

## Supplementary Tables

**Supplementary Table 1.** Frequency, sensitivity and positive predictive value of 45 and Up Study self-reported data for prescription-only medications to 7-digit level ATC classification compared with PBS pharmaceutical claims data (gold standard) considering 90-day exposure definition

Individual drug (ATC code)*	Participants identified with specified medications			Sensitivity % (95%CI)	Positive Predictive Value, PPV % (95%CI)
	PBS entry % (n)	Survey entry % (n)	Correct† survey entry % (n)		
Atorvastatin (C10AA05)	21.8 (109)	22.4 (112)	20.6 (103)	94.5 (88.4, 98.5)	92.0 (85.3, 96.3)
Simvastatin (C10AA01)	13.6 (68)	13.4 (67)	12.0 (60)	88.2 (78.1, 94.8)	89.6 (79.7, 95.7)
Esomeprazole (A02BC05)	11.4 (57)	11.2 (56)	10.0 (50)	87.7 (76.3, 94.9)	89.3 (78.1, 96.0)
Irbesartan (C09CA04)	10.4 (52)	1.2 (6)	1.2 (6)	11.5 (4.4, 23.4)	100
Atenolol (C07AB03)	9.0 (45)	8.8 (44)	8.4 (42)	93.3 (81.7, 98.6)	95.5 (84.5, 99.4)
Metoprolol (C07AB02)	7.8 (39)	6.8 (34)	6.2 (31)	79.5 (63.5, 90.7)	91.2 (76.3, 98.1)
Metformin (A10BA02)	7.8 (39)	8.2 (41)	6.8 (34)	87.1 (72.6, 95.7)	82.9 (67.9, 92.9)
Allopurinol (M04AA01)	7.4 (37)	7.8 (39)	6.8 (34)	91.9 (78.1, 98.3)	87.2 (72.6, 95.7)
Pantoprazole (A02BC02)	7.0 (35)	7.8 (39)	6.6 (33)	94.3 (80.8, 99.3)	84.6 (69.5, 94.1)
Cefalexin (J01DB01)	7.0 (35)	0.4 (2)	0.2 (1)	2.8 (0.1, 14.9)	49.5 (1.3, 98.7)
Ramipril (C09AA05)	6.8 (34)	5.8 (29)	5.8 (29)	85.3 (68.9, 95.1)	100
Frusemide (C03CA01)	6.8 (34)	8.2 (41)	6.0 (30)	88.2 (72.6, 96.7)	73.2 (57.1, 85.8)
Omeprazole (A02BC01)	6.6 (33)	6.6 (33)	5.6 (28)	84.9 (68.1, 94.9)	84.9 (68.1, 94.9)
Perindopril (C09AA04)	6.6 (33)	1.0 (5)	1.0 (5)	15.2 (5.1, 31.9)	100

