

# Supplementary Data (Tables and Figures)

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**Table S1. A list of drug codes**

<b>Drugs</b>	<b>Drug codes</b>
Acetazolamide	101501ATB
Alacepril	104201ATB, 104202ATB
Ambrisentan	564701ATB, 564702ATB
Amiloride	106901ATB
Amlodipine	495901ATB, 459802ACH, 483201ATB, 486501ATB, 107601ATB, 107601ATD, 459801ACH, 459801ATB, 459901ATB, 464601ATB, 470801ATB, 476201ATB, 479701ATB, 483202ATB, 486502ATB, 107602ATB, 107602ATD, 470802ATB
Amlodipine+Atorvastatin	614500ATB, 472300ATB, 472400ATB, 472500ATB, 518900ATB
Amlodipine+Losartan+Chlorthalidone	662800ATB, 662900ATB, 663000ATB
Amlodipine+Losartan+Rosuvastatin	663900ATB, 664000ATB, 664100ATB, 664200ATB, 664300ATB, 664400ATB
Amlodipine+Olmesartan+Rosuvastatin	677300ATB, 677400ATB, 677500ATB, 677600ATB
Amlodipine+Rosuvastatin	673900ATB, 674000ATB, 674100ATB
Amlodipine+Rosuvastatin+Telmisartan	671200ATB, 671300ATB, 671400ATB, 671500ATB, 677000ATB, 677100ATB, 671600ATB, 671700ATB
Amlodipine+Telmisartan+Hydrochlorothiazide	663500ATB, 663600ATB, 663700ATB, 663800ATB
Amosulalol	107901ATB, 107902ATB
Arotinolol	110202ATB, 110201ATB
Atenolol	483102ATB, 111402ATB, 483101ATB, 111403ATB
Atenolol+Chlorthalidone	262100ATB
Azilsartan	662401ATB, 662403ATB, 662402ATB
Azilsartan+Chlorthalidone	673500ATB, 673600ATB
Azosemide	112901ATB
Barnidipine	114003ACH, 114001ACH, 114002ACH
Benidipine	115101ATB, 115102ATB, 115104ATB, 115103ATB
Betaxolol	116801ATB, 116803ATB
Bevantolol	117002ATB, 117001ATB
Bisoprolol	117904ATB, 117903ATB, 117902ATB, 117901ATB
Bisoprolol+Hydrochlorothiazide	469800ATB, 470000ATB, 469900ATB
Bosentan	485201ATB, 485202ATB
Candesartan	122601ATB, 122602ATB, 122603ATB
Candesartan+Amlodipine	652900ATB, 653000ATB, 653100ATB
Candesartan+Hydrochlorothiazide	423700ATB
Candesartan+Rosuvastatin	661800ATB, 661900ATB, 673700ATB, 662000ATB, 662100ATB
Captopril	122901ATB, 122902ATB, 122903ATB
Captopril+Hydrochlorothiazide	262200ATB, 262300ATB
Carteolol	124801ATB

Carvedilol	125005ATB, 125003ATB, 662201ATB, 125008ACR, 125001ATB, 662202ATB, 125007ACR, 125002ATB, 125006ACR, 125004ACR
Celiprolol	129101ATB
Chlorthalidone	451302ATB, 451301ATB
Cilazapril	133001ATB, 133002ATB, 133003ATB
Cilnidipine	133102ATB, 133101ATB
Clonidine	136505ATR
Diltiazem	145706ATB, 145707ACR, 145707ATR, 145703ACR, 145706ATR, 145707ATB
Doxazocin	149101ATB, 149102ATB, 149104ATR, 149103ATB
Efonidipine	441202ATB, 441201ATB
Enalapril	151603ATB, 151601ATB
Enalapril+Hydrochlorothiazide	453700ATB, 440300ATB
Eprosartan	429201ATB
Eprosartan+Hydrochlorothiazide	460500ATB
Felodipine	157503ATR, 157501ATR
Felodipine+Metoprolol	262400ATR
Fimasartan	515203ATB, 515201ATB, 515202ATB
Fimasartan+Amlodipine	651900ATB, 652000ATB, 652700ATB, 652100ATB
Fimasartan+Hydrochlorothiazide	522000ATB, 526800ATB
Fimasartan+Rosuvastatin	655000ATB, 654900ATB, 654800ATB, 654700ATB, 654600ATB
Fosinopril	163501ATB, 163502ATB
Furosemide	163801ATB
Hydralazine	170701ATB
Hydrochlorothiazide	170801ATB
Hydrochlorothiazide+Spironolactone	262700ATB
Imidapril	173402ATB, 173401ATB
Indapamide	174401ATR, 174403ATB, 174402ATB
Irbesartan	177301ATB, 177303ATB
Irbesartan+Atorvastatin	524000ATB, 524100ATB, 527100ATB, 527000ATB
Irbesartan+Hydrochlorothiazide	385700ATB, 385800ATB, 553800ATB
Lacidipine	180301ATB, 180302ATB, 180303ATB
Lercanidipine	182001ATB, 182002ATB
Lisinopril	184501ATB
Lisinopril+Hydrochlorothiazide	499200ATB, 499300ATB
Losartan	185701ATB, 185702ATB
Losartan+Amlodipine	503000ATB, 637400ATB, 513900ATB, 637500ATB, 502700ATB, 637600ATB
Losartan+Hydrochlorothiazide	262500ATB, 486900ATB, 378900ATB
Macitentan	632201ATB

