 42.0%, women 58.0%) were included, with a mean age of 69.9 years (SD = 16). The median number of regularly used medications was 4. Overall, 99 DRPs were identified in 67 patients (51.1%). The most frequent DRPs were dose selection problems (PCNE C3; 43.4%) and inappropriate drug selection (C1; 29.3%) [Figure 1]. Patients requiring pharmacist interventions had a higher median number of medications (5 vs. 3; $p < 0.01$) [Figure 2]. DRP occurrence was significantly associated with age (affected: 73.8 years; unaffected: 65.8 years; $p < 0.001$) [Figure 3]. DRPs were identified in 56.4% of patients receiving anticoagulant therapy, in contrast to 48.9% of patients not receiving it [Figure 4].

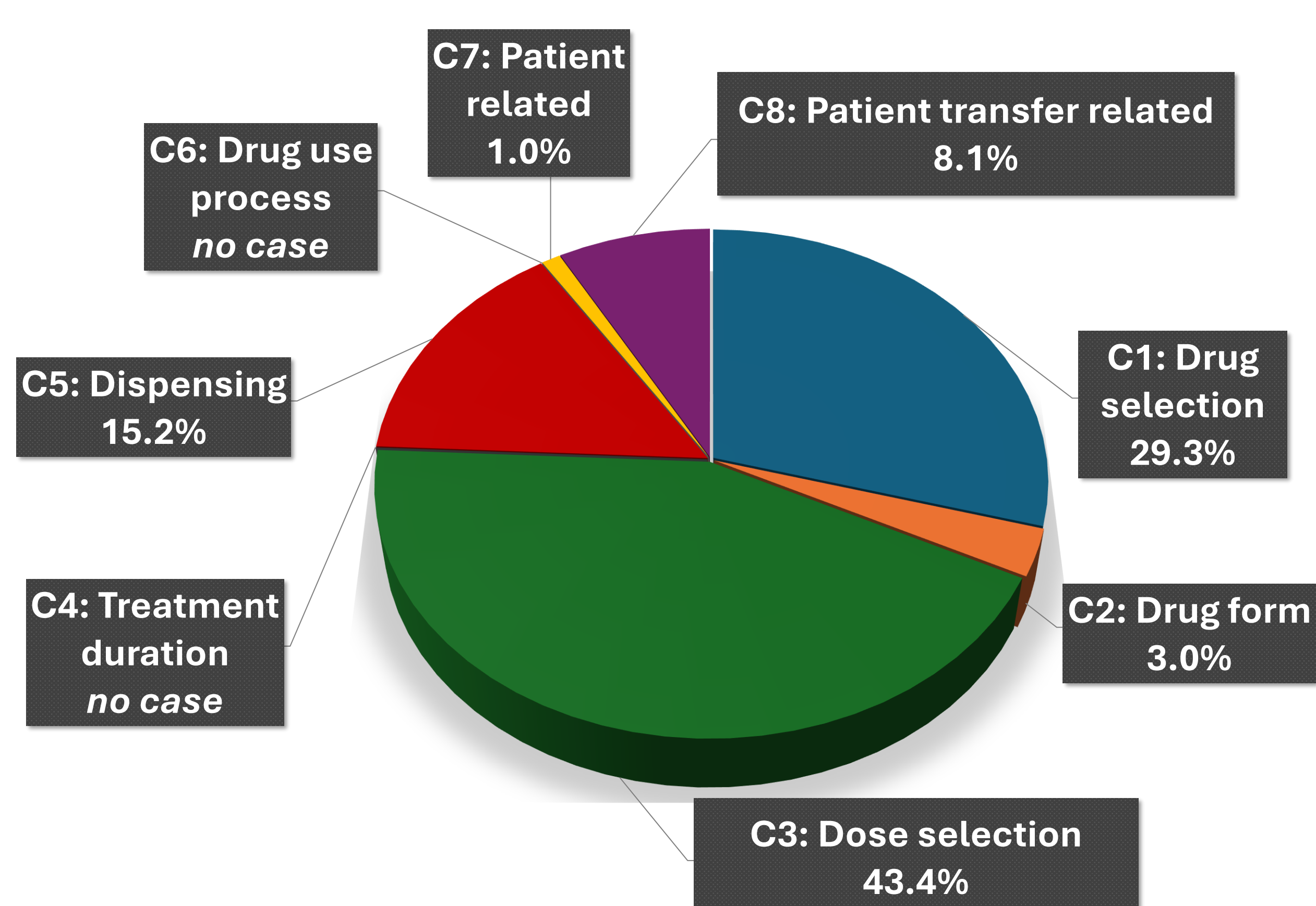


Figure 1. Distribution of Causes according to the PCNE classification (n = 99)

