SEMI
LA VISIÓN GLOBAL DE LA PERSONA ENFERMA

Sademi
Sociedad Andaluza de Medicina Interna

XXXIV Congreso Nacional de la Sociedad Española de Medicina Interna (SEMI)

21-23
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Palacio de Ferias y Congresos de Málaga
Málaga

XXIX Congreso de la Sociedad Andaluza de Medicina Interna (SADEMI)

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¿CÓMO PODEMOS OPTIMIZAR EL TRATAMIENTO FARMACOLÓGICO EN EL PACIENTE CRÓNICO COMPLEJO?

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Guías enfermedades específicas

Asistencia fragmentada

Evidencia limitada

Pluripatología

Paciente crónico complejo

Edad avanzada

Polimedicación

Extrapolación

Cambios farmacocinéticos y farmacodinámicos

Interacciones farmacológicas

Prescripción inapropiada

Fragilidad

Reacciones adversas

Relación beneficio/riesgo?

Table 1 Fictitious profile of a very elderly patient with multimorbidity

- Alendronate tab 70 mg q1w
- Calciumcarb/colecalcif 500 mg/400IE BID
- Acetylsalicyl tab 80 mg OD
- Dipyridamol caps mga 200 mg BID
- Enalapril tab 10 mg OD
- Gliclazide tab mga 30 mg OD
- HydroChloroThiazide tab 12.5 mg OD
- Metformin tab 500 mg TID
- Metoprolol tab mga 50 mg OD
- Macrogol 2dd1 BID
- Paracetamol tab 500 mg TID
- Ranitidine tab 150 mg BID
- Salmeterol inhal 50 mcg BID
- Simvastatine tab 40 mg OD
- Spironolacton tab 25 mg OD 0.5
- Tiotropium inhal 18 mcg OD
- Temazepam tab 10 mg OD

The file of Mrs van Kampen, an 83-year-old widow living independently, lists the following problems: CVA, radius fracture, osteoporosis, diabetes mellitus type II, COPD (Gold III), hypertension, heart failure (NYHA III), gastro oesophageal reflux, degenerative arthritis in one knee, dizziness, sleeping problems and constipation.
Her medication list includes 17 drugs, prescribed in accordance with the relevant current disease specific guidelines.

The problem of the lack of evidence of the effects of preventive medication in the very elderly is paramount

- *With a 40 year old, I'm fairly confident deciding on what medication to prescribe. But I notice I'm less certain with an 80 year old.*
- *I take her quality of life into account and ask myself will she live long enough to benefit from this (preventive) drug?*

GPs indicate a strong need for clear information on the benefit/risk ratio of preventive medication in the very old and often frail.

BMC Family Practice 2012, **13**:56

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"It is an art of no little importance to administer medicines properly: but, it is an art of much greater and more difficult acquisition to know when to suspend or altogether to omit them"

Philippe Pinel, 1745-1826

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DEPRESCRIPCIÓN

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Por Fármaco

Por Paciente

The Impact of Prescribing Safety Alerts for Elderly Persons in an Electronic Medical Record

Arch Intern Med. 2006;166:1098-1104

Conclusions: We found that alerts in an outpatient electronic medical record aimed at decreasing prescribing of medication use in elderly persons may be an effective method of reducing prescribing of contraindicated medications. The effect of the alerts on patient outcomes is less certain and deserves further investigation.

