ONLINE APPENDIX

"Private provision of social insurance: drug-specific price elasticities and cost sharing in Medicare Part D"

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Classifying drugs to drug types and therapeutic classes

The claim data contain NDC11 codes, which are National Drug Codes assigned to each pharmaceutical substance by the US Food and Drug Administration. NDC11 codes identify very fine differences across drugs, including strength, dosage, package size, labeler, and pharmaceutical producer.

We define a "drug" by its chemical compound (what the FDA refers to as "non-proprietary names") and whether it is branded or generic. We use publicly available data from the FDA (NDC Database File and Drugs@FDA Database, available at www.fda.gov/Drugs/InformationOnDrugs), to determine the main chemical that a given NDC11 code corresponds to ("non-proprietary name"), and whether a given NDC11 code stands for a branded or a generic medication. The "non-proprietary names" with a branded or generic indicator is what we refer to as a unique "drug" throughout the paper.

To define therapeutic classes, we link the NDC11 codes to the therapeutic class information from the American Hospital Formulary Service's (AHFS) pharmacologic-therapeutic classification of the American Society of Health-System Pharmacists. We use AHFS 8-level classification that consists of a total of 256 therapeutic classes.

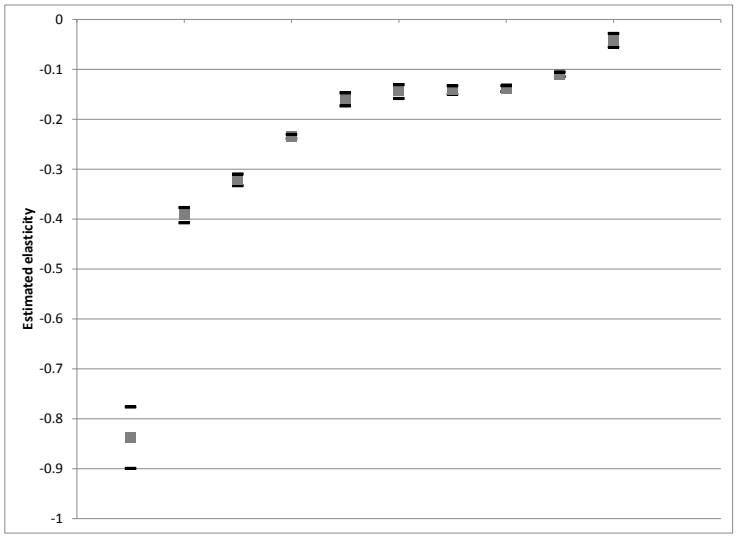
We also use create several groupings of drugs and therapeutic classes. Following Einav et al. (2015), we define chronic vs. acute drugs empirically. Specifically, a drug is classified as "chronic" if, conditional on filling a claim for a particular drug, the median beneficiary in our data fills more than two claims within the year in our data; otherwise it is acute.

We classify drugs as "maintenance" vs. "non-maintenance" using the classification of First Databank, a drug classification company; it, roughly speaking, is another way to measure drugs prescribed for chronic conditions. We classify therapeutic classes as being "maintenance" versus not based on the "maintenance" status of each drug (at the NDC11

code level) within a therapeutic class. Specifically, we compute the fraction of drugs within each therapeutic class that are "maintenance" and assign therapeutic classes to be "maintenance" if more than half of the drugs (at the NDC11 level) in the class are classified as maintenance. The 50 percent cutoff is not consequential in practice; since therapeutic classes roughly capture drugs that are used to treat the same or related conditions, the "maintenance" classification translates cleanly to therapeutic classes - in most cases all NDC11 codes within a therapeutic class are either "maintenance" or not. Since the definition of being a chronic drug is empirical and is based less on conditions and more on the frequency of claiming, this classification does not apply to therapeutic classes; whether drugs are classified as chronic or not tends to vary within a therapeutic class.

