

TABLES

Table 1. Baseline Inpatient's characteristics according to antipsychotics prescribing patterns during the index hospitalisation (IH).

	Total	Antipsychotic prescribing			
		No antipsychotic	Antipsychotic		
	(N=2008) n (%)	(n=1854) n (%)	At any time during the IH (n=154) n (%)	On admission of the IH (n=110) n (%)	At discharge of the IH (n=132) n (%)
Age, median [IQR], years	79,0 [74-84]	78,5 [74-84]	80,0 [75-85]	79,0 [75-85]	80,0 [75-85]
Sex, male	1110 (55,3%)	1032 (55,7%)	78 (50,6%)	56 (50,9%)	65 (49,2%)
Nursing-home residents ^a	192 (9,6%)	154 (8,3%) ^c	38 (24,7%)	28 (25,5%)	33 (25,0%)
BMI, median [IQR]	26,2 [23,4-29,7]	26,2 [23,5-29,8]	25,7 [23,1-29,0]	25,8 [23,1-29,2]	25,6 [23,1-28,7]
Trial site:					
Bern (Switzerland)	822 (40,9%)	721 (38,9%)	101 (65,6%)	68 (61,8%)	87 (65,9%)
Louvain (Belgium)	388 (19,3%)	374 (20,2%)	14 (9,1%)	13 (11,8%)	12 (9,1%)
Utrecht (the Netherlands)	452 (22,5%)	436 (23,5%)	16 (10,4%)	6 (5,4%)	16 (12,1%)
Cork (Ireland)	346 (17,2%)	323 (17,4%)	23 (14,9%)	23 (10,9%)	19 (14,4%)
Education level: ^b		^e	^d		
Less than high school	595 (30,1%)	546 (29,9%)	49 (32,0%)	34 (30,9%)	43 (32,6%)
High school	909 (45,5%)	835 (45,7%)	74 (48,4%)	51 (46,4%)	62 (46,9%)
University	475 (24,0%)	445 (24,4%)	30 (19,6%)	24 (21,8%)	26 (19,7%)
Alcohol consumption:					
< 2 units per week	1343 (66,9%)	1214 (65,5%)	129 (83,8%)	93 (84,5%)	113 (85,6%)
≥ 2 units per week	665 (33,1%)	640 (34,5%)	25 (16,2%)	17 (15,5%)	19 (14,4%)
Smokers ^a	158 (7,9%)	142 (7,7%) ^c	16 (10,4%)	14 (12,7%)	12 (9,1%)
Functional dependency					
ADL < 50/100	204 (10,2%)	151 (8,1%)	53 (34,4%)	37 (33,6%)	44 (33,3%)
ADL ≥ 50/100	1804 (89,8%)	1703 (91,9%)	101 (65,6%)	73 (66,4%)	88 (66,7%)
Number of falls, medical history, median [IQR]	0 [0-1]	0 [0-1]	1 [0-2]	1 [0-2]	1 [0-2]
Length of stay of the IH, median [IQR], days	7 [3-10]	7 [3-10]	8 [4-12]	7 [3-11]	8 [4-12]
Intervention group:					
Intervention	963 (48,0%)	887 (47,8%)	76 (49,4%)	57 (51,8%)	65 (49,2%)
Control	1045 (52,0%)	967 (52,2%)	78 (50,6%)	53 (48,2%)	67 (50,8%)
Daily drugs, number:					
< 15	888 (44,2%)	854 (46,1%)	34 (22,1%)	25 (22,7%)	27 (20,5%)
≥ 15	1120 (55,8%)	1000 (53,9%)	120 (77,9%)	85 (52,7%)	105 (79,5%)
Dementia	118 (5,9%)	77 (4,1%)	41 (26,6%)	34 (30,9%)	36 (27,3%)
Psychosis	14 (0,7%)	4 (0,2%)	10 (6,5%)	10 (9,1%)	9 (6,8%)

