

Drug Therapy Complexity

The Importance of Pharmacotherapeutic Follow-up

Advinha AM¹, Oliveira-Martins S¹, Faisca VM², Pajote S³, Lopes MJ³

¹Med.UL - Research Institute for Medicines and Pharmaceutical Sciences - Faculty of Pharmacy, Lisbon University, ²School of Health Technology of Lisbon, Lisbon Polytechnic Institute, ³Community Pharmacist, ⁴School of Nursing S. João de Deus, Évora University

ammadvinha@ff.ul.pt

Background & Objectives

Nowadays, the phenomenon of population ageing represents a worldwide problem, which assumes particular significance in Portugal (figure 1).

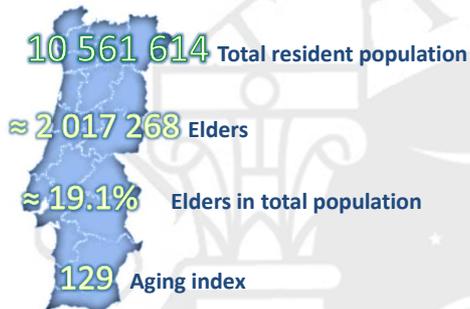


Figure 1. Initial estimate data of 2011 Census (Source: INE, 2011) (1)

As they get older, individuals present more comorbidities and consequently consume an increasing number of drugs, which contributes to a growing drug therapy complexity. The institutionalized elders are particularly affected by this occurrence.

Drug therapy complexity is defined as the conciliator of several characteristics of the pharmacotherapy and can affect patient's safety and medication adherence. It can be measured with *Medication Regimen Complexity Index* (MRCI), a scale published by George J *et al* (2004) (2).

This study aims to determine the drug therapy complexity of institutionalized elders in order to assess the need of pharmacotherapeutic follow-up.

Methods

Study design | Descriptive and cross-sectional

Year of study | 2009

Setting | Retirement homes in mainland Portugal

Sample size | 415 institutionalized elders

Scale | *Medication Regimen Complexity Index* (MRCI) (table 1)

Statistical analysis | Descriptive and comparative statistics with SPSS v.17

Table 1. Scheme of *Medication Regimen Complexity Index*

Section A	+	Section B	+	Section C
Dosage forms		Dosing frequency		Additional directions
Total MRCI				

Results

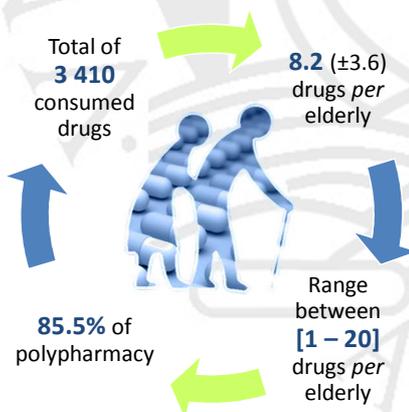
The studied sample presented a mean age of **83.9** (± 6.6) years old, with a range between [65 – 98] years. About **60.2%** of sample are women.

The more frequently consumed drugs belonged to the follow three ATC groups:

- Cardiovascular system with **30.8%**
- Nervous system with **27.7%**
- Food tract and metabolism with **16.4%**

Acetylsalicylic acid in low dosages (100 and 150mg) was the active substance more consumed with a representativeness of **31.8%** of total consume. The more consumed dosage forms were tablets and capsules with **84.5%**.

The MRCI presented an average value of **18.2** ($\pm SD=9.6$) with a range of [2.0–53.5]. The most determinant factors that contributed to the drug therapy complexity were the number of consumed drugs and dosing frequency.



Mean of Section A	+	Mean of Section B	+	Mean of Section C
3.6		11.2		3.4
Mean of Total MRCI				
18.2				

Conclusion

The drug therapy complexity evaluated by MRCI was related to the drugs number, but also to dosing frequency. If high, the MRCI can have a negative impact in medication adherence and expected results of treatment, and these cases needs a regular follow-up in order to simplify the therapeutic scheme.

References

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- (2) George J, Phun Y-T, Bailey M, Kong DCM, Stewart K. Development and validation of the medication regimen complexity index. *The Annals of Pharmacotherapy*. 2004 Sep;38(9):1369–1376.