Manidipine	188001ATB, 188002ATB
Metolazone	367001ATB , 367002ATB
Metoprolol	194003ATR, 193802ATB
Metoprolol+Hydrochlorothiazide	262600ATB
Minoxidil	196102ATB
Nadolol	198301ATB
Nicardipine	201003ACR, 201002ATB
Nifedipine	201407ACS, 201405ATR, 528201ATR, 201409ATR, 528202ATR, 201401ACS, 201401ATB, 201408ATR
Nimodipine	201901ATB, 356202ATR, 356203ATR, 356201ATB, 356202ATB
Nisoldipine	356202ATR
Olmesartan	468502ATB, 468501ATB, 468503ATB, 520902ATB, 520901ATB
Olmesartan+Amlodipine	547800ATB, 632800ATB, 500500ATB, 547700ATB, 629500ATB, 631300ATB, 500600ATB, 547900ATB, 632900ATB, 547600ATB, 548000ATB, 582200ATB, 629600ATB, 633000ATB, 547500ATB, 582400ATB, 629400ATB
Olmesartan+Amlodipine+Hydrochlorothiazide	519800ATB, 519700ATB, 520100ATB, 520000ATB, 519900ATB
Olmesartan+Hydrochlorothiazide	513600ATB, 489100ATB
Olmesartan+Rosuvastatin	644200ATB, 644100ATB, 526900ATB, 526300ATB, 526400ATB, 653200ATB, 526500ATB
Perindopril	211301ATB, 501601ATB, 211302ATB, 501602ATB
Perindopril+Indapamide	556200ATB
Propranolol	219901ATB, 219904ATB, 219906ACR, 219905ACR
Quinapril	221901ATB
Ramipril	222401ATB, 222402ATB, 222404ATB
Ramipril+Felodipine	447100ATB, 447200ATB
Ramipril+Hydrochlorothiazide	448600ATB, 448700ATB
Spirolactone	231101ATB, 231102ATB
Telmisartan	378801ATB, 378802ATB, 378803ATB
Telmisartan+Amlodipine	521200ATB, 511600ATB, 521300ATB, 511700ATB, 521400ATB, 511500ATB, 644800ATB, 623100ATB
Telmisartan+Hydrochlorothiazide	443200ATB, 443300ATB, 502600ATB
Telmisartan+Rosuvastatin	631600ATB, 629900ATB, 630000ATB, 631700ATB, 630100ATB, 630200ATB
Temocapril	235002ATB
Terazosin	235501ATB, 235502ATB, 235503ATB, 616501ATB
Tolvaptan	616501ATB, 616502ATB
Torasemide	242002ATB, 242003ATB, 242001ATB

Valsartan	247103ATB, 651403ATB, 247101ATB, 651401ATB, 247102ATB, 651402ATB, 247104ATB
Valsartan+Amlodipine	522600ATB, 492900ATB, 522900ATB, 523200ATB, 522700ATB, 492800ATB, 522800ATB, 523000ATB, 523300ATB, 495800ATB, 523100ATB, 523400ATB
Valsartan+Hydrochlorothiazide	356400ATB, 442600ATB
Valsartan+Lercanidipine	522200ATB, 522300ATB, 522400ATB
Valsartan+Pitavastatin	635000ATB, 635200ATB, 634900ATB, 635100ATB
Valsartan+Rosuvastatin	629700ATB, 525000ATB, 525200ATB, 629800ATB, 525100ATB, 525300ATB
Verapamil	247606ATB, 247607ATB, 247603ATR, 247605ATR, 247601ACR
Xipamide	249401ATB
Zofenopril	510401ATB, 510402ATB, 510403ATB

**Table S2. A list of the total combination therapies in order of frequency based on 2015**

Combination Therapy	2015			2016			2017		
	n	(%)	Prescribed days	n	(%)	Prescribed days	n	(%)	Prescribed days
Overall	4,840,899	100.00	292.5	5,029,361	100.00	293.5	5,237,109	100.00	295.0
ARB+CCB	1,694,283	35.00	288.3	1,910,619	37.99	289.9	2,145,694	40.97	292.0
ARB+DU	934,638	19.31	290.7	930,591	18.50	291.8	914,994	17.47	295.0
ARB+CCB+DU	683,223	14.11	298.5	688,949	13.70	299.1	696,381	13.30	300.4
BB+CCB	227,483	4.70	307.4	215,137	4.28	308.2	205,974	3.93	308.0
ARB+BB+CCB	211,485	4.37	295.1	227,583	4.53	296	244,131	4.66	297.6
CCB+DU	193,824	4.00	299.1	176,653	3.51	300.2	161,927	3.09	300.3
ARB+BB+CCB+DU	158,409	3.27	294.9	160,049	3.18	295.3	163,356	3.12	296.0
ARB+BB+DU	132,253	2.73	293.5	131,054	2.61	293.7	129,954	2.48	294
ARB+BB	128,911	2.66	295.0	136,777	2.72	295.7	144,700	2.76	298.4
BB+DU	99,633	2.06	283.7	97,287	1.93	282.8	94,770	1.81	281.9
BB+CCB+DU	75,358	1.56	304.8	68,249	1.36	304.1	61,939	1.18	303.6
ACEI+CCB	49,498	1.02	309.4	44,249	0.88	311.9	39,329	0.75	314.6
ACEI+BB	36,234	0.75	302.3	35,864	0.71	304.3	35,598	0.68	306.8
ACEI+DU	23,488	0.49	284.0	21,709	0.43	283.1	19,759	0.38	284.9
CCB+OTHER	21,929	0.45	282.4	21,016	0.42	285.8	20,614	0.39	284.2
ACEI+BB+DU	19,601	0.40	281.7	19,884	0.40	283.2	20,204	0.39	283.4
ARB+CCB+OTHER	19,424	0.40	276.2	20,246	0.40	278.1	21,104	0.40	280.3
ARB+OTHER	15,405	0.32	274.4	15,730	0.31	276.7	15,782	0.30	278.0
ACEI+CCB+DU	15,291	0.32	304.0	13,127	0.26	305.4	11,357	0.22	308.0
ACEI+BB+CCB	13,346	0.28	311.8	12,342	0.25	311.9	11,666	0.22	312.7
ARB+CCB+DU+OTHER	10,647	0.22	275.1	10,381	0.21	276.6	10,001	0.19	280.0
ARB+DU+OTHER	9,907	0.20	274.1	9,525	0.19	273.7	8,889	0.17	276.7

