

Title	Pharmacotherapy optimization in older patients by a structured clinical pharmacist assessment and intervention
Authors	O'Sullivan, David.
Publication date	2014
Original Citation	O'Sullivan, D. 2014. Pharmacotherapy optimization in older patients by a structured clinical pharmacist assessment and intervention. PhD Thesis, University College Cork.
Type of publication	Doctoral thesis
Rights	© 2013, David O'Sullivan http://creativecommons.org/licenses/ by-nc-nd/3.0/
Download date	2024-05-04 11:03:56
Item downloaded from	https://hdl.handle.net/10468/1900



University College Cork, Ireland Coláiste na hOllscoile Corcaigh

Appendix Table 1 Instances of STOPP potentially inappropriate prescribing (PIP)

Criteria	All	Exc. prns
Cardiovascular System		
Loop diuretic for dependent ankle oedema only i.e. no clinical signs of heart failure	8	8
Loop diuretic first line for hypertension	34	34
Use of diltiazem or verapamil with NYHA Class III or IV heart failure	2	2
Calcium channel blockers and constipation	24	24
Aspirin and history of peptic ulcer disease without H2 antagonist/PPI	1	1
Aspirin without an indication	20	20
Warfarin for first, uncomplicated deep venous thrombosis for longer than 6 months duration		1
<u>Central nervous system</u>		
TCA and dementia	8	8
TCA and glaucoma	3	3
TCAs and cardiac conductive abnormalities	2	2
TCAs and constipation	12	12

Criteria	All	Exc. prns
TCAs and opiate or calcium blockers	20	13
TCA and urinary retention	1	1
Long term long acting benzodiazepine or benzodiazepines with long acting metabolites	61	61
Long-term (i.e. > 1 month) neuroleptics as long-term hypnotics	22	22
Long-term neuroleptics (> 1 month) in those with Parkinsons' disease	25	25
Phenothiazines in patients with epilepsy	5	0
Anticholinergics to treat extra-pyramidal side-effects of neuroleptic medications	14	14
Selective serotonin re-uptake inhibitors (SSRI's) with a history of clinically significant hyponatraemia (non-iatrogenic hyponatraemia<130mmol/l within the previous 2 months).	4	4
>1 week first-generation antihistamines	25	25
Gastrointestinal system		
Diphenoxylate, loperamide or codeine phosphate for treatment of diarrhoea of unknown cause	1	1
Prochlorperazine or metoclopramide with Parkinsons disease	4	2
PPI for peptic ulcer disease at full therapeutic dosage for >8 weeks	166	166

Criteria	All	Exc. prns
Anticholinergic antispasmodic drugs with chronic constipation		0
Respiratory system		
Theophylline as monotherapy for COPD	2	2
Nebulised ipratropium with glaucoma	4	3
Musculoskeletal system		
NSAIDs and hypertension	60	26
NSAIDs and heart failure	12	2
Long-term continuous NSAIDs for osteoarthritis	6	б
Warfarin and NSAIDs together	9	4
NSAID with chronic renal failure	4	1
Long-term corticosteroids (>3 months) as monotherapy for rheumatoid arthrtitis or osterarthritis		8
Urogenital System		
Bladder antimuscarinic drugs with dementia	12	12
Antimuscarinic drugs with chronic glaucoma	2	2
Antimuscarinic drugs with chronic constipation	17	17
Antimuscarinic drugs with chronic prostatism	3	3

Criteria	All	Exc. prns
Alpha-blockers in males with frequent incontinence	12	12
Alpha-blockers with long-term urinary catheter in situ		3
Drugs that adversely affect fallers		
Benzodiazepines in individuals with a history of recurrent falls	197	115
Neuroleptic drugs in individuals with a history of recurrent falls	138	115
First generation antihistamines in individuals with a history of recurrent falls	24	16
Long-term opiates in individuals with a history of recurrent falls	71	71
Analgesic Drugs		
Use of long-term powerful opiates e.g. morphine or fentanyl as first line therapy for mild-moderate pain	4	4
Long-term opiates in those with dementia unless indicted for palliative care or management of moderate/severe chronic pain syndrome	22	22
Duplicate class	202	62
Total STOPP PIP instances	1280	955

Key: Exc: Excluding; prn: Pro Re Nata (as needed/ as required); NYHA: New York Heart Association;
H2 receptor antagonist: Histamine 2 receptor antagonist; PPI: Proton Pump Inhibitor; SSRIs:
Selective Serotonin Reuptake Inhibitors; COPD: Chronic Obstructive Pulmonary Disease; NSAIDs:
Non-Steroidal Anti-Inflammatory Drugs; STOPP: Screening Tool of Older People's potentially
inappropriate Prescriptions; PIP: Potentially Inappropriate Prescribing.