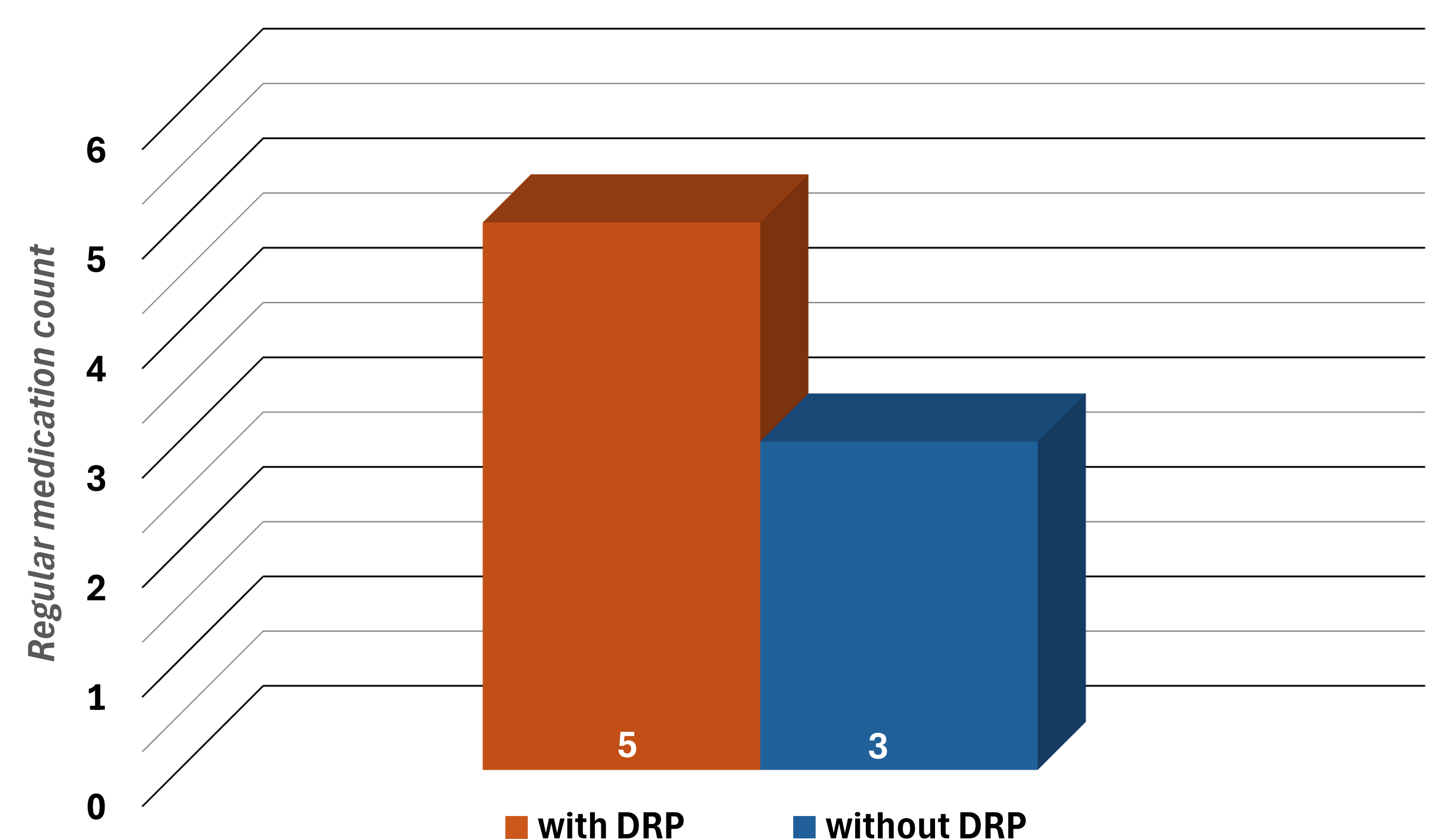


Figure 2. Median number of regularly used medications in the two groups (with DRP $n_1 = 67$ vs. without DRP $n_2 = 33$).