Figure A1: Confidence intervals for elasticity estimates

(a) Top ten common therapeutic classes



(b) Top ten common drugs

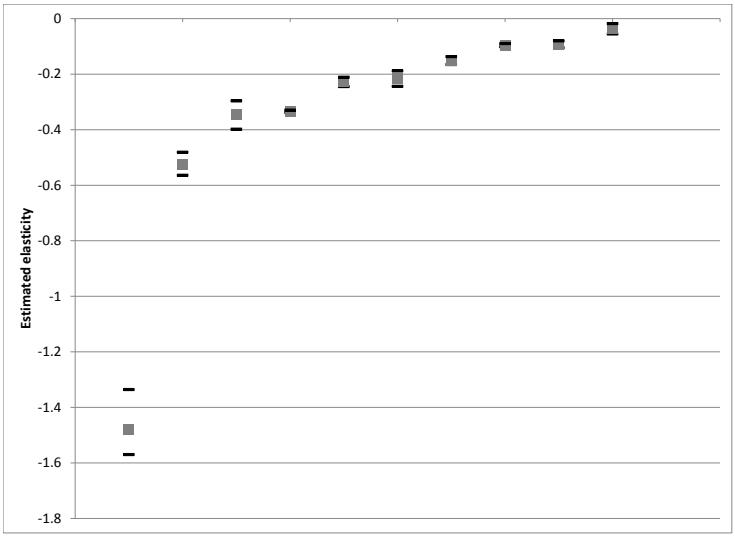
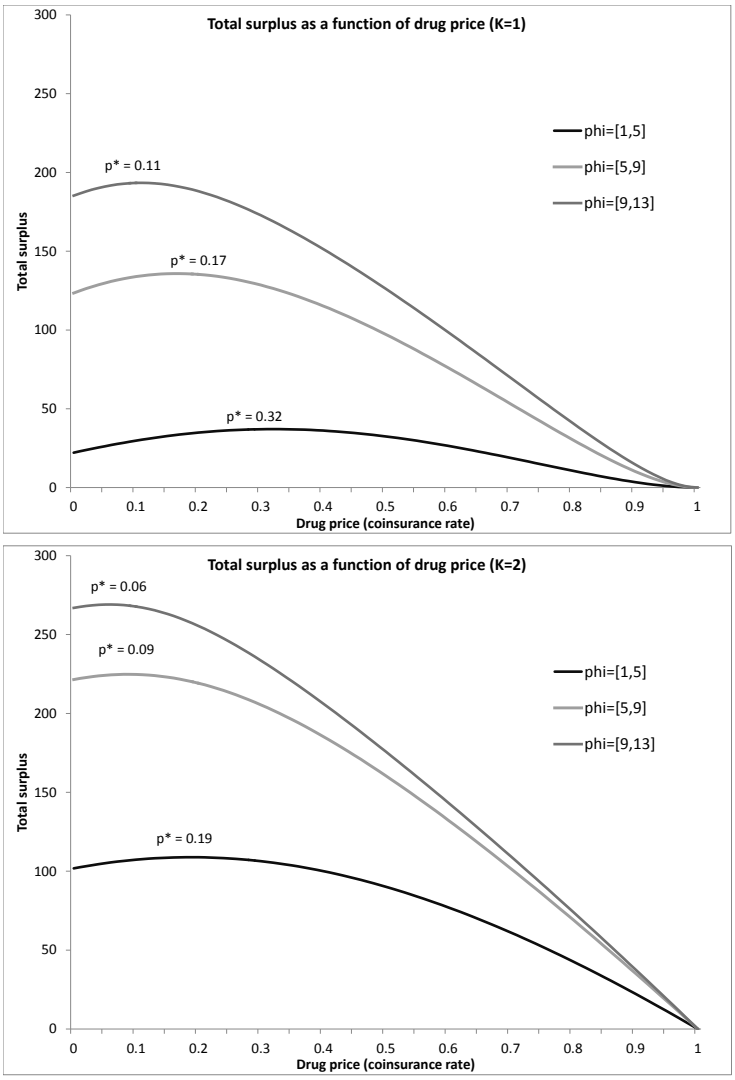


Figure reports point estimates of the elasticities and the associated 95% confidence intervals for the ten most frequently claimed therapeutic classes (top panel) and the ten most frequently claimed drugs (bottom panel). The confidence intervals are based on 100 bootstrap draws as described in Section 3.2.