Delirium	97 (4,83%)	60 (3,23%)	37 (24,0%)	18 (16,4%)	33 (25,0%)
Anxiety	38 (1,9%)	31 (1,7%)	7 (4,5%)	6 (5,5%)	7 (5,3%)
Mood disorders	199 (9,9%)	157 (8,5%)	42 (27,3%)	34 (30,9%)	39 (29,5%)
Hip fractures	55 (2,7%)	51 (2,7%)	4 (2,6%)	2 (1,8%)	4 (3,0%)
Type 2 diabetes	594 (29,6%)	552 (29,8%)	42 (27,3%)	31 (28,2%)	35 (26,5%)
Stroke	311 (15,5%)	288 (15,5%)	23 (14,9%)	13 (11,8%)	22 (16,7%)
Increased QT-interval	20 (1,0%)	18 (0,9%)	2 (1,3%)	2 (1,8%)	2 (1,5%)
Postural hypotension	64 (3,2%)	57 (3,1%)	7 (4,5%)	4 (3,6%)	6 (4,5%)
Pneumonia	172 (8,6%)	160 (8,6%)	12 (7,8%)	7 (6,4%)	11 (8,3%)
Dyskinesia	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Parkinsonism	5 (0,2%)	4 (0,2%)	1 (0,6%)	1 (0,9%)	1 (0,7%)
Other extrapyramidal symptoms	68 (3,4%)	65 (3,5%)	3 (1,9%)	2 (1,8%)	2 (1,5%)

^amissing values=10; ^bmissing values=29; ^cmissing values=10; ^dmissing values=1; ^emissing values=28

ADL score= activity of daily living score, the maximum score is 20, lower score means higher functional dependency; BMI= body mass index;

IH: index hospitalisation, IQR: Interquartile range

Table 2. Variables associated with antipsychotic prescribing compared to no antipsychotic use, included in the multivariable logistic regressions (N=1998).

	Antipsychotic at any time		Antipsychotic on admission		Antipsychotic at discharge	
	OR [IC95%]	p-value	OR [IC95%]	p-value	OR [IC95%]	p-value
Age	0,99 [0,97 ; 1,03]	0,902			1,00 [0,97 ; 1,03]	0,967
Sex: Male					0,92 [0,60 ; 1,40]	0,697
Nursing-home residents ^a	1,60 [0,97 ; 2,65]	0,067	1,55 [0,89 ; 2,69]	0,120	1,56 [0,92 ; 2,65]	0,102
Alcohol <2 units / week	2,20 [1,36 ; 3,57]	0,001*	2,17 [1,23 ; 3,82]	0,007*	2,51 [1,45 ; 4,33]	0,001*
Smokers ^a			1,89 [0,97 ; 3,66]	0,061		
ADL score < 50/100	3,96 [2,55 ; 6,15]	<0,001*	3,49 [2,12 ; 5,76]	<0,001*	3,36 [2,10 ; 5,39]	<0,001*
Numbers of drugs ≥ 15	1,67 [1,07 ; 2,58]	0,022*	1,58 [0,95 ; 2,61]	0,076	1,83 [1,13 ; 2,95]	0,014*
Dementia	3,73 [2,24 ; 6,19]	<0,001*	4,90 [2,89 ; 8,32]	<0,001*	3,42 [2,03 ; 5,82]	<0,001*
Psychosis	26,19 [7,39 ; 92,80]	<0,001*	33,63 [9,22 ; 122,65]	<0,001*	21,19 [6,31 ; 71,17]	<0,001*
Delirium	6,41 [3,79 ; 10,81]	<0,001*	2,28 [1,19 ; 4,63]	0,013*	6,37 [3,71 ; 10,94]	<0,001*
Anxiety	2,06 [0,79 ; 5,33]	0,138	2,38 [0,85 ; 6,67]	0,098	2,47 [0,95 ; 6,37]	0,063
Mood disorders	2,60 [1,65 ; 4,11]	<0,001*	2,75 [1,66 ; 4,53]	<0,001*	2,89 [1,79 ; 4,65]	<0,001*
Parkinsonism			1,41 [0,02 ; 102,28]	0,876		

^amissing values=10; ^bmissing values=29

IC= confidence interval; OR= odd ratio

Table 3. Description of the drug-related readmissions for which the antipsychotic is the main reason or a contributing factor for hospitalisation.