ARB+BB+CCB+DU+OTHER	6,407	0.13	269.6	6,327	0.13	268.7	6,271	0.12	270.9
BB+OTHER	6,279	0.13	270.2	6,183	0.12	270.2	6,091	0.12	272.6
ACEI+BB+CCB+DU	6,181	0.13	300.7	5,655	0.11	296.2	5,160	0.10	298.8
ARB+BB+CCB+OTHER	6,099	0.13	262.1	6,227	0.12	264.6	6,418	0.12	266.7
BB+CCB+OTHER	4,517	0.09	281.2	4,214	0.08	282.4	4,012	0.08	282.5
DU+OTHER	4,214	0.09	235.3	4,111	0.08	235.9	4,126	0.08	236.5
CCB+DU+OTHER	3,879	0.08	276.6	3,556	0.07	280.5	3,322	0.06	278.1
ACEI+ARB+CCB	3,790	0.08	284.2	3,290	0.07	293.2	2,913	0.06	291.7
ARB+BB+OTHER	2,341	0.05	267.0	2,351	0.05	268.7	2,330	0.04	270.3
ACEI+ARB	2,327	0.05	290.2	2,078	0.04	290.8	1,788	0.03	300.6
ACEI+ARB+CCB+DU	2,262	0.05	285.2	1,913	0.04	286.8	1,678	0.03	290.0
ARB+BB+DU+OTHER	2,159	0.04	271.7	2,093	0.04	269.4	2,012	0.04	267.1
BB+CCB+DU+OTHER	1,878	0.04	272.1	1,706	0.03	269.5	1,659	0.03	268.9
BB+DU+OTHER	1,835	0.04	265.2	1,721	0.03	267.9	1,708	0.03	266.9
ACEI+ARB+BB+CCB	1,634	0.03	288.1	1,461	0.03	287.3	1,303	0.02	286.1
ACEI+ARB+DU	1,611	0.03	284.6	1,315	0.03	287.6	1,080	0.02	290.1
ACEI+OTHER	1,546	0.03	281.5	1,324	0.03	287.9	1,181	0.02	293.0
ACEI+ARB+BB+CCB+DU	1,432	0.03	281.2	1,275	0.03	279	1,136	0.02	281.8
ACEI+CCB+OTHER	1,379	0.03	288.1	1,173	0.02	288.8	986	0.02	293.2
ACEI+BB+OTHER	705	0.01	274.7	646	0.01	279.5	625	0.01	276.5
ACEI+ARB+BB+DU	579	0.01	281.3	523	0.01	274.7	438	0.01	265.3
ACEI+DU+OTHER	545	0.01	276.7	521	0.01	262.8	453	0.01	279.0
ACEI+BB+CCB+OTHER	518	0.01	283.8	466	0.01	291.4	406	0.01	285.7
ACEI+CCB+DU+OTHER	488	0.01	290.1	409	0.01	283.0	343	0.01	290.9
ACEI+ARB+BB	469	0.01	278.9	437	0.01	273.7	338	0.01	287.6
ACEI+BB+DU+OTHER	370	0.01	266.3	326	0.01	267.0	323	0.01	275.7
ACEI+BB+CCB+DU+OTHER	344	0.01	278.6	304	0.01	280.7	283	0.01	271.7

ACEI+ARB+BB+CCB+OTHER	229	0.00	256.4	200	0.00	252.3	174	0.00	266.4
ACEI+ARB+BB+CCB+DU+OTHE	215	0.00	261.0	199	0.00	259.4	161	0.00	286.1
R ACEI+ARB+CCB+OTHER	151	0.00	247.6	126	0.00	265.1	102	0.00	282.8
ACEI+ARB+CCB+DU+OTHER	120	0.00	256.1	112	0.00	258.2	89	0.00	283.1
ACEI+ARB+DU+OTHER	37	0.00	278.4	33	0.00	244.9	20	0.00	260.2
ACEI+ARB+OTHER	37	0.00	263.8	29	0.00	274.5	23	0.00	287.4
ACEI+ARB+BB+DU+OTHER	31	0.00	239.9	17	0.00	233.4	19	0.00	244.9
ACEI+ARB+BB+OTHER	21	0.00	243.6	19	0.00	276.6	15	0.00	262.0