Figure A2: Graphic Representation of the Social Planner's Problem



The graphs plot the willingness to pay for insurance as a function of drug price for the model described in Section 5. The top panel plots the willingness to pay for the moral hazard parameter $K = 1$, while the bottom panel for $K = 2$. The maxima points mark the social planner's solutions for different distributions of risk aversion.

Table A1: Cost-Sharing in Public Insurance across OECD Countries

	Copayments								Sources*
Country	Use of copayment	Vary by condition	Vary by type of drug	Vary by socio-economic state	Fixed or percentage	Maximum out –of-pocket limit (MOPL)	Cap	Deductible	
Australia	Yes	No	No	Yes	Fixed	Fixed, dependent on type of patient	No	No	[9,34–37]
Austria	Yes	No	No	No	Fixed	2% of annual income	No	No	[10,38–40]
Belgium	Yes	Yes	No	Yes	Percentage	Dependent on type of patient	No	No	[41–45]
Canada	Varies by plan	No	No	Varies by plan	Varies by plan	Varies by plan	Varies by plan	Varies by plan	[7,46–51]
Czech Republic	Yes	Yes	No	Yes	Fixed	Set at 200€; for children under 18 and adults over 65, set at 100€	No	No	[52,53]
Denmark	Yes	Yes	No	No	Both	Set at 406€ for chronically ill patients	No	Yes	[54,55]
England	Yes	Yes	No	Yes	Fixed	No	No	No	[45,56–59]
Estonia	Yes	Yes	No	Yes	Both	No	No	No	[60,61]
Finland	Yes	Yes	No	No	Percentage	Set at 672€; subsequent costs are reimbursed in full after a fixed 1.50€ copayment	No	No	[62–64]
France	Yes	No	No	No	Both	No	No	No	[45,65–67]
Germany	Yes	No	No	No	Both	Set at 2% of net income; 1% of net income for chronically ill patients	No	No	[45,68–72]
Greece	Yes	Yes	Yes	Yes	Percentage	No	No	No	[73,74]
Hungary	Yes	Yes	No	Yes	Percentage	No	No	No	[75,76]
Iceland	Yes	No	Yes	No	Percentage	No	No	No	[77]
Ireland**	Yes	No	No	No	Fixed	19.50€ per month per family	No	No	[78–83]
Israel	Varies by plan	Varies by plan	Varies by plan	Varies by plan	Varies by plan	Varies by plan	No	No	[84,85]
Italy	Yes	Yes	No	Yes	Fixed	No	No	No	[45,86–88]
Japan	Yes	No	No	Yes	Percentage	Set at 80,000 yen monthly	No	No	[89–93]
Luxembourg	Yes	Yes	No	No	Percentage	2.5% of net income	No	No	[94,95]
Mexico[+]	No					No	No	No	[96,97]
Netherlands	Yes	No	No	No	Difference between reference price and retail	No	No	Yes	[45,98]
New Zealand	Yes	Yes	No	Yes	Fixed	No	No	No	[35,99–101]
Norway	Yes	Yes	No	Yes	Both	Set at 216€ and 63€ per prescription	No	No	[102]
Poland	Yes	Yes	No	No	Both	No	No	No	[103–105]
Portugal	Yes	No	Yes	No	Percentage	No	No	No	[106,107]
Scotland	No						No	No	[57]
Slovakia	Yes	No	Yes	No	Both	No	No	No	[108,109]
Slovenia	Yes	Yes	No	Yes	Percentage	No	No	No	[105,110]
South Korea	Yes	Yes	No	Yes	Percentage	Set at 2, 3 or 4 million KRW depending on health insurance plan	No	No	[93,111–116]
Spain	Yes	Yes	No	Yes	Percentage	No	No	No	[45,117,118]
Sweden	Yes	No	Yes	No	Percentage	No	No	Yes	[22,119–123]
Switzerland	Yes	No	No	No	Percentage	Set at 700 CHF for adults and 350 CHF for children	Yes	Yes	[124,125]
Turkey	Yes	Yes	No	Yes	Percentage	No	No	No	[96,105,126]
US[++]	Varies	No	No	No		Copayment reduces to 5% after limit	Varies by plan. Step therapy, prior authorization and cost tiers	[127]	