Instrumentos de adecuación del tratamiento farmacológico

Métodos implícitos

- Cuestionario MAI
- Cuestionario Hamdy

Métodos explícitos

- Criterios Beers
- Criterios IPET
- Criterios STOPP-START
- Criterios ACOVE
- Criterios CRIME
- Criterios NORGEP
- Criterios PRISCUS

Comparison of Published Explicit Criteria for Potentially Inappropriate Medications in Older Adults

Drugs Aging 2010; 27 (12): 947-957

Characteristics	Beers	McLeod	Rancourt	Laroche	STOPP	Winit-Watjana	NORGEP
Year	2003	1997	2004	2007	2008	2008	2009
Country	US	Canada	Canada	France	Ireland	Thailand	Norway
Authors	Fick et al.[13]	McLeod et al.[21]	Rancourt et al.[23]	Laroche et al.[24]	Gallagher et al.[25]	Winit-Watjana et al.[15]	Rognstad et al.[26]
Method	Delphi	Delphi	Delphi	Delphi	Delphi	Delphi	Delphi
Experts (n)	12	32	4	15	18	17	47
Delphi rounds	2	2	2	2	2	3	3
Applicable age group (y)	≥65	≥65	≥65	≥75	≥65	NA	≥70
Statements (n)	68	38	111	34	65	77	36
Drug-disease interactions (n)	20	11	0	5	39	32	0
Drug-drug interactions (n)	1	11	37	2	5	12	15
Prescription duplications (n)	0	0	10	2	2	0	1
Suggestions for alternative drugs provided	No	Yes	No	Yes	No	No	No
Prevalence (%)[a]							
community	18.3–41.9	10.4	NA	NA	21.4	NA	NA
hospital	14–44.4	12.5	NA	NA	35.0	NA	NA
long-term care	18–34.9	14.9	54.7	NA	NA	NA	NA

a Prevalence range given for Beers criteria data.

NA = not available; **NORGEP** = Norwegian General Practice criteria; **STOPP** = Screening Tool of Older Person's potentially inappropriate Prescriptions criteria.

Comparison of Published Explicit Criteria for Potentially Inappropriate Medications in Older Adults