**Table S3. Prescription trends of antihypertensive therapies stratified by sex and age in 2015 and 2016**

2015												
	Total			Monotherapy			Dual therapy			Three or more classes therapy		
	n	(%)	Prescribed days	n	(%)	Prescribed days	n	(%)	Prescribed days	n	(%)	Prescribed days
Overall	8,625,821	100.0	280.4	3,784,922	43.9	264.9	3,439,692	39.9	291.1	1,401,207	16.2	296.0
≤29	95,864	100.0	175.3	79,171	82.6	167.7	12,152	12.7	204.4	4,541	4.7	229.1
30-49	1,227,862	100.0	246.1	567,568	46.2	220.5	488,605	39.8	265.3	171,689	14	276.4
50-69	4,480,879	100.0	286.9	1,968,925	43.9	273.2	1,827,900	40.8	296.3	684,054	15.3	300.9
≥70	2,821,216	100.0	288.6	1,169,258	41.4	279.0	1,111,035	39.4	295.0	540,923	19.2	296.5
Male	4,266,354	100.0	277.0	1,750,060	41.0	259.7	1,759,456	41.2	287.2	756,838	17.7	293.3
≤29	54,079	100.0	188	41,065	75.9	180.9	9,360	17.3	202.8	3,654	6.8	230.6
30-49	785,970	100.0	250.8	317,219	40.4	225.8	339,730	43.2	264.3	129,021	16.4	276.8
50-69	2,370,741	100.0	284.6	950,271	40.1	269.0	1,007,906	42.5	293.6	412,564	17.4	298.9
≥70	1,055,564	100.0	283.9	441,505	41.8	271.4	402,460	38.1	292.6	211,599	20	293.4
Female	4,359,467	100.0	283.7	2,034,862	46.7	269.3	1,680,236	38.5	295.3	644,369	14.8	299.1
≤29	41,785	100.0	158.7	38,106	91.2	153.5	2,792	6.7	209.7	887	2.1	223.2
30-49	441,892	100.0	237.8	250,349	56.7	213.8	148,875	33.7	267.4	42,668	9.7	275.1
50-69	2,110,138	100.0	289.4	1,018,654	48.3	277.2	819,994	38.9	299.7	271,490	12.9	304.0
≥70	1,765,652	100.0	291.4	727,753	41.2	283.6	708,575	40.1	296.3	329,324	18.7	298.4
2016												
	Total			Monotherapy			Dual therapy			Three or more classes therapy		
	n	(%)	Prescribed days	n	(%)	Prescribed days	n	(%)	Prescribed days	n	(%)	Prescribed days

Overall	8,997,829	100. 0	281.6	3,968,468	44.1	266.7	3,619,328	40.2	292.2	1,410,033	15.7	296.5
≤29	114,410	100. 0	177.2	93,054	81.3	168.5	15,499	13.5	209.6	5,857	5.1	230.3
30-49	1,395,642	100. 0	250.5	635,413	45.5	225.9	570,298	40.9	268.5	189,931	13.6	278.3
50-69	4,734,568	100. 0	288.8	2,091,536	44.2	276.1	1,946,001	41.1	297.9	697,031	14.7	301.8
≥70	2,753,209	100. 0	289.4	1,148,465	41.7	280.0	1,087,530	39.5	295.8	517,214	18.8	296.7
Male	4,487,341	100. 0	278.5	1,845,806	41.1	262.1	1,875,649	41.8	288.4	765,886	17.1	293.9
≤29	65,032	100. 0	190.1	48,132	74.0	181.4	12,093	18.6	208.7	4,807	7.4	230.8
30-49	894,478	100. 0	254.9	355,362	39.7	231.4	396,611	44.3	267.4	142,505	15.9	278.7
50-69	2,503,388	100. 0	286.6	1,008,769	40.3	272.2	1,075,189	42.9	295.1	419,430	16.8	299.7
≥70	1,024,443	100. 0	284.9	433,543	42.3	272.8	391,756	38.2	293.6	199,144	19.4	294.0
Female	4,510,488	100. 0	284.7	2,122,662	47.1	270.6	1,743,679	38.7	296.4	644,147	14.3	299.6
≤29	49,378	100. 0	160.2	44,922	91.0	154.6	3,406	6.9. 0	212.8	1,050	2.1	227.7
30-49	501,164	100. 0	242.5	280,051	55.9	219.0	173,687	34.7	271.0	47,426	9.5	277.2
50-69	2,231,180	100. 0	291.3	1,082,767	48.5	279.7	870,812	39.0	301.3	277,601	12.4	305.1
≥70	1,728,766	100. 0	292.0	714,922	41.4	284.3	695,774	40.2	297.0	318,070	18.4	298.4

