Benzodiazepines prescribing patterns in Belgian Nursing Homes

A Posthoc analysis of the COME-ON Study

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Background & Aims

- Benzodiazepine receptor agonists (BZRA, i.e. benzodiazepines and Z-drugs), are mainly used for the treatment of primary insomnia and anxiety. However, due to an unfavorable benefit/risk ratio, their use in older adults should be limited to 4 weeks. Yet in nursing somes (NHs) a high rate of chronic use is often reported.
- The COME-ON study, conducted in 56 Belgian NHs, was a randomized controlled trial aiming to analyze the impact of a complex intervention on potentially inappropriate prescriptions (PIPs). The intervention had overall a favorable effect on PIPs.
- In the COME-ON study, the use and effect of the intervention on BZRA specifically has not been assessed yet.

AIMS:
- To **describe the baseline** BZRA prescribing patterns in Belgian NHs.
- To **evaluate the impact of COME-ON** on BZRA (de)prescribing.

Methodology

- **Nursing Home Residents** (NHRs) with available data at both baseline and endpoint were included. NHRs in palliative care or with ongoing BZRA or alcohol withdrawal were excluded.
- We analyzed **BZRA** recorded by the Anatomical Therapeutic and Chemical classification as anxiolytics (N05BA), hypnotics (N05CD), and related Z-drugs (N05CF).
- **PIP events** were determined using 2 explicit tools : The Beers criteria (2019) and START/STOPP (2015)
- BZRA **deprescribing** was defined as any of these: at end of study as compared to baseline, (i) complete cessation; (ii) decrease in overall chronic daily dose; (iii) cessation of an 'if needed' BZRA without change in regular BZRA dose
- **Factors associated with BZRA use and BZRA deprescribing** were investigated at 3 levels using a multivariable multinomial regression : resident', NH' and General Practitioner's (GP).

Results

- Out of 1804 NHRs included in COME-ON, **797** met the inclusion criteria for the present analysis.
- **Half of the NHRs** were taking a BZRA (*Table 1*), and among these the prevalence of various **PIP events** was high (*Table 2*).
- 8/0/2 factors related to the patient/NH/GP were significantly associated with chronic BZRA use versus no use (*Figure 1*).
- At the end of the study, **deprescribing** was achieved in **28.1%** of NHRs initially taking BZRA. Six factors were significantly associated with BZRA deprescribing (*Figure 2*).

Table 1 : Main characteristics of included NHRs (n=797)

Age median[P25;P75]	87 [81.75 ; 91]
Gender: female n(%)	582 (73.0)
Number of medicines taken median[P25;P75]	9 [6 ; 12]
Presence of insomnia n(%)	204 (25.6)
Presence of anxiety n(%)	235 (29.5)
BZRA users n(%)	418 (52.4)
Main BZRA used n(%)	lorazepam : 123 (15.4) lormetazepam : 108 (13.6)
BZRA Regimen n(%)	Regular use : 380 (47.7) If needed use : 37 (4.6)

Table 2 : PIP events at baseline among BZRA users (n=418)

Use of any BZRA (Beers)	418 (100%)
Duration of use > 4 weeks (STOPP)	411 (98.3%)
Use of BZRA without insomnia or anxiety reported by the GP (STOPP)	175 (41.9%)
Use of BZRA in a patient with delirium, dementia or history of falls or fractures (Beers)	281 (67.2%)
Simultaneous use of BZRA and opioid (Beers)	88 (21.1%)
Simultaneous use of BZRA and ≥ 2 other Central Nervous System active drugs (Beers)	281 (67.2%)

Figure 1 : Factors associated with regular BZRA use vs no use at baseline (N=797)