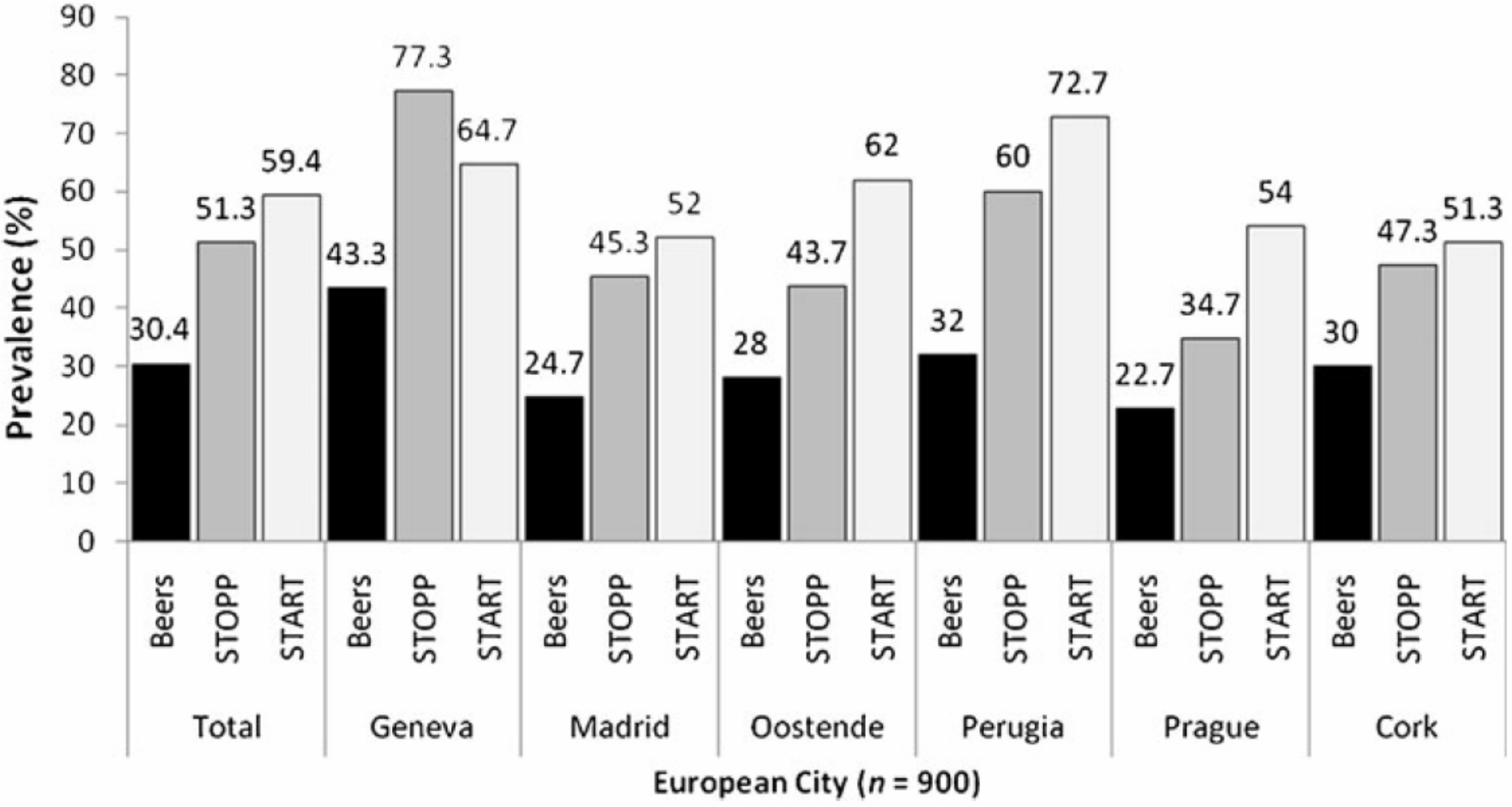
Drugs Aging 2010; 27 (12): 947-957

Principle	Beers	McLeod	Rancourt	Laroche	STOPP	Winit-Watjana	NORGEP
1. Organization based on physiological systems and rapid applicability in daily practice	–	–	+/–	+/–	+	–	–
2. Inclusion of common prescribing errors (commission and omission)	+/–	+/–	+/–	+/–	+/–	+/–	+/–
3. Generalizability to the global community of physicians and pharmacists	+/–	+/–	+/–	+/–	+/–	+/–	+/–
4. Ease of interface with computer records of patients and drug lists	–	–	+/–	+	+/–	+/–	+
5. Ability to reduce the prevalence of PIMs	+	+	+	NS	+	NS	NS
6. Ability to reduce the incidence and negative impact of ADRs	NS	NS	NS	NS	NS	NS	NS

ADRs = adverse drug reactions; **NORGEP** = Norwegian General Practice criteria; **NS** = no studies; **STOPP** = Screening Tool of Older Person's potentially inappropriate Prescriptions criteria; + indicates fully met; +/– indicates partially met; – indicates not met.

Prevalence of potentially inappropriate prescribing in an acutely ill population of older patients admitted to six European hospitals

Eur J Clin Pharmacol (2011) 67:1175–1188



Population characteristics	Total (n=900)
Age distribution	
Median (years), IQR (years)	82, 77–87
Age category, n (%)	
65–74 years	147 (16)
75–84 years	420 (47)
≥85 years	333 (37)
Female gender, n (%)	548 (61)
Co-morbidity, n (%)	
Charlson Index=0	111 (12)
Charlson Index=1	191 (21)
Charlson Index≥2	598 (66)
≥1 hospitalization in preceding year	517 (57)
Medications	
Median, IQR	6, 4–9
0 medications, n (%)	23 (3)
1–5 medications, n (%)	351 (39)
6–10 medications, n (%)	400 (44)
>10 medications, n (%)	126 (14)

Prevalence of potentially inappropriate prescribing in an acutely ill population of older patients admitted to six European hospitals Eur J Clin Pharmacol (2011) 67:1175–1188