* in addition to system experts and agency websites.
** General Medical Services Scheme.
[+]Seguro Popular plan.
[++]Medicare.
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Table is a reproduction of Table 1 in Barnieh et al. (2014).

Table A2: Out-of-pocket costs, co-insurance, and formulary tiers

Dependent Variable:	Mean OOP price ($US)			Mean total price ($US)			Mean co-insurance rate		
Weighting:	Unweighted	Weighted by enrollment	Weighted by claims	Unweighted	Weighted by enrollment	Weighted by claims	Unweighted	Weighted by enrollment	Weighted by claims
	(1)	(2)	(3)	(4)	(5)	(6)	(4)	(5)	(6)
No. of Obs.	26,317	26,317	26,317	26,317	26,317	26,317	26,317	26,317	26,317
Mean od Dep. Var.	58.1	75.5	16.9	180.4	233.9	53.7	0.338	0.350	0.297
Std. Dev. Of Dep. Var.	79.2	83.9	19.5	259.4	281.1	54.9	0.172	0.141	0.121
Panel A. High tier indicator:									
High co-insurance (Tier 3)	45.2	45.3	47.3	79.9	59.7	76.6	0.206	0.225	0.216
	(4.9)	(7.9)	(5.0)	(19.3)	(23.0)	(13.6)	(0.025)	(0.023)	(0.037)
Plan Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.605	0.751	0.392	0.582	0.768	0.158	0.437	0.639	0.740
Panel B. Individual tier indicators:									
Tier 1					--- omitted ---				
Tier 2	30.5	33.2	33.3	105.9	116.0	113.8	0.031	-0.004	0.000
	(3.6)	(4.0)	(2.1)	(11.4)	(15.2)	(4.8)	(0.023)	(0.016)	(0.012)
Tier 3	60.3	61.9	56.6	132.5	117.6	108.2	0.221	0.224	0.216
	(4.7)	(5.7)	(3.4)	(18.2)	(14.3)	(5.6)	(0.028)	(0.025)	(0.037)
Tier 4	151.9	179.8	92.4	496.2	612.8	220.8	0.083	0.004	0.214
	(12.0)	(10.4)	(8.8)	(46.0)	(34.6)	(41.7)	(0.029)	(0.018)	(0.064)
Tier 5	200.2	217.0	71.5	650.0	717.4	189.5	0.095	-0.012	0.340
	(22.9)	(19.4)	(36.8)	(89.5)	(67.1)	(136.0)	(0.063)	(0.024)	(0.151)
Tier 6	306.9	335.4	262.1	1,065.4	1,095.7	827.8	-0.025	-0.027	0.005
	(20.1)	(24.9)	(25.8)	(85.7)	(89.1)	(74.6)	(0.089)	(0.057)	(0.053)
Plan Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.626	0.770	0.888	0.605	0.789	0.890	0.442	0.639	0.740