Warfarin (B01AA03)	6.4 (32)	6.4 (32)	6.2 (31)	96.9 (83.8, 99.9)	96.9 (83.8, 99.9)
Salmeterol and other drugs (R03AK06)	6.4 (32)	0 (0)	0 (0)	0	n/a
Meloxicam (M01AC06)	6.4 (32)	3.4 (17)	3.0 (15)	46.9 (29.1, 65.3)	88.2 (63.6, 98.5)
Amoxicillin (J01CA04)	6.0 (30)	0.4 (2)	0.2 (1)	3.3 (0.1, 17.2)	50.3 (1.3, 98.7)
Temazepam (N05CD07)	6.0 (30)	1.0 (5)	1.0 (5)	16.7 (5.6, 34.7)	n/a
Amlodipine (C08CA01)	6.0 (30)	5.4 (27)	5.2 (26)	86.7 (69.3, 96.2)	96.3 (81.0, 99.9)
Candesartan (C09CA06)	6.0 (30)	6.0 (30)	5.2 (26)	86.7 (69.3, 96.2)	86.7 (69.3, 96.2)
Amoxicillin and enzyme inhibitor (J01CR02)	5.8 (29)	0 (0)	0 (0)	0	n/a
Clopidogrel (B01AC04)	5.8 (29)	5.0 (25)	5.0 (25)	86.2 (68.3, 96.1)	100
Thyroxine (H03AA01)	5.8 (29)	7.8 (39)	4.6 (23)	79.3 (60.3, 92.0)	59.0 (42.1, 74.4)
Rabeprazole (A02BC04)	5.6 (28)	4.4 (22)	4.4 (22)	78.6 (59.1, 91.7)	100
Tiotropium (R03BB04)	5.0 (25)	2.2 (11)	2.0 (10)	40.0 (21.1, 61.3)	90.9 (58.7, 99.8)
Irbesatran, hydrochlorthizide (C09DA04)	4.8 (24)	1.6 (8)	1.2 (6)	25.0 (9.7, 46.7)	75.0 (34.9, 96.8)
Roxithromycin (J01FA06)	4.6 (23)	0 (0)	0 (0)	0	n/a
Betamethasone (D07AC01)	4.6 (23)	0 (0)	0 (0)	0	n/a
Bliclazide (A10BB09)	4.6 (23)	3.4 (17)	3.4 (17)	73.9 (51.6, 89.8)	100
Latanoprost (S01EE01)	4.2 (21)	1.6 (8)	1.4 (7)	33.3 (14.6, 57.0)	87.4 (47.4, 99.7)
Diazepam (N05BA01)	4.0 (20)	1.0 (5)	1.0 (5)	25.0 (8.7, 49.1)	100
Celecoxib (M01AH01)	4.0 (20)	2.8 (14)	2.6 (13)	65.0 (40.8, 84.6)	92.8 (66.1, 99.8)
Indapamide (C03BA11)	4.0 (20)	4.4 (22)	3.6 (18)	90.0 (68.3, 98.8)	81.9 (59.7, 94.8)
Rosuvastatin (C10AA07)	4.0 (20)	3.4 (17)	3.4 (17)	85.0 (62.1, 96.8)	100

Lercanidipine (C08CA13)	3.8 (19)	3.2 (16)	3.2 (16)	84.2 (60.4, 96.6)	100
Oxazepam (N05BA04)	3.6 (18)	0.8 (4)	0.4 (2)	11.1 (1.4, 34.7)	50.3 (6.8, 93.2)
Isosorbide (C01DA14)	3.6 (18)	3.2 (16)	3.2 (16)	88.9 (65.3, 98.6)	100
Prednisolone (H02AB06)	3.6 (18)	2.0 (10)	1.4 (7)	38.9 (17.3, 64.3)	70.1 (34.8, 93.3)
Felodipine (C08CA02)	3.6 (18)	3.2 (16)	3.2 (16)	88.9 (65.3, 98.6)	100
Ranitidine (A02BA02)	3.6 (18)	1.4 (7)	1.2 (6)	33.3 (13.3, 59.0)	85.6 (42.1, 99.6)
Budesonide eformoterol (R03AK07)	3.6 (18)	2.2 (11)	1.8 (9)	50.0 (26.0, 74.0)	82.0 (48.2, 97.7)
Tramadol (N02AX02)	3.4 (17)	0.8 (4)	0.8 (4)	23.5 (6.8, 49.9)	100
Prednisone (H02AB07)	3.4 (17)	2.4 (12)	1.8 (9)	52.9 (27.8, 77.0)	75.0 (42.8, 94.5)
Verapamil (C08DA01)	3.2 (16)	2.4 (12)	2.4 (12)	75.0 (47.6, 92.7)	100
Estradiol (G03CA03)	3.2 (16)	2.4 (12)	1.4 (7)	43.8 (19.8, 70.1)	58.4 (27.7, 84.8)
Citalopram (N06AB04)	3.2 (16)	2.8 (14)	2.4 (12)	75.0 (47.6, 92.7)	85.8 (57.2, 98.2)
Alendronic acid (M05BA04)	3.0 (15)	4.2 (21)	2.2 (11)	73.3 (44.9, 92.2)	52.4 (29.8, 74.3)
Pravastatin (C10AA03)	3.0 (15)	3.2 (16)	2.6 (13)	86.7 (59.5, 98.3)	81.2 (54.4, 96.0)
Diltiazem (C08DB01)	2.8 (14)	3.4 (17)	2.8 (14)	100	82.3 (56.6, 96.2)
Telmisatran (C09CA07)	2.8 (14)	3.4 (17)	2.2 (11)	78.6 (49.2, 95.3)	64.8 (38.3, 85.8)
Prazosin (C02CA01)	2.6 (13)	2.0 (10)	1.8 (9)	69.2 (38.6, 90.9)	89.8 (55.5, 99.8)
Combinations, platelet aggregation agents (B01AC30)	2.6 (13)	0 (0)	0 (0)	0	n/a
Mometasone (D07AC13)	2.6 (13)	0 (0)	0 (0)	0	n/a
Lansoprazole (A02BC03)	2.6 (13)	2.8 (14)	2.4 (12)	92.3 (64.0, 99.8)	85.7 (57.2, 98.2)
Sertraline (N06AB06)	2.6 (13)	2.4 (12)	2.2 (11)	84.6 (54.6, 98.1)	91.5 (61.5, 99.8)

