

# Pharmacists as key players in fall prevention: evaluation of an algorithm-based risk score

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## Introduction

Every year, falls among people over the age of 65 years old are responsible for more than 100,000 hospitalizations and 10,000 deaths. In order to address this challenge, a multidisciplinary team at the European Hospital, based in Marseille, developed a fall-risk score combined with an algorithm to identify hospitalized patient with a high risk of fall (patients with a score  $\geq 4$ ).

## Objective

The objective of this study was to evaluate twelve months of implementation, focusing on the number of pharmaceutical interventions and the types of iatrogenic risks identified.

## Material and methods



Retrospective observational study



multidisciplinary working group



pharmaceutical analysis of prescriptions for patients with a fall risk score  $\geq 4$

Criteria	Score
History of falls (within the past year, repeated, or severe: fracture, serious injury, hospitalization, prolonged time on the floor)	2
Balance and/or gait disorders	2
Need for assistance with hygiene and dressing	1
Foot problems and/or footwear issues	1
Cognitive disorders (disorientation, behavioral disorders, agitation)	2
Visual impairment, wearing glasses	1
Disabling conditions (fatigue, orthopedic prostheses, obesity, diabetes, hypotension, etc.)	1
Sedatives, strong analgesics, antipsychotics	2
Post-anesthesia	2
Environmental factors (IV lines, infusion stands, etc.)	1

total score	Risk level
1 – 3	Moderate risk
4 – 8	High risk
9 – 15	Major risk

If score > 4: Patient at high risk of falling  
→ to be clearly indicated in the nursing summary

## Results

Assessing the risk of falling from the moment the patient is admitted to hospital

Inform and raise awareness

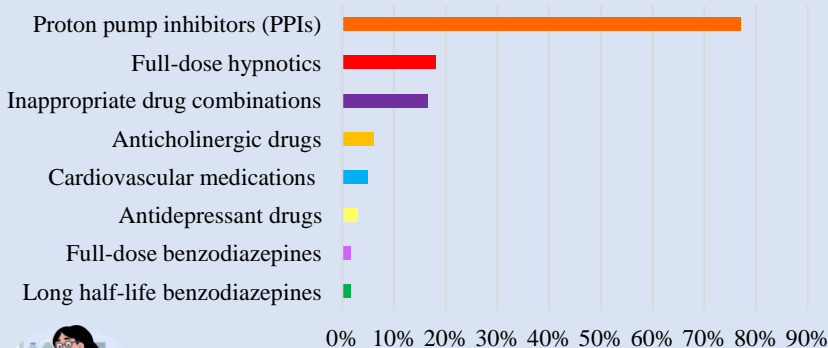
Assessment by the geriatric team

Pharmaceutical evaluation of prescriptions

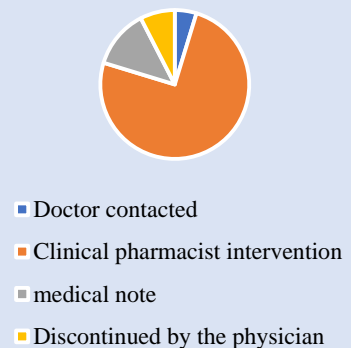
Patient at high risk of falling	850
Number of males	431
Number of females	419
Median age (years)	85
Score médian	6
Median number of active substances per patient	7
Score médian	6

- 27% of patients had  $\geq 10$  medications prescribed,
- 36% of patients had at least one inappropriate prescription.

Potentially inappropriate medications identified in older patients with a fall risk score  $\geq 4$  (%)



Measures taken



## Conclusion

This study identified priority areas for work for the most represented class (IPP)

- Implementation of a protocol for deprescribing PPIs this year.
- Include a summary of identified iatrogenic effects in the medical letter.