	Criterios Beers	Criterios STOPP
Sobreutilización (PIMs)	30,4% (22,7-43,3%)	51,3% (34,7%-77,3%)

PIMs (Potentially inappropiate Medications)

Factores asociados a sobreprescripción (PIMs)

	Criterios Beers OR (IC 95%)	Criterios STOPP OR (IC 95%)
Número de medicamentos		
6-10	2,50 (1,75-3,56)	2,31 (1,68-3,18)
>10	4,87 (3,0-7,90)	7,22 (4,30-12,12)

Prevalence of potentially inappropriate prescribing in an acutely ill population of older patients admitted to six European hospitals Eur J Clin Pharmacol (2011) 67:1175–1188

	Criterios START
Infrautilización (PPOs)	59,4% (51,3%-72,7%)

PPO (potentally inappropriate prescribing omisions)

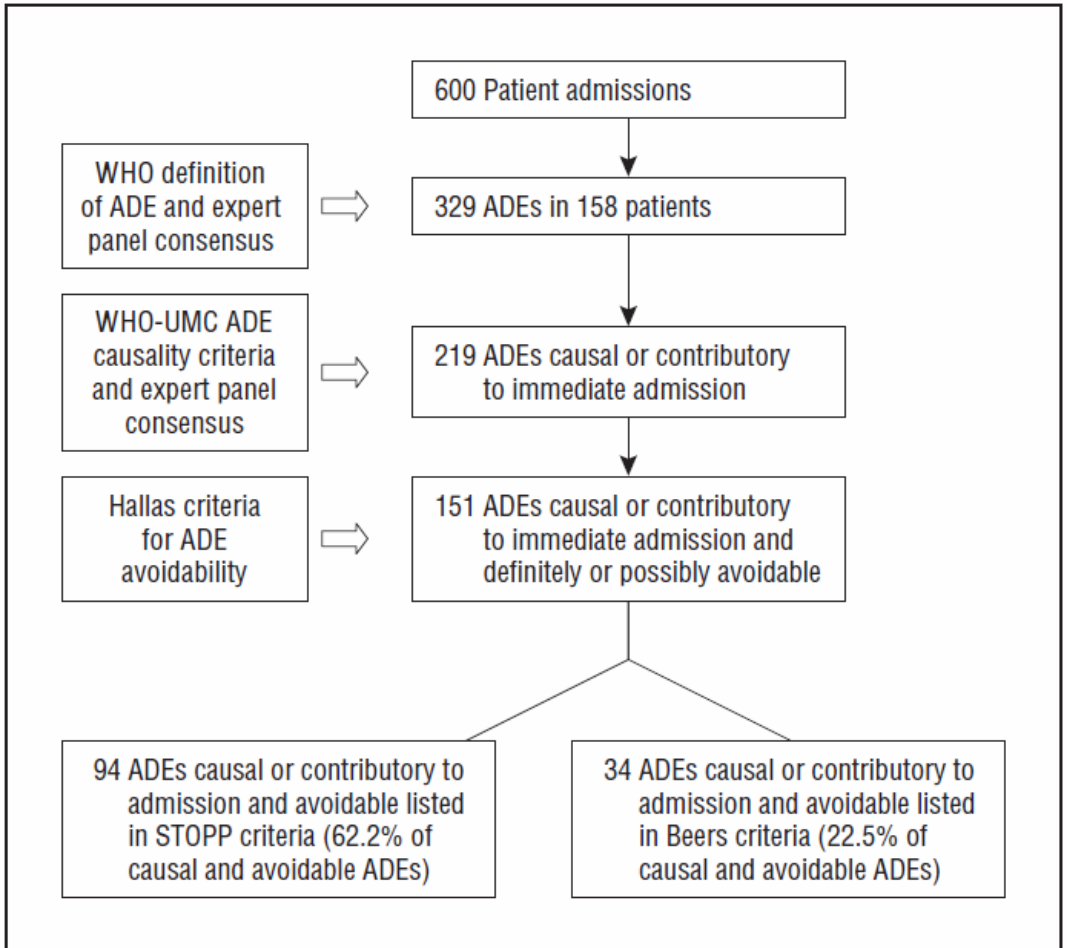
Factores asociados a infraprescripción (PPOs)

