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# Evaluation of anticholinergic drug prescription using a clinical decision support system: a prospective study in a geriatric rehabilitation center

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## Background

Anticholinergic drugs are considered as potentially inappropriate in older adults. Different scales are available to quantify anticholinergic burden. A score  $\geq 3$  is considered as increasing the risk of side effect. Clinical pharmacists can play an important role in reducing anticholinergic drug prescription, but resources are limited. A Clinical Decision Support System (CDSS) set up on an anticholinergic burden scales can help pharmacist identifying patients at higher risk of anticholinergic side effects.

## Objectives

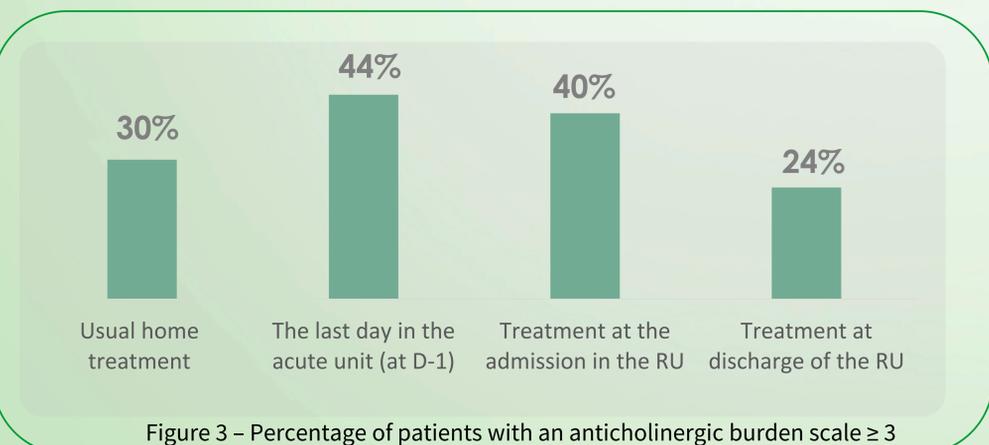
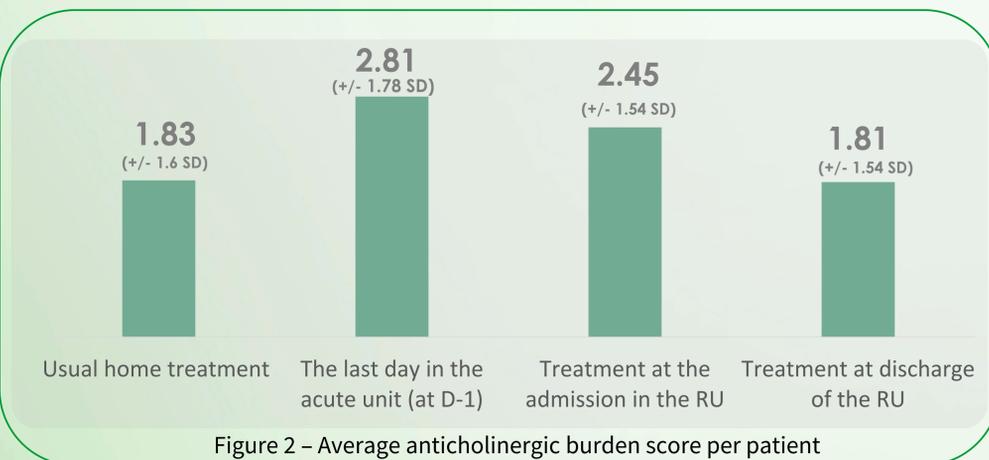
- To identify the prescription of anticholinergic drugs in a geriatric rehabilitation unit (RU)
- To measure the anticholinergic burden for each patient regarding the prescription at home, at discharge of acute care, on admission in RU and at discharge from RU.

## Material and methods

All patients, aged  $> 65$  years, with at least one anticholinergic drug on admission in RU or during the stay were eligible. The CDSS PharmaClass<sup>®</sup> was used to detect patients with anticholinergic drug, based on the CRIDECO anticholinergic burden scale<sup>1</sup>. When the score was  $\geq 3$ , the pharmacist evaluated the situation and informed the physician. If needed, he suggested pharmaceutical interventions (Figure 1).

