

Screening for potentially inappropriate prescribing in the community pharmacy: Development and first results of the GheOP³S-tool

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INTRODUCTION

- POTENTIALLY INAPPROPRIATE PRESCRIBING (PIP) & ADVERSE DRUG EVENTS (ADE)
 - Age-related changes in pharmacokinetics and pharmacodynamics, polypharmacy & polypharmacy lead to an increased risk for ADEs.
 - PIP also appears to contribute to an increased risk for ADEs.
 - Three types of PIP exist: underuse, overuse and misuse.
- SCREENING FOR PIP BY COMMUNITY PHARMACISTS
 - Community pharmacists are ideally placed to screen for PIP because of their medication-specific knowledge and the availability of a complete electronic dispensing record in the pharmacy (including OTC medication).
 - Screening for PIP in the community pharmacy requires however an evidence-based and suitable screening tool specifically suitable for this setting.

AIMS

- To develop an evidence-based screening tool specifically suitable for the community pharmacy practice
- To determine the prevalence of PIP in Belgian community-dwelling & institutionalized older adults
- To identify the PIPs that account for the highest proportion of PIP

METHODS

- DEVELOPMENT OF THE GHEOP³S-TOOL
 - RAND/UCLA process (11 participants) including round zero meeting, literature review, first written evaluation round and second face-to-face evaluation round
 - Additional round on feasibility in the contemporary community pharmacy
- PROSPECTIVE OBSERVATIONAL STUDY COMMUNITY-DWELLING PATIENTS
 - Between December 2013 and July 2014
 - 204 community pharmacies in Belgium
 - 5 patients per pharmacy
 - Inclusion criteria:
 - aged 70 years of older
 - using 5 of more chronic drugs
 - being regular visitor
 - speaking and reading Dutch/French
- PROSPECTIVE OBSERVATIONAL STUDY COMMUNITY-PHARMACY DELIVERED NURSING HOMES
 - Between February 2014 and June 2014
 - 10 randomly selected nursing homes in Belgium
 - 40 patients per nursing home
 - Inclusion criteria:
 - aged 70 years of older
 - using 5 of more chronic drugs

RESULTS

1. GHEOP³S-TOOL: THE GHENT OLDER PEOPLE'S PRESCRIPTIONS COMMUNITY PHARMACY SCREENING TOOL

Part	Handles	No. of items
Part 1	Potentially inappropriate drugs, independent of diagnosis	31
Part 2	Potentially inappropriate drugs, dependent on diagnosis	11
Part 3	Potential prescribing omissions	6
Part 4	Drug-Drug interactions of specific relevance	29
Part 5	General care-related items to be addressed in the community pharmacy	6

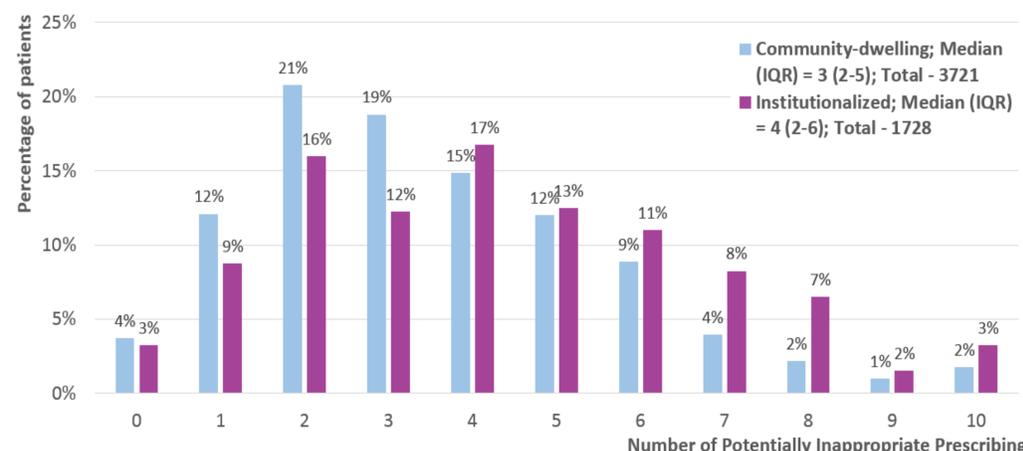
3. TOP 10 MOST PREVALENT PIPs

GheOP ³ S-criterion	% of community-dwelling patients (n = 1016)	GheOP ³ S-criterion	% of institutionalized patients (n = 400)
1 The patient has an elevated risk for osteoporosis (determined via FRAX tool) and is not prescribed calcium/Vitamin D supplementation.	54%	The patient has an elevated risk for osteoporosis (determined via FRAX tool) and is not prescribed calcium/Vitamin D supplementation.	54%
2 Any intermediate acting benzodiazepine or Z-product at full dose or any dose ≥30 subsequent days OR any short or long-acting benzodiazepine	50%	Any intermediate acting benzodiazepine or Z-product at full dose or any dose ≥30 subsequent days OR any short or long-acting benzodiazepine	53%
3 The patient is not reminded and proposed to undergo yearly influenza vaccination.	30%	Any antidepressant ≥1 year	42%
4 Oral antidiabetics/insulin + beta-blocker	22%	Any combination of anticholinergic drug	41%
5 Any antidepressant ≥1 year	21%	Anticholinergics with constipation	37%
6 Any oral NSAID	14%	Any antipsychotic drug ≥ 1 month	29%
7 Any PPI at full dose ≥8 weeks	14%	Any PPI at full dose ≥8 weeks	18%
8 Any combination of anticholinergic drug	13%	Calcium Channel Blockers with constipation	11%
9 The patient is taking narcotic analgesics and is not prescribed appropriate preventative bowel regimen (preferably macrogol or lactulose).	10%	Oral antidiabetics/insulin + beta-blocker	10%
10 Thiazide and loop diuretics with gout	9%	Anticholinergics with dementia or cognitive impairment	9%

4. RISK FACTORS

- Explanatory risk factors (determined through Poisson regression analyses) for a higher number of PIPs were:
 - FOR COMMUNITY-DWELLING PATIENTS: a higher number of drugs, female gender, a higher BMI and poorer functional status
 - FOR INSTITUTIONALIZED PATIENTS: a higher number of drugs, female gender and younger age

2. PREVALENCE IN COMMUNITY-DWELLING & INSTITUTIONALIZED PATIENTS



CONCLUSIONS

- The GheOP³S-tool was specifically developed to screen for PIPs in the community pharmacy practice.
- The first observational studies with the GheOP³S-tool detected a high number of PIPs in community-dwelling and institutionalized older polypharmacy patients.