Table reports the relationship between average total cost, average out-of-pocket costs, and co-insurance rate across different tiers of part D plans. Panel A estimates the difference in the outcome variable by whether a drug is located in tiers 1-2 versus higher tiers. Panel B estimates the difference for each tier separately. In columns (1)-(3) the outcome variable is out-of-pocket drug cost, for any (not only common) drug. In Columns (4)-(6) the outcome variable is total cost. In columns (7)-(9) the outcome variable is the co-insurance; the co-insurance was computed at the individual claim level and then averaged within a plan-tier, which is the unit of observation. Plan enrollment weights (in columns (2), (5), and (8)) are computed using enrollees that make at least one claim for which out of pocket cost, total drug cost and co-insurance can be computed. The total cost, the out of pocket cost and the co-insurance were computed using only claims that fall above the deductible and below in the donut hole. Standard errors are clusterred at the insurer-tier level.

Table A3: Simulation results of the conceptual model

	Social Planner		Monopoly				Duopoly (Lowest equilibrium[a])				
	Coins.	TS	Premium	Coins.	Profits	TS	Kappa	Premium	Coins.	Profits	TS
Panel A: K=1											
phi in (1,5)	0.32	37.1	0.234	0.31	18.7	28.1	0.10	0.161	0.27	0.5	36.7
							0.40	0.195	0.27	11.2	35.4
							0.49	0.228	0.28	17.7	31.2
phi in (5,9)	0.17	135.8	0.378	0.22	92.7	129.6	0.10	0.249	0.12	8.3	134.9
							0.40	0.296	0.23	59.1	134.0
							0.49	0.356	0.23	88.3	134.2
phi in (9,13)	0.11	193.4	0.569	0.13	171.0	193.1	0.10	0.280	0.09	15.8	193.2
							0.40	0.470	0.09	110.8	193.2
							0.49	0.576	0.08	161.0	192.9
Panel B: K=1.5											
phi in (1,5)	0.24	89.1	0.367	0.25	46.3	66.2	0.10	0.233	0.16	3.9	87.7
							0.40	0.282	0.20	29.7	84.8
							0.49	0.354	0.19	43.7	74.7
phi in (5,9)	0.11	206.6	0.558	0.15	164.3	206.0	0.10	0.272	0.13	16.8	206.5
							0.40	0.467	0.13	114.3	206.5
							0.49	0.584	0.10	162.0	202.6
phi in (9,13)	0.07	255.7	0.732	0.09	237.7	255.6	0.10	0.399	0.04	59.3	255.0
							0.40	0.597	0.04	158.3	255.0
							0.49	0.730	0.06	229.6	255.6
Panel C: K=2											
phi in (1,5)	0.19	108.9	0.423	0.20	57.8	82.2	0.10	0.284	0.08	9.5	106.5
							0.40	0.355	0.14	45.1	100.7
							0.49	0.408	0.14	55.0	91.5
phi in (5,9)	0.09	224.8	0.615	0.13	185.5	224.0	0.10	0.304	0.08	19.5	224.8
							0.40	0.529	0.08	132.0	224.8
							0.49	0.646	0.08	180.6	215.0
phi in (9,13)	0.06	269.0	0.771	0.08	253.0	268.7	0.10	0.343	0.02	26.0	268.1
							0.40	0.625	0.03	169.2	268.6
							0.49	0.781	0.02	245.0	268.1

Table reports equilibrium results from the model described in Section 5.

[a] In the duopoly case, in all cases considered, there exists an equilibrium in which both firms set the corresponding monopolist's premium and coinsurance rate.