**Table S4. Distribution of age and use of antihypertensive medications in 2015-2017**

Year	Therapy	Overall		Age ≤ 29		Age 30-49		Age 50-69		Age ≥ 70	
		n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
2015	Overall	8,625,821	100.0	95,864	100.0	1,227,862	100.0	4,480,879	100.0	2,821,216	100.0
	ACEI	73,258	0.8	4,712	4.9	9,172	0.7	36,945	0.8	22,429	0.8
	ARB	1,357,496	15.7	9,925	10.4	229,722	18.7	785,016	17.5	332,833	11.8
	BB	581,052	6.7	52,061	54.3	157,985	12.9	253,232	5.7	117,774	4.2
	CCB	1,405,383	16.3	4,725	4.9	121,734	9.9	730,222	16.3	548,702	19.4
	DU	218,623	2.5	6,240	6.5	36,592	3.0	92,474	2.1	83,317	3.0
	OTHER	149,110	1.7	1,508	1.6	12,363	1.0	71,036	1.6	64,203	2.3
	ARB+BB	128,911	1.5	600	0.6	14,098	1.1	67,217	1.5	46,996	1.7
	ARB+CCB	1,694,283	19.6	6,301	6.6	305,899	24.9	931,308	20.8	450,775	16.0
	ARB+DU	934,638	10.8	1,818	1.9	121,668	9.9	516,059	11.5	295,093	10.5
	BB+CCB	227,483	2.6	597	0.6	20,330	1.7	117,504	2.6	89,052	3.2
	BB+DU	99,633	1.2	294	0.3	7,424	0.6	43,853	1.0	48,062	1.7
	CCB+DU	193,824	2.2	137	0.1	7,651	0.6	78,327	1.7	107,709	3.8
	ARB+BB+CCB	211,485	2.5	1,123	1.2	33,431	2.7	106,845	2.4	70,086	2.5
	ARB+BB+DU	132,253	1.5	310	0.3	12,700	1.0	60,156	1.3	59,087	2.1
	ARB+CCB+DU	683,223	7.9	1,555	1.6	89,802	7.3	347,448	7.8	244,418	8.7
	ARB+BB+CCB+DU	158,409	1.8	610	0.6	21,526	1.8	75,443	1.7	60,830	2.2
etc.	376,757	4.4	3,348	3.5	25,765	2.1	167,794	3.7	179,850	6.4	
2016	Overall	8,997,829	100.0	114,410	100.0	1,395,642	100.0	4,734,568	100.0	2,753,209	100.0
	ACEI	69,031	0.8	4,738	4.1	9,090	0.7	35,301	0.7	19,902	0.7
	ARB	1,491,687	16.6	11,980	10.5	268,990	19.3	869,559	18.4	341,158	12.4
	BB	614,326	6.8	62,335	54.5	171,608	12.3	264,603	5.6	115,780	4.2
	CCB	1,427,729	15.9	5,631	4.9	134,782	9.7	756,512	16.0	530,804	19.3

