# IMPLEMENTING CLINICAL PHARMACY PRACTICES IN THE COMPREHENSIVE GERIATRIC ASSESSMENT PERFORMED BY THE MOBILE GERIATRIC MULTIDISCIPLINARY TEAM IN ORTHOPEDIC UNITS

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## Background

Inappropriate **polypharmacy** in the **elderly** is a major health issue, associated with adverse clinical outcomes, especially iatrogenic, that can lead to hospitalization. In the orthopedic unit, the **mobile geriatric multidisciplinary team** (MGMT) is consulted to assess clinics of patients over 75. Recently, we have integrated pharmacist-lead systematic medication reconciliation to the geriatric comprehensive assessment performed by the MGMT.

## Purpose

The aim of our study was **to evaluate the impact of medication review made by MGMT** on **in-hospital and post discharge facilities' prescriptions**, **re-hospitalization rate** and **mortality 1-to-3months after discharge**.

## Material and methods

We conducted a retrospective study on patients over 75yo, with a TRST score ⩾2 and hospitalized in orthopedic units 4 months **before** (sept-to-dec2016) and 4months **after** (jan-to-apr2017) implementation.

- ✓ We compared **therapeutic plans** suggested by the MGMT and their acceptance rate.
- ✓ Cumulative exposure to **anticholinergic and sedative drugs** within the chronic treatment was measured by the drug burden index (**DBI**)
- ✓ Post-discharge **adherence to the treatment plan** was assessed by a phone call to physicians 4-to-7days after discharge.
- ✓ **Rehospitalization rate** and **mortality** were assessed by phone calls 1,2-and-3months after discharge.

## Results

### Population studied:

| Demographics | Before (n=58) | After (n=56) |
|---|---|---|
| Sex ratio | 70F/30M | 75F/25M |
| Mean age | 88 ± 5 y.o. | 86 ± 5 y.o. |
| Delay MGMT after admission | 3,3 ± 2,5 | 3,2 ± 3,3 |
| Lenght of stay | 10,1 ± 5,7 | 10,2 ± 5,6 |
| **Geriatric comprehensive assessment** | | |
| Living status (home/nursing home) | 82/18 | 91/09 |
| Cognitive impairment | 45% | 49% |
| Delirium | 23% | 51% |
| Mobility impairment | 58% | 72% |
| History of falls | 42% | 40% |
| Poor nutrition status | 33% | 19% |
| Polypathology (>3) | 45% | 61% |
| ADL (activity daily living) (≤4) | 30% | 28% |
| IADL ≤2/4 | 44% | 48% |
| Mood disorders | 40% | 39% |

### Short-term impact:

- Increase

- Therapeutic recommandations (n=188)
  3,4 ± 2,2 per patient *vs* 2,0 ± 1,7 (p<0,01)

- Acceptance rate during hopistalization
  71 ± 29 % *vs* 53 ± 38% (p<0,05)

- Decrease

Exposure to sedative and anticholinergic drugs *Drug Burden Index* (DBI) **:**

Admission DBI: **1.09 +/- 0.72**

⇩ *p<0,01*

Discharge DBI: **0.81+/- 0.58**

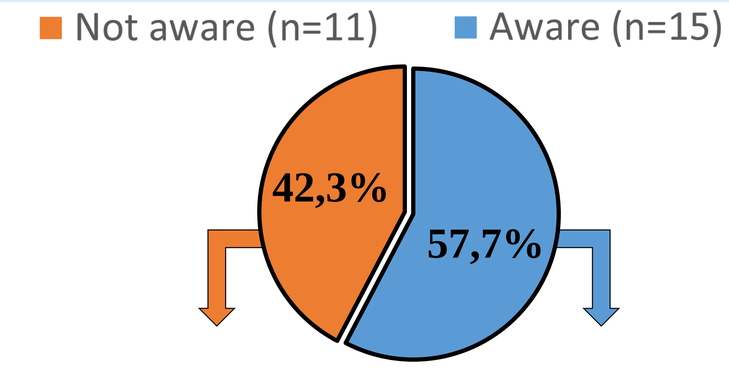
DBI > 1 is associated with

→ a **long term decline of cognitive functions** in elderly. *Hilmer et al., 2009*

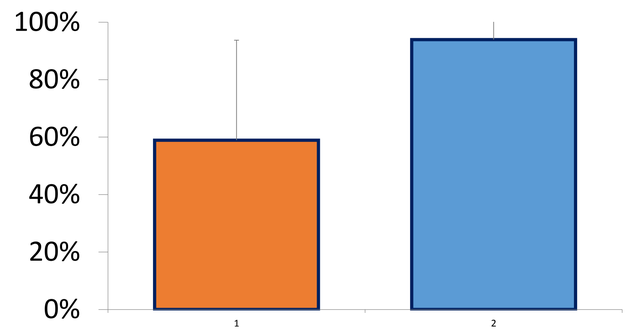
→ An **increase in falls**, **GP visits** and **death**. *Nishtala et al., 2014, Ruxton et al., 2015; Salahudeen et al., 2015*

### Post-discharge impact

- Recommandation awareness in rehab




- Rate of application of pharmaceutical plan




### 90 days outcomes:

Mortality : 12,5%

Re-hospitalization rate: 12,5%

## Conclusion

Implementing clinical pharmacy practices in the assessment provided by the MGMT in orthopedic units significantly increased therapeutic recommendations such as their acceptance rate. Cumulative exposure to anticholinergic and sedative drugs significantly decreased at discharge for patients included after implementation. Adherence to treatment plan is interesting in post-discharge facilities when physicians are aware of. We now focus on ensuring the transmission of treatment plans to improve MGMT's impact after discharge.