	Criterios START OR (IC 95%)
Edad ≥ 85 años	1,80 (1,18-2,75)
Índice de Charlson ≥ 2	3,25 (2,01-5,26)

LESS IS MORE

Potentially Inappropriate Medications Defined by STOPP Criteria and the Risk of Adverse Drug Events in Older Hospitalized Patients

Arch Intern Med. 2011;171(11):1013-1019



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Estudio sobre la Utilización Inapropiada de Medicamentos en pacientes de edad avanzada hospitalizados en servicios de Medicina Interna de siete hospitales españoles (estudio PUMEA)

San José A, Agustí A, Vidal X, Formiga F, López-Soto A, Fernández-Moyano A, García J, Torres O, Ramírez-Duque N, Barbé J

Objetivo principal: Analizar el consumo de medicamentos y su prescripción inapropiada (PI) al ingreso hospitalario en los Servicios de Medicina Interna en pacientes de edad avanzada. Tanto la prescripción potencialmente inadecuada (*PIMs*) como la infraprescripción o potencialmente omitida (*PPOs*).

Características de los pacientes	N= 672
Edad Media (IC 95%)	82,61 (82,19-83,03)
75-84 años %	63,9
85 y más %	36,1
Sexo (%)	
Mujeres	55,9
Varones	44,1
Motivo ingreso (%)	
Enfermedad aguda	51,4
Enfermedad crónica agudizada	48,6
Índice de Barthel. Media (IC 95%)	
Basal.	65,22 (62,58-67,86)
Ingreso.	42,29 (39,56-45,03)
Alta (616 pacientes)	52,32 (49,5-55,14)
Reisberg basal (%)	
1-2	57,3
3-5	31
6-7	11,7
CAM al ingreso positivo %	14,3
Errores en el Pfeiffer. Media (IC 95%) (565 pacientes)	2,81 (2,56-3,05)
Índice de Charlson. Media (IC 95%)	2,9 (2,72-3,08)
Paciente Pluripatológico %	62
Destino al alta (%)	
Domicilio	75
Exitus	7,2
Institución media-larga estancia	16,8
Otros	1