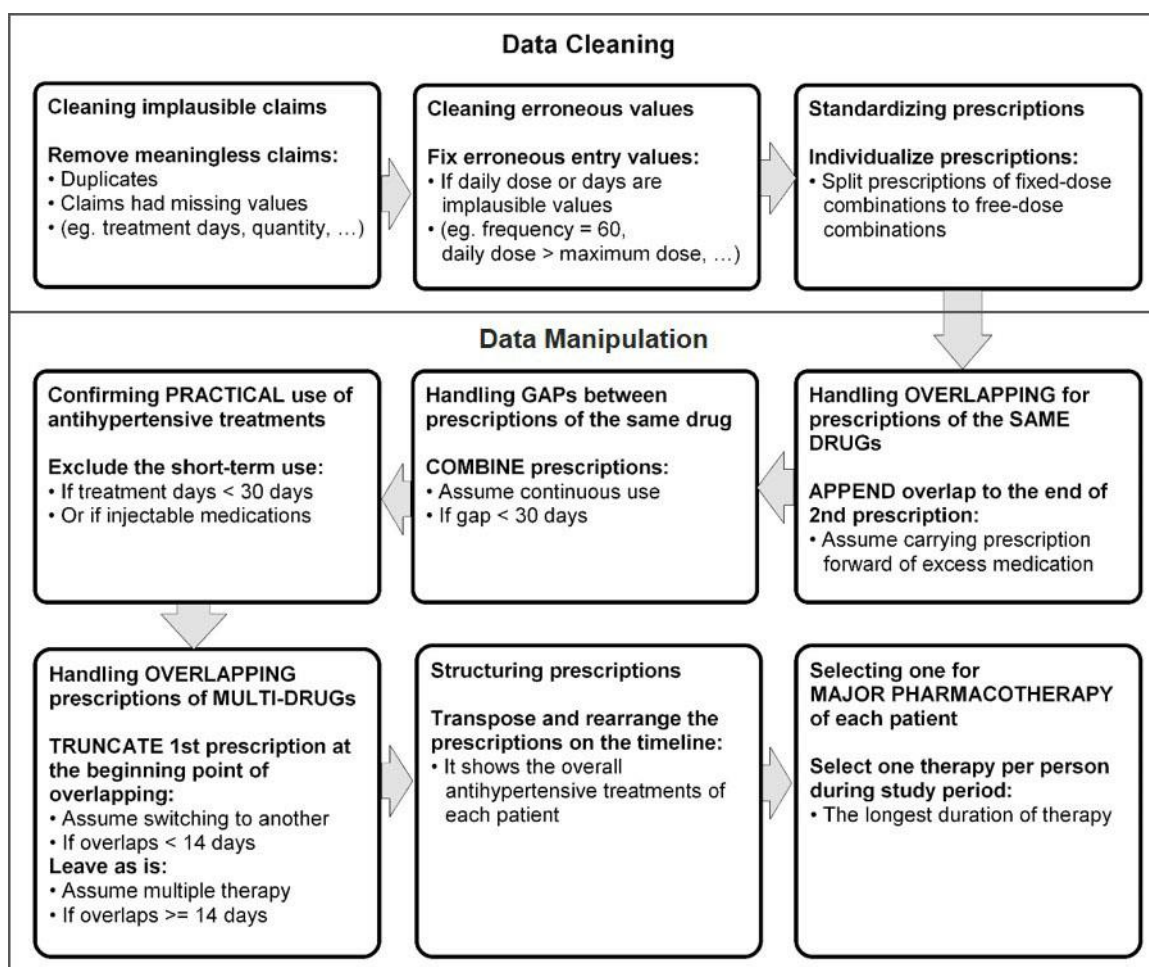
	DU	222,670	2.5	6,756	5.9	39,205	2.8	94,976	2.0	81,733	3.0
	OTHER	143,025	1.6	1,614	1.4	11,738	0.8	70,585	1.5	59,088	2.1
	ARB+BB	136,777	1.5	821	0.7	16,307	1.2	72,510	1.5	47,139	1.7
	ARB+CCB	1,910,619	21.2	8,849	7.7	375,484	26.9	1,054,968	22.3	471,318	17.1
	ARB+DU	930,591	10.3	2,154	1.9	130,739	9.4	518,539	11.0	279,159	10.1
	BB+CCB	215,137	2.4	701	0.6	20,541	1.5	112,545	2.4	81,350	3.0
	BB+DU	97,287	1.1	349	0.3	7,762	0.6	42,971	0.9	46,205	1.7
	CCB+DU	176,653	2.0	154	0.1	7,498	0.5	72,683	1.5	96,318	3.5
	ARB+BB+CCB	227,583	2.5	1,452	1.3	38,622	2.8	116,107	2.5	71,402	2.6
	ARB+BB+DU	131,054	1.5	383	0.3	13,267	1.0	60,217	1.3	57,187	2.1
	ARB+CCB+DU	688,949	7.7	2,147	1.9	99,760	7.1	352,975	7.5	234,067	8.5
	ARB+BB+CCB+DU	160,049	1.8	819	0.7	23,569	1.7	76,790	1.6	58,871	2.1
	etc.	354,662	3.9	3,527	3.1	26,680	1.9	162,727	3.4	161,728	5.9
<b>2017</b>	Overall	9,357,751	100.0	132,678	100.0	1,565,263	100.0	4,975,873	100.0	2,683,937	100.0
	ACEI	65,056	0.7	4,807	3.6	9,110	0.6	33,551	0.7	17,588	0.7
	ARB	1,601,524	17.1	13,925	10.5	304,798	19.5	939,761	18.9	343,040	12.8
	BB	648,223	6.9	73,068	55.1	186,212	11.9	275,002	5.5	113,941	4.2
	CCB	1,448,204	15.5	6,476	4.9	146,212	9.3	781,774	15.7	513,742	19.1
	DU	220,759	2.4	6,536	4.9	39,027	2.5	94,150	1.9	81,046	3.0
	OTHER	136,876	1.5	1,501	1.1	11,541	0.7	70,175	1.4	53,659	2.0
	ARB+BB	144,700	1.5	962	0.7	18,524	1.2	78,148	1.6	47,066	1.8
	ARB+CCB	2,145,694	22.9	11,705	8.8	454,259	29.0	1,188,600	23.9	491,130	18.3
	ARB+DU	914,994	9.8	2,333	1.8	136,394	8.7	514,726	10.3	261,541	9.7
	BB+CCB	205,974	2.2	841	0.6	20,903	1.3	108,637	2.2	75,593	2.8
	BB+DU	94,770	1.0	417	0.3	8,049	0.5	42,090	0.8	44,214	1.6
	CCB+DU	161,927	1.7	163	0.1	7,294	0.5	67,957	1.4	86,513	3.2