Appendix Table 2 Instances of Beers' ID potentially inappropriate prescribing (PIP)

Criteria	All	Exc. prns
Muscle relaxants and antispasmodics:oxybutynin (do not consider	10	10
extended release oxybutynin)		
Flurazepam	15	15
Amitriptyline, chlordiazepoxide- amitriptyline and perphenazine-	20	20
amitriptyline		
Doxepin	1	1
Doses of short acting benzodiazepines: doses greater than	10	10
lorazepam 3mg; oxazepam 60mg; alprazolam 2mg; temazepam		
15mg; triazolam0.25mg.		
Chlordiazepoxide, chlordiazepoxide- amitriptyline, clidinium-	70	41
chlordiazepoxide, diazepam, quazepam, halazepam and		
chlorazepate		
Long-acting benzodiazepines	7	6
Gastrointestinal antispasmodic drugs:dicyclomide, hyoscyamine,	27	8
propantheline, belladonna alkoloids and clinidium-chlordiazepoxide		
Anticholinergics and anthistamines: Chlorpheniramine,	25	12
diphenhydramine, hydroxyzine, cyproheptadine, promethazine,		
tripelennamine and dexchlorpheniramine		

Criteria	All	Exc. prns
Daily fluoxetine	17	17
Amiodarone	15	15
Nitrofurantoin	13	13
Doxazosin	9	9
Oestrogen	1	1
Total Beers ID PIP Instances	240	178

Key: Exc: Excluding; **prn:** Pro Re Nata (as needed/ as required); **ID:** Independent of Diagnosis; **PIP**: Potentially Inappropriate Prescribing.

Appendix Table 3 Instances of Beers' CD potentially inappropriate prescribing (PIP)

Criteria	All	Exc. prns
Gastric of duodenal ulcers AND NSAIDs and aspirin	9	4
Seizures or epilepsy AND Clozapine, chlorpromazine, thioridazine and thiothixene	1	0
Blood clotting disorders or receiving anticoagulant therapy AND aspirin, NSAIDs, dipryidamole, ticlodipine and clopidogrel	10	7
Bladder outflow obstruction AND anticholinergics and antihistamines, GI antispasmodic drugs, muscle relaxants, oxybutynin, flavoxate, anticholinergics, antidepressants, decongestants and tolteridine.	34	29
Stress incontinence AND α -blockers, anticholinergics, tricyclic antidepressants (imipramine hydrochloride, doxepin hydrochloride and amitriptyline hydrochloride) and long-acting benzodiazepines.	77	58
Arrhythmias AND Tricyclic antidepressants (imipramine hydrochloride, doxepin hydrochloride and amitriptyline hydrochloride)	1	1
Parkinson disease AND Metoclopramide, conventional antipsychotics and tacrine	5	3
Cognitive impairment AND barbiturates, anticholinergics, antispasmodics, muscle relaxants and cns stimulants:	68	49

Criteria		Exc. prns
dextroamphetamine, methylphenidate, methamphetamine and		
pemolin.		
Depression AND long-term benzodiazepine use. sympatholytic	87	87
agents: methyldopa, reserpine and guanethidine		
Syncope or falls AND short to intermediate acting benzodiazepine	208	124
and tricyclic antidepressants (imipramine hydrochloride, doxepin		
hydrochloride and amitriptyline hydrochloride)		
SIADH/hyponatraemia AND SSRIs (fluoxetine, citalopram,	2	2
fluvoxamine, paroxetine and Sertraline)		
Obesity AND Olanzapine	1	1
COPD AND Long-acting benzodiazepines: chlordiazepoxide,	7	4
chlordiazepoxide- amitriptyline, clidinium-chlordiazepoxide,		
diazepam, quazepam, halazepam and chlorazepate. ß-blockers:		
propranolol.		
Constipation AND calcium channel blockers, anticholinergics,	81	70
tricyclic antidepressants (imipramine hydrochloride, doxepin		
hydrochloride and amitriptyline hydrochloride)		
Total Beers CD PIP Instances	591	439

Key: Exc: Excluding; prn: Pro Re Nata (as needed/ as required); GI: Gastro-Intestinal; SIADH:
 Syndrome of Inappropriate Anti-Diuretic Hormone; SSRIs: Selective Serotonin Reuptake Inhibitors;
 COPD: Chronic Obstructive Pulmonary Disease; NSAIDs: Non-Steroidal Anti-Inflammatory Drugs; CD:
 Considering Diagnosis; PIP: Potentially Inappropriate Prescribing.