Sodium valproate (N03AG01)	2.4 (12)	2.2 (11)	1.8 (9)	75.0 (42.8, 94.5)	81.8 (48.2, 97.7)
Oxycodone (N02AA05)	2.4 (12)	1.4 (7)	1.4 (7)	58.3 (27.7, 84.8)	100
Lisinopril (C09AA03)	2.4 (12)	2.0 (10)	2.0 (10)	83.3 (51.6, 97.9)	100
Digoxin (C01AA05)	2.4 (12)	3.2 (16)	2.2 (11)	91.7 (61.5, 99.8)	68.9 (41.3, 89.0)
Nifedipine (C08CA05)	2.4 (12)	2.2 (11)	2.0 (10)	83.3 (51.6, 97.9)	91.1 (58.7, 99.8)
Conjugated estrogens (G03CA57)	2.4 (12)	0 (0)	0 (0)	0	n/a
Ezetimibe (C10AX09)	2.4 (12)	2.2 (11)	2.2 (11)	91.7 (61.5, 99.8)	n/a
Triamcinolone and antiinfectives (S02CA04)	2.4 (12)	0 (0)	0 (0)	0	n/a
Alendronic acid and colecalciferol (M05BB03)	2.2 (11)	0 (0)	0 (0)	0	n/a
Enalapril (C09AA02)	2.2 (11)	2.2 (11)	2.0 (10)	90.9 (58.7, 99.8)	91.1 (58.7, 99.8)
Cefaclor (J01DC04)	2.2 (11)	0 (0)	0 (0)	0	n/a
Amitriptyline (N06AA09)	2.2 (11)	1.2 (6)	1.0 (5)	45.5 (16.8, 76.6)	83.6 (35.9, 99.6)
Erythromycin (J01FA01)	2.0 (10)	0 (0)	0 (0)	0	n/a
Doxycycline (J01AA02)	2.0 (10)	0.2 (1)	0 (0)	0	0
Spirolactone (C03DA01)	2.0 (10)	2.0 (10)	2.0 (10)	100	100

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\*table sorted by order of PBS pharmaceutical claims data frequency.

† correct =survey entry where there is a pharmaceutical claims record for the same medication.

Only medication classes with 10 or more entries identified using pharmaceutical claims data are presented.