ARB+BB+CCB	244,131	2.6	1,850	1.4	44,601	2.8	125,314	2.5	72,366	2.7
ARB+BB+DU	129,954	1.4	430	0.3	13,789	0.9	60,543	1.2	55,192	2.1
ARB+CCB+DU	696,381	7.4	2,796	2.1	111,198	7.1	358,572	7.2	223,815	8.3
ARB+BB+CCB+DU	163,356	1.7	1,073	0.8	26,164	1.7	78,555	1.6	57,564	2.1
etc.	335,228	3.6	3,795	2.9	27,188	1.7	158,318	3.2	145,927	5.4

**Table S5. Drug class proportion of pattern change compared to the previous year (2016 vs 2015)**

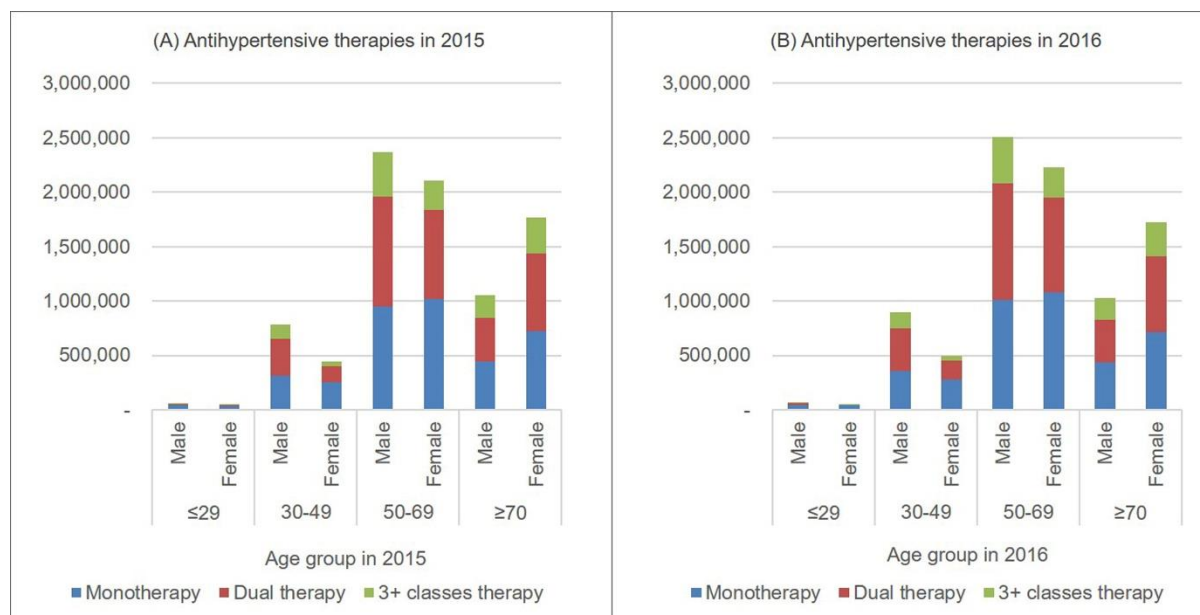
year	Therapy	Consistent		Add-on		Switch		Drop-off		Quit	
		n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
2016 vs 2015	Overall	6,614,379		499,733		394,144		440,894		676,671	
	ACEI	53,560	0.8	3,200	0.6	9,705	2.5			6,793	1.0
	ARB	1,072,078	16.2	151,726	30.4	41,043	10.4			92,649	13.7
	BB	386,529	5.8	23,936	4.8	28,110	7.1			142,477	21.1
	CCB	1,122,063	17.0	111,773	22.4	68,967	17.5			102,580	15.2
	DU	116,132	1.8	13,491	2.7	12,408	3.1			76,592	11.3
	OTHER	92,722	1.4	4,537	0.9	7,330	1.9			44,521	6.6
	ARB+BB	91,900	1.4	11,223	2.2	8,154	2.1	11,907	2.7	5,727	0.8
	ARB+CCB	1,402,566	21.2	82,432	16.5	41,699	10.6	95,942	21.8	71,644	10.6
	ARB+DU	721,457	10.9	35,491	7.1	67,601	17.2	68,343	15.5	41,746	6.2
	BB+CCB	176,148	2.7	9,822	2.0	17,482	4.4	15,299	3.5	8,732	1.3
	BB+DU	70,738	1.1	3,977	0.8	8,222	2.1	7,609	1.7	9,087	1.3
	CCB+DU	143,226	2.2	8,885	1.8	15,912	4.0	14,453	3.3	11,348	1.7
	ARB+BB+CCB	158,611	2.4	9,768	2.0	7,934	2.0	27,607	6.3	7,565	1.1
	ARB+BB+DU	94,448	1.4	4,340	0.9	9,936	2.5	17,309	3.9	6,220	0.9
	ARB+CCB+DU	535,357	8.1	12,642	2.5	12,566	3.2	100,168	22.7	22,490	3.3
	ARB+BB+CCB+DU	118,164	1.8	995	0.2	992	0.3	32,364	7.3	5,894	0.9
etc.	258,680	3.9	11,495	2.3	36,083	9.2	49,893	11.3	20,606	3.0	

**Figure S1. Development Algorithm to analyze the claims data**



Data cleaning involved procedures of handling the missing, erroneous, or duplicated values, and standardizing the format of raw data to fit our study design. Data manipulation included procedures such as confirming the study database and establishing and applying definitions of drug use. These processes are used to increase transparency and improve the repeatability and reproducibility of published results.

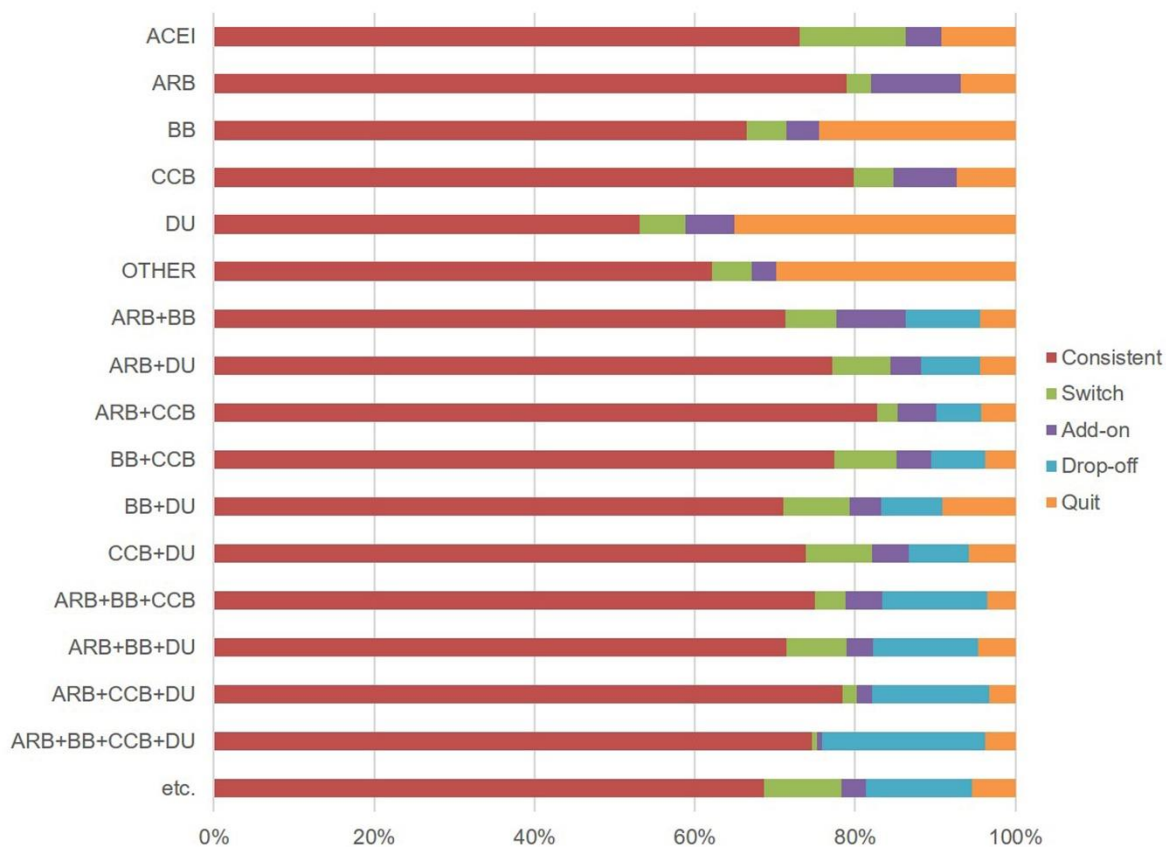
**Figure S2. Prescription trends of antihypertensive therapies stratified by sex and age in 2015 and 2016**