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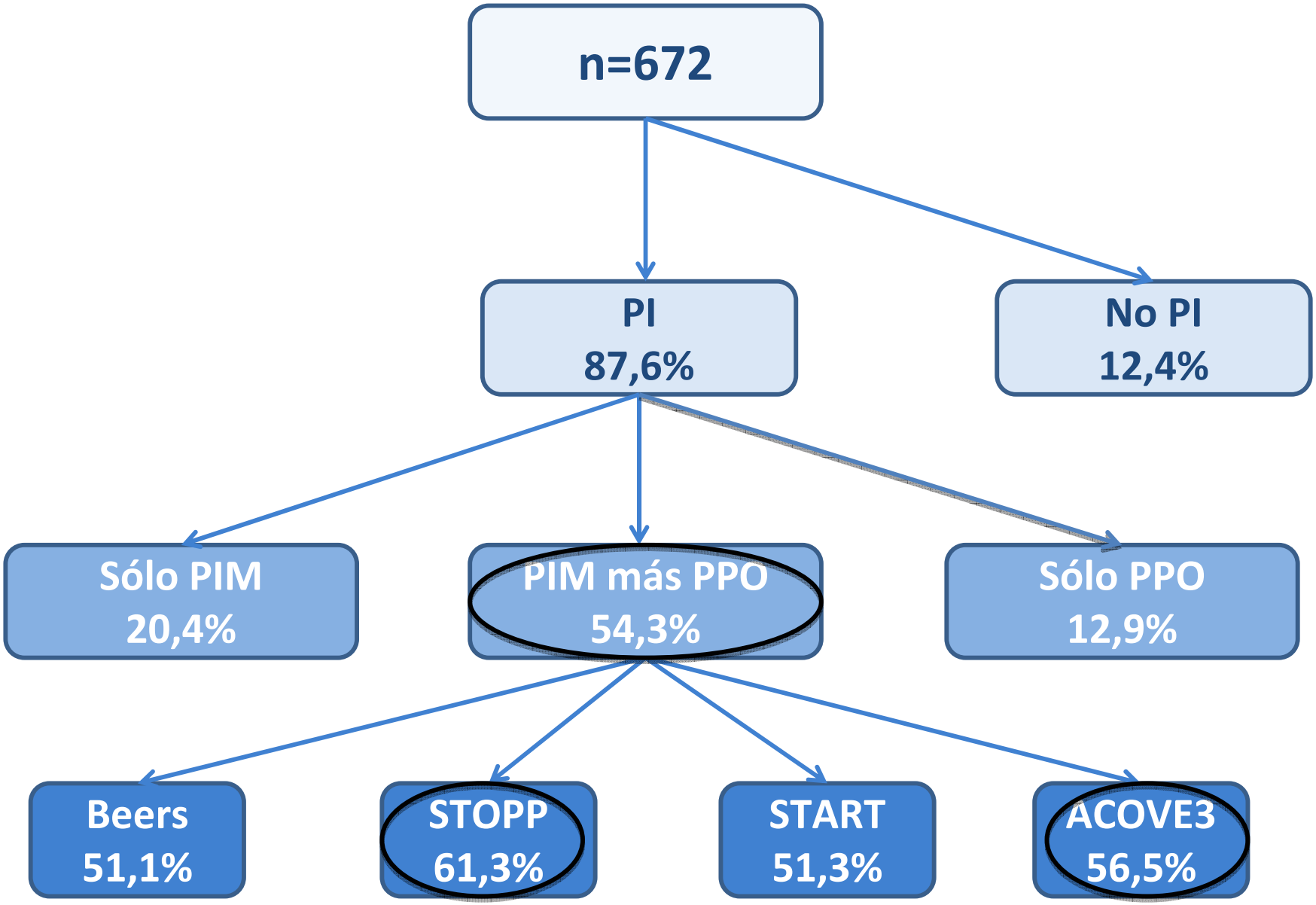
Estudio sobre la Utilización Inapropiada de Medicamentos en pacientes de edad avanzada hospitalizados en servicios de Medicina Interna de diferentes hospitales españoles (estudio PUMEA)