**Supplementary Table 2.** Frequency, sensitivity and positive predictive value of 45 and Up Study self-reported data for prescription-only medications to 3-digit level ATC classification compared with PBS pharmaceutical claims data (gold standard) considering 30- and 60-day exposure definitions.

Therapeutic group (ATC class) <sup>*</sup>	Participants identified with specified medications			Sensitivity % (95%CI)	Positive Predictive Value, PPV % (95%CI)
	PBS entry % (n)	Survey entry % (n)	Correct† survey entry % (n)		
<b>60-day exposure period</b>					
Agents acting on the renin-angiotensin system (C09)	49.6 (248)	47.8 (239)	46.0 (230)	92.7 (88.8,95.6)	96.2 (93.0,98.3)
Lipid-modifying agents (C10)	45.4 (227)	45.0 (225)	43.4 (217)	95.6 (92.1,97.9)	96.4 (93.1,98.5)
Drugs for acid-related disorders (A02)	35.2 (176)	33.0 (165)	30.8 (154)	87.5 (81.7,92.0)	93.3 (88.4,96.6)
Antibacterial agents for systematic use (J01)	23.4 (117)	1.8 (9)	1.4 (7)	6.0 ( 2.4,11.9)	77.8 (40.0,97.2)
Calcium-channel blockers (C08)	21.4 (107)	19.6 (98)	18.8 (94)	87.9 (80.1,93.4)	95.9 (89.9,98.9)
Beta-blocking agents (C07)	20.6 (103)	20.4 (102)	18.4 (92)	89.3 (81.7,94.6)	90.1 (82.7,95.2)
Psychoanaleptic agents (N06)	17.2 (86)	15.2 (76)	14.0 (70)	81.4 (71.6,89.0)	92.1 (83.6,97.1)
Antithrombotic agents (B01)	14.6 (73)	11.8 (59)	11.4 (57)	78.1 (66.9,86.9)	96.6 (88.3,99.6)
Obstructive airway disease agents (R03)	13.8 (69)	5.2 (26)	4.2 (21)	30.4 (19.9,42.7)	80.8 (60.7,93.5)
Psycholeptics (N05)	12.8 (64)	5.8 (29)	3.6 (18)	28.1 (17.6,40.8)	62.1 (42.3,79.3)
Diuretics (C03)	12.0 (60)	15.0 (75)	10.6 (53)	88.3 (77.4,95.2)	70.7 (59.0,80.6)
Diabetes agents (A10)	11.2 (56)	10.6 (53)	10.0 (50)	89.3 (78.1,96.0)	94.3 (84.3,98.8)
Anti-inflammatory and anti-rheumatic agents	10.4 (52)	6.8 (34)	5.8 (29)	55.8 (41.3,69.5)	85.3 (68.9,95.1)