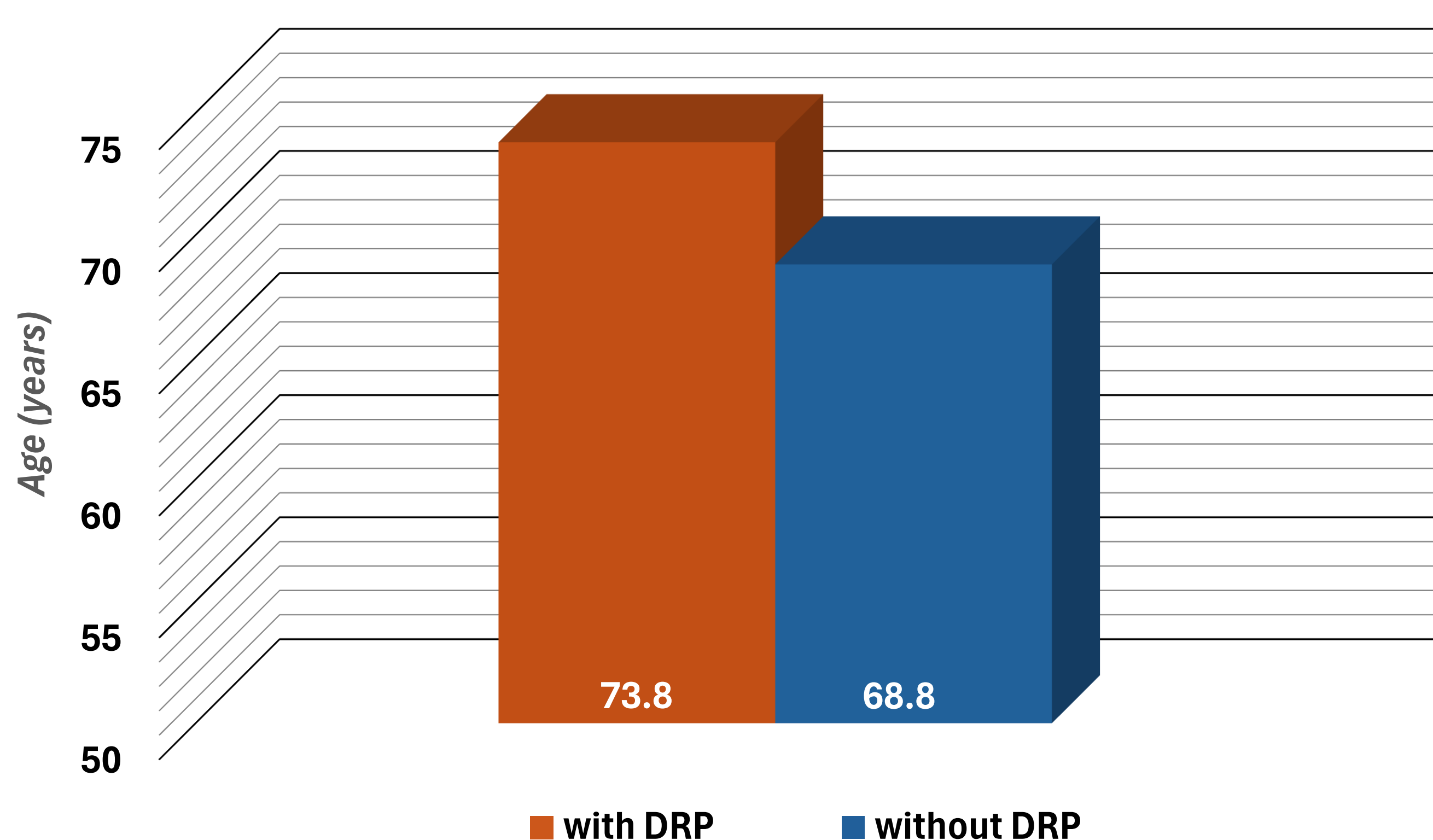


Figure 3. Mean age of the patients included in the study in the two groups (with DRP $n_1 = 67$ vs. without DRP $n_2 = 33$).