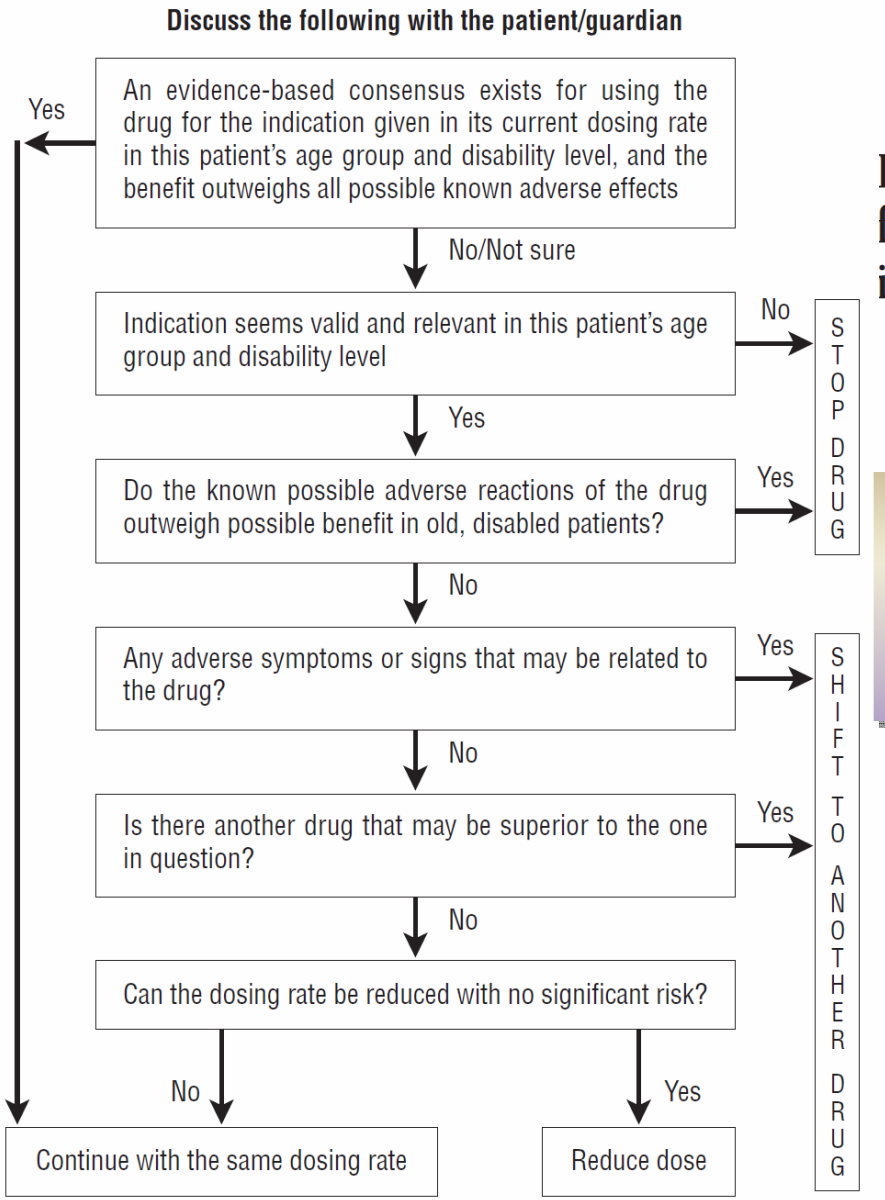
Consumo de medicamentos	N=672
Media (IC 95%)	10,5 (10,1-10,9)
0 a 4	7,5%
5 a 9	36,5%
10 o más	56,0%

PRESCRIPCIÓN INADECUADA



Factores asociados a prescripción inadecuada

Factores asociados a PPOs	OR (IC al 95%)
Pluripatología	1,93 (1,25-2,97)
PIM	2,79 (1,81-4,28)
Barthel basal Dependencia muy grave o total	0,29 (0,12-0,68)
Procedencia Otra distinta al domicilio	2,20 (1,14-4,25)



Feasibility Study of a Systematic Approach for Discontinuation of Multiple Medications in Older Adults

Arch Intern Med. 2010;170(18):1648-1654

- 70 pacientes ambulatorios
- 311 (58%) medicaciones discontinuadas
- 81% con éxito

Drug cessation in complex older adults: time for action

Age and Ageing 2013; **0:** 1–6

Box 3. Summary for medication use in end-of-life situations

Very little rigorous research has been conducted on reducing inappropriate medications in frail older adults or patients approaching end of life [24].

There is a need to develop consensus criteria to assess appropriate versus inappropriate medication use, specifically for individuals at the end of life [25].

Limitaciones

- No hay ninguno estándar reconocido internacionalmente.
- No han sido diseñados ni validados específicamente para el paciente pluripatológico.
- Validados en pacientes de edad avanzada y en medio ambulatorio.
- Escasa información sobre su correlación con resultados en salud.