(M01)					
Ophthalmologic agents (S01)	8.6 (43)	3.6 (18)	3.6 (18)	41.9 (27.0,57.9)	100
Bone disease agents (M05)	8.6 (43)	5.8 (29)	5.0 (25)	58.1 (42.1,73.0)	86.1 (68.3,96.1)
Sex hormones and modulators (G03)	8.0 (40)	6.0 (30)	3.8 (19)	47.5 (31.5,63.9)	63.4 (43.9,80.1)
Corticosteroids, dermatological agents (D07)	7.2 (36)	0 (0)	0 (0)	0	n/a
Cardiac therapy agents (C01)	7.2 (36)	9.8 (49)	5.8 (29)	80.6 (64.0,91.8)	59.2 (44.2,73.0)
Analgesics (N02)	7.2 (36)	4.6 (23)	3.0 (15)	41.7 (25.5,59.2)	65.3 (42.7,83.6)
Antigout agents (M04)	7.2 (36)	8.0 (40)	6.4 (32)	88.9 (73.9,96.9)	80.0 (64.4,91.0)
Corticosteroids for systematic use (H02)	5.6 (28)	4.4 (22)	3.8 (19)	67.9 (47.7,84.1)	86.3 (65.1,97.1)
Thyroid agents (H03)	4.2 (21)	7.8 (39)	3.4 (17)	81.0 (58.1,94.6)	43.6 (27.8,60.4)
Antiepileptics (N03)	3.6 (18)	4.0 (20)	3.0 (15)	83.3 (58.6,96.4)	75.0 (50.9,91.3)
Antihypertensives (C02)	3.2 (16)	3.0 (15)	2.4 (12)	75.0 (47.6,92.7)	80.0 (51.9,95.7)
Otologicals, anti-infectives (S02)	3.0 (15)	0 (0)	0 (0)	0	n/a
Antidiarrheals, intestinal anti-inflammatory/anti-infective agents (A07)	2.2 (11)	1.0 (5)	0.8 (4)	36.4 (10.9,69.2)	80.4 (28.4,99.5)
<b>30-day exposure period</b>					
Agents acting on the renin-angiotensin system (C09)	48.2 (241)	47.8 (239)	45.0 (225)	93.4 (89.4,96.2)	94.1 (90.4,96.8)
Lipid-modifying agents (C10)	44.6 (223)	45.0 (225)	42.8 (214)	96.0 (92.5,98.1)	95.1 (91.4,97.5)
Drugs for acid-related disorders (A02)	33.2 (166)	33.0 (165)	29.0 (145)	87.4 (81.3,92.0)	87.9 (81.9,92.4)
Calcium-channel blockers (C08)	21.0 (105)	19.6 (98)	18.6 (93)	88.6 (80.9,94.0)	94.9 (88.5,98.3)
Antibacterial agents for systematic use (J01)	18.6 (93)	1.8 (9)	1.4 (7)	7.5 (3.1,14.9)	77.8 (40.0,97.2)
Beta-blocking agents (C07)	18.0 (90)	20.4 (102)	16.4 (82)	91.1 (83.2,96.1)	80.4 (71.4,87.6)

Psychoanaleptic agents (N06)	15.8 (79)	15.2 (76)	13.4 (67)	84.8 (75.0,91.9)	88.2 (78.7,94.4)
Antithrombotic agents (B01)	14.0 (70)	11.8 (59)	11.0 (55)	78.6 (67.1,87.5)	93.2 (83.5,98.1)
Obstructive airway disease agents (R03)	12.2 (61)	5.2 (26)	3.8 (19)	31.2 (19.9,44.3)	73.1 (52.2,88.4)
Psycholeptics (N05)	11.0 (55)	5.8 (29)	3.4 (17)	30.9 (19.1,44.8)	58.6 (38.9,76.5)
Diabetes agents (A10)	9.4 (47)	10.6 (53)	8.2 (41)	87.2 (74.3,95.2)	77.4 (63.8,87.7)
Ophthalmologic agents (S01)	8.4 (42)	3.6 (18)	3.4 (17)	40.5 (25.6,56.7)	94.4 (72.7,99.9)
Diuretics (C03)	8.2 (41)	15.0 (75)	7.6 (38)	92.7 (80.1,98.5)	50.7 (38.9,62.4)
Bone disease agents (M05)	7.8 (39)	5.8 (29)	4.8 (24)	61.5 (44.6,76.6)	82.8 (64.2,94.2)
Anti-inflammatory and anti-rheumatic agents (M01)	7.8 (39)	6.8 (34)	4.8 (24)	61.5 (44.6,76.6)	70.6 (52.5,84.9)
Antigout agents (M04)	6.8 (34)	8.0 (40)	6.0 (30)	88.2 (72.6,96.7)	75.0 (58.8,87.3)
Sex hormones and modulators (G03)	6.6 (33)	6.0 (30)	3.4 (17)	51.5 (33.5,69.2)	56.7 (37.4,74.5)
Analgesics (N02)	6.6 (33)	4.6 (23)	3.0 (15)	45.5 (28.1,63.7)	65.3 (42.7,83.6)
Cardiac therapy agents (C01)	6.0 (30)	9.8 (49)	4.8 (24)	80.0 (61.4,92.3)	49.0 (34.4,63.7)
Corticosteroids for systematic use (H02)	4.8 (24)	4.4 (22)	3.2 (16)	66.7 (44.7,84.4)	72.7 (49.8,89.3)
Corticosteroids, dermatological agents (D07)	4.8 (24)	0 (0)	0 (0)	0	n/a
Thyroid agents (H03)	3.2 (16)	7.8 (39)	2.4 (12)	75.0 (47.6,92.7)	30.8 (17.0,47.6)
Antihypertensives (C02)	2.6 (13)	3.0 (15)	2.0 (10)	76.9 (46.2,95.0)	66.6 (38.4,88.2)
Antiepileptics (N03)	2.6 (13)	4.0 (20)	2.2 (11)	84.6 (54.6,98.1)	55.0 (31.5,76.9)
Antidiarrheals, intestinal anti-inflammatory/anti-infective agents (A07)	2.0 (10)	1.0 (5)	0.8 (4)	40.0 (12.2,73.8)	80.3 (28.4,99.5)