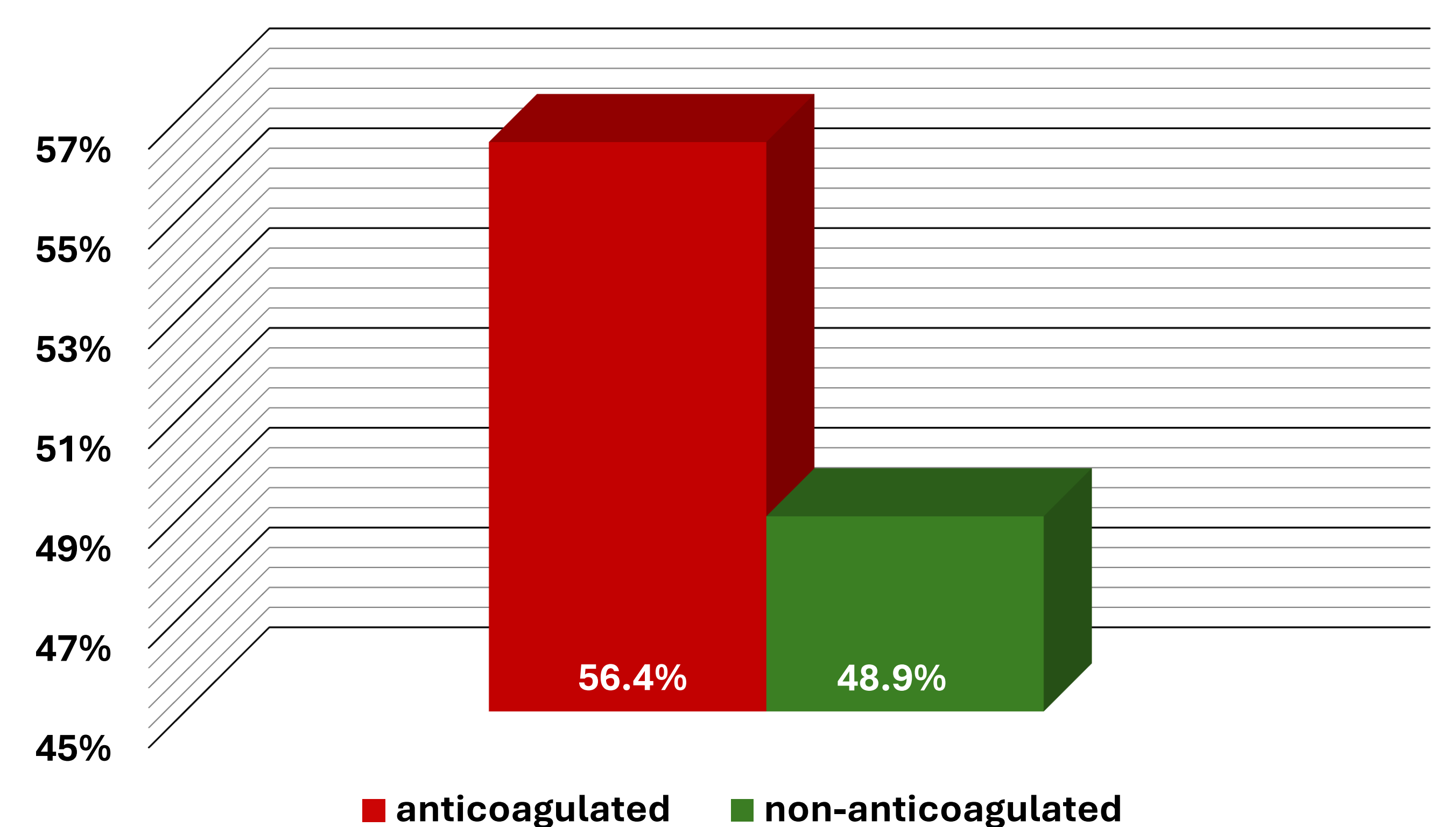


Figure 4. Proportion of drug-related problems among anticoagulated ($n_1 = 39$) and non-anticoagulated patients ($n_2 = 92$).

Conclusion:

The prevalence of DRPs in trauma care is considerable. It is essential to prioritise elderly patients, those receiving multiple medications, and individuals on anticoagulant therapy. Future research should aim to broaden the identification of high-risk groups in trauma care.



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