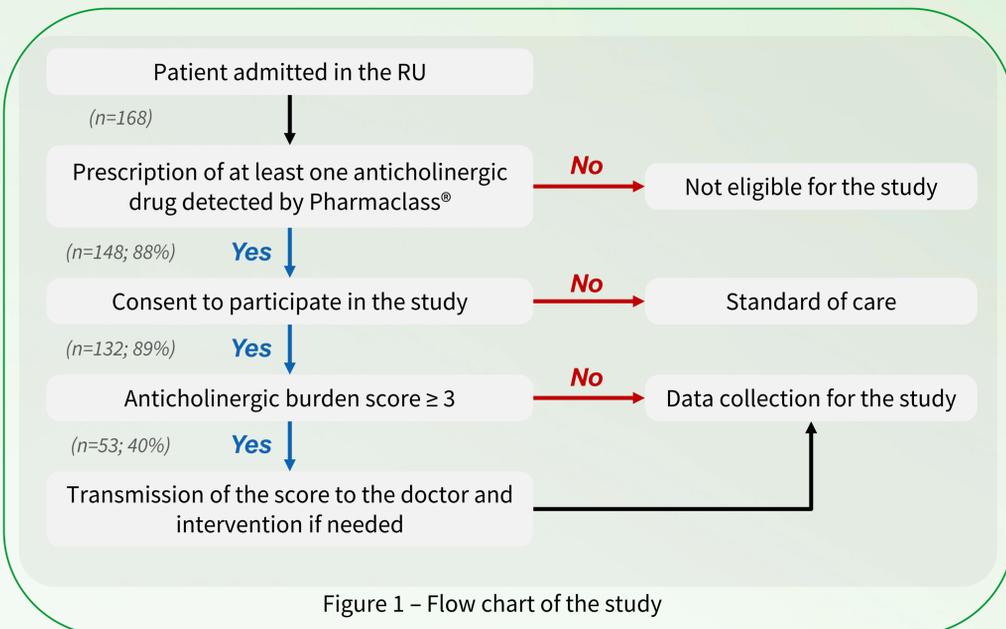
## Results

132 patients were included between April and May 2023 (Figure 1). Average anticholinergic burden varied during the hospital stay (Figure 2). 40 % of the patients had an anticholinergic score  $\geq 3$  on admission in RU but 24% at discharge (Figure 3).

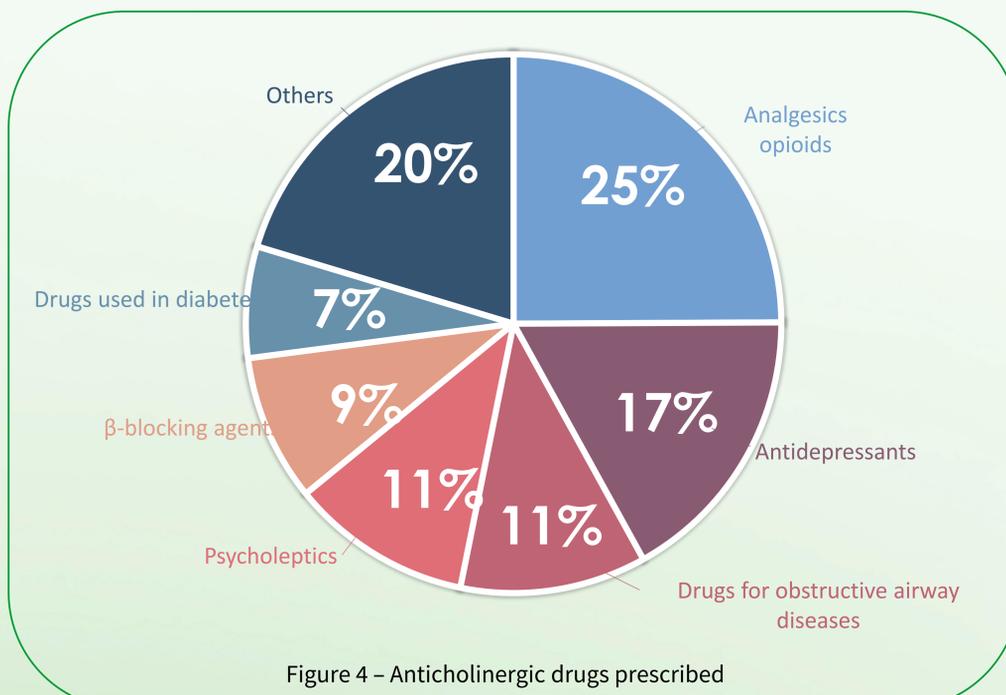


## Conclusions

- Hospitalization in acute care led to an increase of anticholinergic drug prescription.
- A stay in a geriatric rehabilitation unit before discharge helped reducing this burden.
- Sensitivity of geriatrician regarding inappropriate prescriptions as well as focused pharmaceutical interventions, supported by a CDSS, result in this score reduction.
- This study reveals the need to deploy the anticholinergic alert of CDSS to other wards in acute care.



Anticholinergic drugs were prescribed 349 times with analgesics being the most prescribed (25%), followed by antidepressants (17%). (Figure 4) Pharmacist informed the prescriber about a score  $\geq 3$  for 58 patients and realized 45 interventions with an acceptance rate of 82%.



## Reference

1. Ramos H, Moreno L, Pérez-Tur J, Cháfer-Pericás C, García-Lluch G, Pardo J. CRIDECO Anticholinergic Load Scale: An Updated Anticholinergic Burden Scale. Comparison with the ACB Scale in Spanish Individuals with Subjective Memory Complaints. *J Pers Med.* 2022 Feb 3;12(2):207.