We need minimally disruptive medicine

- Disponer de buenos instrumentos y estrategias para identificar a los pacientes con polimedicación.
- Mejorar la coordinación de la asistencia.
- Disponer de un mayor conocimiento y de mejores evidencias sobre la pluripatología.
- Priorizar en función de las perspectivas de los pacientes.

BMJ | 29 AUGUST 2009

PRESCRIPCIÓN PRUDENTE DE MEDICAMENTOS

- Make every reasonable effort to ensure an accurate diagnosis.
- Question necessity for the drug. Avoid inappropriate and over enthusiastic treatment. Consider the patient as a whole, not a collection of symptoms.
- Can nonpharmacological alternatives be used instead?
- Has the most suitable drug been chosen for the patient?
- Be familiar with the drugs you prescribe.
- Is the dose correct? Start low and titrate carefully.
- Consider risk of drug interactions.
- Ensure a thorough drug history is taken, including OTC medication.
- Does the patient suffer from another disease for which the drug in question is contraindicated?
- Is the treatment regimen as simple as possible?
- Has the patient and any carer been counselled about the treatment and do they understand how to take the drugs? Would a compliance aid be useful?
- How long will the medication be continued for? Determine the criteria for stopping treatment.
- Ensure repeat prescriptions are reviewed regularly.
- Is any drug monitoring required?

Factores asociados a prescripción inadecuada

Factores asociados a STOPP	OR (IC al 95%)
Pluripatología	0,57 (0,36-0,92)
Número de fármacos 5-9 ≥10	 4,13 (1,74-9,78) 8,21 (3,47-19,44)
Barther basal Dependencia muy grave o total	 3,79 (1,5-9,54)
Beers	2,41 (1,58-3,67)
ACOVE 3	2,68 (1,77-4,06)

Factores asociados a prescripción inadecuada

Factores asociados a ACOVE 3	OR (IC al 95%)
STOPP	2,3 (1,51-3,49)
START	7,31 (4,8-11,12)

LESS IS MORE

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Arch Intern Med. 2011;171(11):1013-1019

Table 5. Most Common ADEs That Were Classified as Causal or Contributory to Admission and Possibly or Definitely Avoidable as per Hallas Criteria

ADE	No. (%)	No. (%)		
		Attributed to STOPP Criteria PIMs	Attributed to Beers Criteria PIMs	ADEs Appearing Both in STOPP and Beers Criteria
Fall(s) while receiving benzodiazepines	24 (15.9)	24 (100)	22 (91.7)	22 (91.7)
Symptomatic orthostasis while receiving antihypertensives	17 (11.3)	15 (88.2)	1 (5.9)	1 (5.9)
Falls while receiving opiates	10 (6.6)	10 (100)	0	0
Hyponatremia while receiving diuretics	10 (6.6)	0	0	0
Constipation while receiving opiates	6 (4.0)	6 (100)	0	0
Falls while receiving sedative hypnotics	6 (4.0)	0	0	0
Acute kidney injury while receiving diuretics	6 (4.0)	3 (50)	0	0
Symptomatic orthostasis while receiving diuretics	5 (3.3)	5 (100)	0	0
Falls on neuroleptics	5 (3.3)	5 (100)	1 (20)	0
NSAID-related gastritis/peptic ulcer disease	4 (2.6)	3 (75)	1 (25)	1 (25)
Bradycardia while receiving β-blockers	4 (2.6)	0	0	0

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DEPRESCRIPCIÓN

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Por Fármaco

Por Paciente

Optimizar el tratamiento farmacológico

- Seleccionar el tratamiento en función de las mejores evidencias disponibles y de las características del paciente.
- Definir los criterios de respuesta y de retirada del tratamiento.
- Monitorizar la respuesta y posible aparición de efectos indeseados.
- Tomar consciencia de las áreas de incertidumbre y de la falta de evidencia al prescribir.

PRESCRIPCIÓN PRUDENTE DE MEDICAMENTOS