After stratification by sex and age, patients prescribed antihypertensive medications in 2015 (A) and 2016 (B) were shown. The similar prescription trends of antihypertensive medications according to sex and age were shown during the study period. In contrast with participants <70 years, women >70 years were more likely to receive antihypertensive medications than men >70 years.



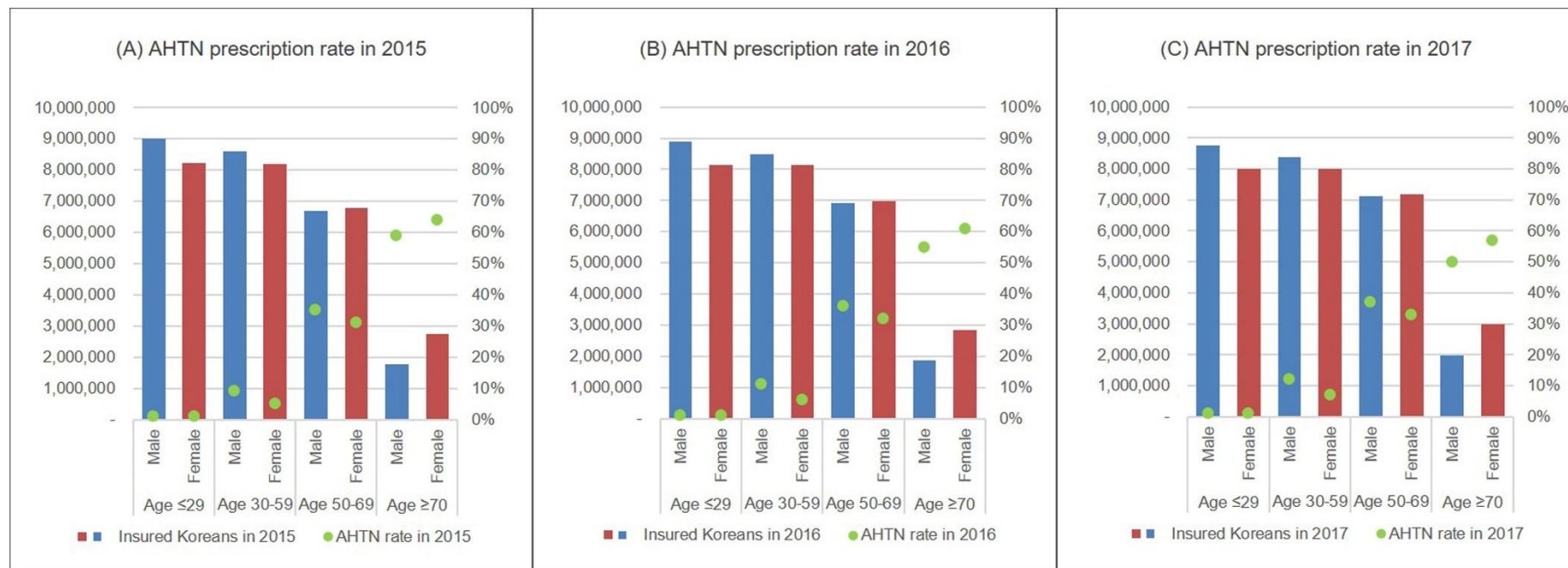
**Figure S3. Changes in the pattern of anti-hypertensive drugs presented by 100% stacked row graphs compared to the previous year in 2016 vs 2015**



Abbreviation: ACEI, angiotensin-converting enzyme inhibitors; ARB, angiotensin II receptor blockers; BB, beta blockers; CCB, calcium channel blockers; DU, diuretics; OTHER, alpha-blockers or vasodilators

While changes arose in the patterns of antihypertensive medication use during the study period, they were similar from year to year. The treatment change in each patient was tracked and analyzed from year to year. Five categorized groups were identified as follows: (1) Consistent, continued the same therapy; (2) Switch, changed one or both medications to different classes; (3) Add-on, added one or more other drug classes to the existing therapy; (4) Drop-off, dropped at least one class from the existing therapy; and (5) Quit, dropped all classes from the existing therapy, and retained no use of antihypertensive medications the following year. Thus, with monotherapy, drop-off and quit were the same.

**Figure S4. Prescription rates of antihypertensive medications stratified by year, age and sex compared to total insured Koreans using data from KOSIS**



Abbreviation: KOSIS, Korean Statistical Information Service; AHTN, antihypertensive medication;

Bar = Total insured Korean population referenced by KOSIS; Circle = prescription rate of Antihypertensive medications

The prescription rate of antihypertensive medications among the entire insured Korean population, stratified by age groups, was estimated to evaluate the prescription magnitude of the drugs. The prescription rate was calculated as the number of patients with antihypertensives divided by the total number of insured people per age stratification. In 2015, subjects aged ≥70 showed the highest prescription rate of antihypertensives compared with those <70 years (A). This finding was in line with the trend observed in 2016 (B) and 2017 (C). However, a decreasing trend presented from 2015 to 2017.