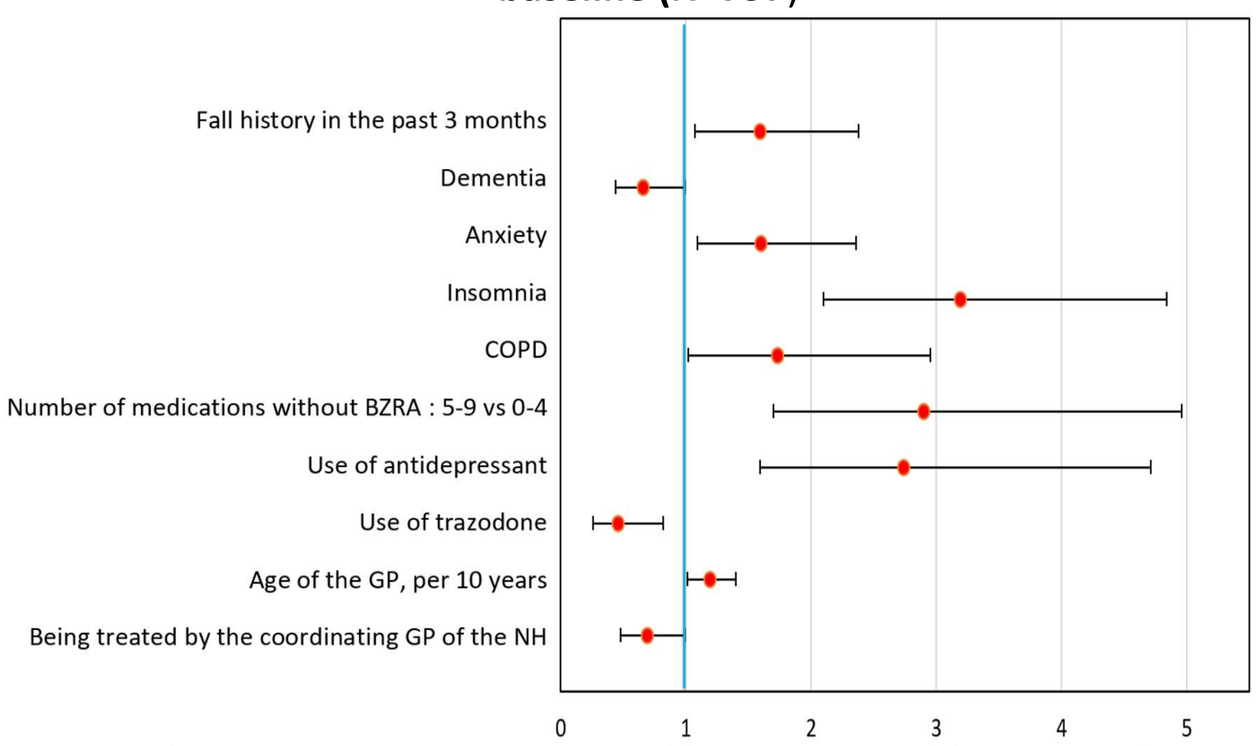
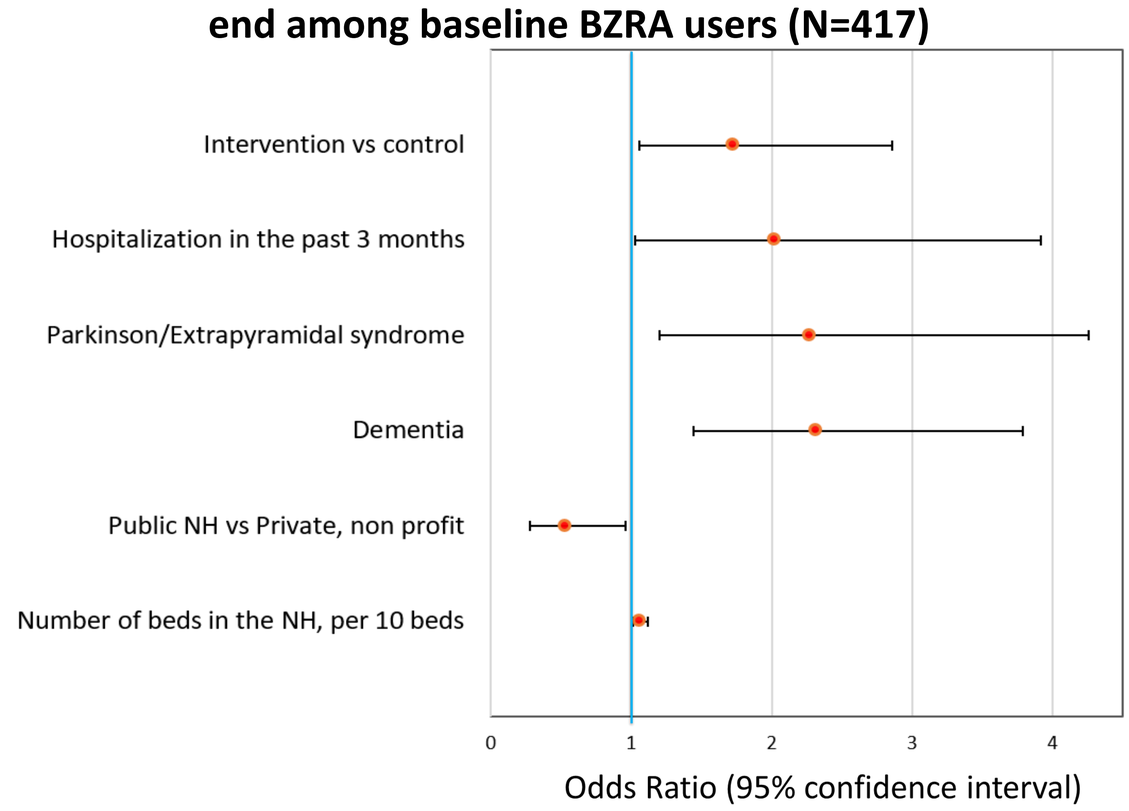


Figure 2 : Factors associated with BZRA deprescribing at study end among baseline BZRA users (N=417)



Conclusions

- BZRA prevalence remains very high and similar to previous published data from 2005, yet much higher than in other countries. This suggests r**oom for improvement** in terms of BZRA prescribing in Belgian NHs.
- Over the study period, deprescribing was achieved for more than one fifth of NHRs, and the **intervention was associated with deprescribing**. Designing a **specific intervention** targeting BZRA - including for non-demented patients, is required and may lead to higher discontinuations rates.

References

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