

## Psychotropic polypharmacy and inappropriate use of benzodiazepines in NHs in Croatia: results from the START/MED/093 project

### Politerapija psihotropnim lijekovima i neprikladna uporaba benzodiazepina u domovima za starije osobe u Hrvatskoj: rezultati START/MED/093 projekta

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**Introduction and objective:** Nursing home (NH) residents are often multimorbid and, due to their complex health condition, are prescribed polypharmacy (PP) and hyperpolypharmacy (HPP). Psychotropic drugs can cause adverse drug events (ADEs), e.g., increased risk of falling, presence of geriatric syndromes, frailty, higher prevalence of hospitalisations and mortality. This study aimed to identify the prevalence of the prescribing of PP/HPP, psychotropic PP and benzodiazepines (BZDs) in NH residents and to outline examples of inappropriate BZD use and factors leading to being prescribed PP/HPP.

**Methods:** This cross-sectional study was conducted in public NHs, in three regions of Croatia (City of Zagreb, Slavonia and Dalmatia) (Aug-Dec 2022), comprising the Croatian START/MED/093 project sample. 226 NH residents (65+years) were included in the study. Data were collected using the standardised and validated interRAI Long-Term Care Facilities (LTCF) Assessment Tool, enabling comprehensive geriatric assessment. Psychotropic drug use was defined using the ATC system as the use of antipsychotics (N05A), antidepressants (N06A), anxiolytics (N05B), hypnotic drugs/sedatives (N05C) and opioids (N02A).

**Results:** The mean age of NH residents was 82.5±6.2 years, 89.9% pertained to the higher age group 75+, and most of the subjects were women (76.5%). 49.6% of NH residents used PP (5-9 drugs), 25.7% HPP (10+ drugs), and 65.1% psychotropic PP (2+ psychotropic drugs). 72.1% of the residents used psychotropic drugs, and BZDs were the most prevalent (55.8%). Residents of NHs had significantly increased odds of using a higher number of medications if they were in higher stages of geriatric frailty (Clinical Frailty Scale, CFS≥5; proportional odds ratio POR=4.31), experiencing pain (pain scale≥1; POR=2.50), depression (Depression Rating Scale, DRS≥3; POR=2.31), suffering from coronary heart disease (POR=5.41), diabetes mellitus type 2 (POR=5.22), acid reflux (POR=4.62), and loss of appetite (POR=3.20).

**Conclusion:** In this study, we identified a high prevalence of NH residents exposed to PP, HPP and psychotropic PP, particularly among older adults with higher degrees of frailty and suffering from specific comorbidities. To prevent possible ADEs, monitoring medication safety in these cohorts of patients is essential. More than every second NH resident was exposed to BZDs and over ¾ inappropriately, thus, targeted interventions reducing inappropriate BZD use should be primarily developed in Croatian NHs.

#### LITERATURE

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