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\*table sorted by order of PBS pharmaceutical claims data frequency.

† correct =survey entry where there is a pharmaceutical claims record for the same medication.

Only medication classes with 10 or more entries identified using pharmaceutical claims data are presented.



**Supplementary Table 3.** Specificity value of 45 and Up Study self-reported data for prescription-only medications to 3-digit level ATC classification compared with pharmaceutical claims data (gold standard) considering 90-day exposure definition

<b>Therapeutic group (ATC class)*</b>	<b>Specificity (95%CI)</b>
Agents acting on the renin-angiotensin system (C09)	97.6 (94.8, 99.1)
Lipid-modifying agents (C10)	97.4 (94.7, 98.9)
Drugs for acid-related disorders (A02)	96.9 (94.3, 98.5)
Antibacterial agents for systematic use (J01)	99.4 (97.9, 99.9)
Calcium-channel blockers (C08)	99.2 (97.8, 99.8)
Beta-blocking agents (C07)	98.2 (96.4, 99.3)
Psychoanaleptic agents (N06)	98.8 (97.2, 99.6)
Antithrombotic agents (B01)	99.8 (98.7, 99.9)
Psycholeptics (N05)	97.7 (95.7, 98.9)
Obstructive airway disease agents (R03)	98.8 (97.3, 99.6)
Diuretics (C03)	96.5 (94.4, 98.1)
Anti-inflammatory and anti-rheumatic agents (M01)	98.9 (97.4, 99.6)
Diabetes agents (A10)	99.8 (98.8, 99.9)
Ophthalmologic agents (S01)	100
Bone disease agents (M05)	99.1 (97.8, 99.8)
Sex hormones and modulators (G03)	97.6 (95.7, 98.8)
Corticosteroids, dermatological agents (D07)	100
Cardiac therapy agents (C01)	96.5 (94.4, 97.9)
Antigout agents (M04)	98.9 (97.5, 99.7)
Analgesics (N02)	98.5 (96.9, 99.4)

Corticosteroids for systematic use (H02)	99.4 (98.1, 99.9)
Thyroid agents (H03)	96.6 (94.5, 98.1)
Otologicals, anti-infectives (S02)	100
Antiepileptics (N03)	98.9 (97.6, 99.7)
Antihypertensives (C02)	99.4 (98.2, 99.9)
Antidiarrheals, intestinal anti-inflammatory/anti-infective agents (A07)	99.8 (98.9, 99.9)

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\*table sorted by order of pharmaceutical claims data frequency.

† correct =survey entry where there is a pharmaceutical claims record for the same medication.

Only medication classes with 10 or more entries identified using pharmaceutical claims data are presented.