Sex	Age	Comorbidities	Medications	Type of AP	Dosage	PDD/ DDD	Duration of use (days)	Type of DRA	Reason for admission	AP impact on admission ^a	Causality assessment ^b
Female	85	- Cognitive impairment - Hypertension, mitral valve insufficiency, atrial fibrillation, venous insufficiency - Asthma, spondylosis, myopathy, coxarthrosis, rickets, glaucoma, hypothyroidism	Quetiapine , colecalciferol, brimonidine, brinzolamide, L-thyroxin, metoprolol, rivaroxaban, budesonide, formoterol, escitalopram, calcium carbonate	Atypical	12,5 mg QD	0,03	3	Adverse drug reaction	Fall	Main reason	Possible
Female	83	- Delirium and dementia - Cardiomegaly, heart failure, paroxysmal atrial fibrillation, unstable angina pectoris, venous insufficiency - T2D, skin eruption due to medication, hypo-osmolality's hyponatremia	Quetiapine , clopidogrel, pantoprazole, metoprolol, paracetamol, lisinopril, rivaroxaban, acetylcystein/chlorphenamin, torasemib, diosmine/hesperidin, colecalciferol	Atypical	12,5 mg QD	0.03	82	Adverse drug reaction	Confusion, acute renal impairment, dehydration	Contributory factor	Possible
Male	84	- Delirium and dementia - Cardiomegaly, atherosclerosis, stenosis of the carotid artery, retinal artery occlusion, hypertension, hypertensive heart failure, mitral and tricuspid insufficiency, ventricular failure - Blindness, CKD stage 3, gout	Quetiapine , rivaroxaban, nebivolol, torasemib, azilsartan, allopurinol, atorvastatine, amlodipine, chlortalidone	Atypical	25 mg QD	0.06	150	Adverse drug reaction	delirium	Contributory factor	Possible
Male	75	- Delirium - Atrial fibrillation, aortic insufficiency, cerebral infarction, dyslipidaemia, tricuspid and mitral insufficiency, hypertensive heart disease - Anaemia, glaucoma, spondylopathy, T2D, myositis, acute renal failure	Risperidone , atorvastatine, metoprolol, timolol, clomethiazole, levofloxacin, paracetamol, lisinopril, nadroparin, rifampicin, carteolol, brinzolamid	Atypical	1 mg BID 2 mg QD 0,25 mg twice AN	0,70	301	Adverse drug reaction	Recurrent falls, delirium, acute renal impairment	Main reason	probable

Male	85	- Hypertension, myocardial infarction, atherosclerotic heart disease, venous insufficiency, dyslipidaemia - Ataxia, benign neoplasm of connective tissue, mononeuropathy of the upper limb, T2D, malignant neoplasm of prostate, tetraplegia	Quetiapine , colecalciferol, sulfamethoxazole/trimethoprim, insulin aspart, prednisolone, clopidogrel, atorvastatine, pantoprazole, calcium carbonate, enoxaparin, losartan, metformin	Atypical	NA	NA	NA	Adverse drug reaction	Presyncope, hyperlactatemia	Contributory factor	Possible
Female	76	- Depression, mental and behavioural disorder due to sedatives or hypnotics - Atherosclerosis, hypertension, atrial fibrillation, pulmonary embolism, haemothorax, stroke, chronic ischemic heart failure, dyslipidaemia - Respiratory failure, non-Hodgkin lymphoma, fibromyalgia, anaemia, dorsalgia, oesophagitis, hypothyroidism, dyspnoea, dysphagia, obesity, ileus	Haloperidol , flunitrazepam, pramipexol, atorvastatine, spironolactone, nadroparin, salbutamol, torasemib, sertraline, lisinopril, ipratropium, diclofenac, cinchocaine/dequalinium, amphotericin B, acetylsalicylic acid, L-thyroxine, bisoprolol, pantoprazole, kalium, phenprocoumon	Typical	0,5 mg BID	0,12	>40	Adverse drug reaction	Drowsiness	Main reason	Probable
Male	71	- Depression, psychosis - COPD, parkinsonism	Risperidone , salbutamol, glycopyrronium, beclometason, colecalciferol, temazepam, pantoprazole, macrogol, ascorbic acid, formoterol	Atypical	2 mg BID 4 mg QD	1,60	>209	Adverse drug reaction + overuse	Aspiration pneumoniae	Main reason	NA
Male	80	- Anxiety and depressive disorder, - Atrial fibrillation, hypertension, chronic ischaemic heart disease - Malignant neoplasm of skin, COPD, hypothyroidism, asthma	Olanzapine , fluticasone, salmeterol, salbutamol, amiloride, warfarine, furosemide, L-thyroxine, omeprazole, bisoprolol, atorvastatine	Atypical	2,5 mg BID	0,50	>281	underuse	Undertreatment of anxiety and depression	Main reason	Probable

^a: according to the adjudication-experts team; ^b: according to the WHO-UMS system (certain-probable-possible-unlikely-conditional-unassessable)

AN= as needed; AP=antipsychotic; BID= twice a day; CKD= chronic kidney disease; COPD= chronic obstructive pulmonary disease; DDD= defined daily dose; DRA= drug-related readmission; Duration of use= time between start of AP and DRA; NA= no information recorded; PDD= prescribed daily dose; QD=once a day; T2D= type 2 diabetes