Table A4: Estimated Elasticities for All "Common" Therapeutic Classes

Therapeutic class name (1)	AHFS code (2)	Claim share (3)	Spend share (4)	%ΔQ (5)	%ΔOOP (6)	Elasticity (7)
All common therapeutic classes	-	0.860	0.847	-10.2	233.4	-0.04
HMG-CoA Reductase Inhibitors^	24060800	0.077	0.097	-31.9	136.1	-0.23
beta-Adrenergic Blocking Agents^	24240000	0.067	0.028	-17.4	125.5	-0.14
Angiotensin-Converting Enzyme Inhibitors^	24320400	0.047	0.013	-13.9	87.8	-0.16
Thiazide Diuretics^	40282000	0.045	0.027	-27.1	84.2	-0.32
Thyroid Agents^	68360400	0.038	0.008	-17.9	21.4	-0.84
Dihydropyridines^	24280800	0.031	0.016	-19.4	138.1	-0.14
Proton-pump Inhibitors^	56283600	0.030	0.047	-26.7	243.0	-0.11
Selective Serotonin-reuptake Inhibitors^	28160420	0.023	0.015	-15.9	111.5	-0.14
Angiotensin II Receptor Antagonists^	24320800	0.022	0.034	-29.2	74.8	-0.39
Opiate Agonists	28080800	0.022	0.009	-5.5	132.0	-0.04
Loop Diuretics^	40280800	0.022	0.002	-11.0	47.5	-0.23
Coumarin Derivatives^	20120408	0.019	0.006	-20.3	59.1	-0.34
Biguanides^	68200400	0.016	0.006	-8.8	133.8	-0.07
Bone Resorption Inhibitors^	92240000	0.016	0.017	-41.0	114.8	-0.36
Platelet-Aggregation Inhibitors^	20121800	0.016	0.049	4.1	221.2	0.02
Replacement Preparations^	40120000	0.015	0.005	-14.1	146.8	-0.10
Sulfonylureas^	68202000	0.013	0.004	-0.2	110.0	0.00
Anxiolytics, Sedatives, and Hypnotics; Miscellaneous	28249200	0.013	0.008	-12.0	150.9	-0.08
Other Nonsteroidal Anti-inflammatory Agents^	28080492	0.012	0.005	-19.9	136.4	-0.15
Selective beta-2-Adrenergic Agonists^	12120812	0.011	0.028	-15.0	211.0	-0.07
Anticonvulsants, Miscellaneous^	28129200	0.011	0.013	-8.7	209.0	-0.04
Calcium-Channel Blocking Agents, Miscellaneous^	24289200	0.010	0.007	-15.9	270.3	-0.06
Adrenals	68040000	0.009	0.006	-7.4	150.9	-0.05
Parasympathomimetic (Cholinergic) Agents^	12040000	0.009	0.029	11.6	313.1	0.04
Antilipemic Agents^	24060000	0.009	0.020	-38.8	133.7	-0.29
Antidepressants, Miscellaneous^	28160492	0.008	0.013	-14.6	210.9	-0.07
Analgesics and Antipyretics, Miscellaneous	28089200	0.008	0.002	-5.2	138.4	-0.04
Antimuscarinics^	86120400	0.008	0.015	-28.2	161.3	-0.17
Central Nervous System Agents, Miscellaneous^	28920000	0.008	0.018	2.9	272.9	0.01
Other Miscellaneous Therapeutic Agents	92920000	0.008	0.014	-29.9	200.7	-0.15
Insulins^	68200800	0.008	0.020	-3.8	177.8	-0.02
Prostaglandin Analogs^	52402800	0.008	0.011	-35.4	69.1	-0.51
Anti-inflammatory Agents	84060000	0.007	0.003	-20.6	170.2	-0.12
Quinolones	8121800	0.007	0.004	-4.4	102.3	-0.04
Fibric Acid Derivatives^	24060600	0.007	0.011	-21.7	153.2	-0.14
Cardiotonic Agents^	24040800	0.007	0.001	-13.2	29.1	-0.45
Antigout Agents^	92160000	0.006	0.001	-17.4	43.9	-0.40
Nitrates and Nitrites^	24120800	0.006	0.002	-4.3	113.4	-0.04
Antineoplastic Agents	10000000	0.006	0.037	1.6	432.7	0.00
Hypotensive Agents^	24080000	0.006	0.009	-31.5	225.4	-0.14
alpha-Adrenergic Blocking Agents^	24200000	0.006	0.001	-16.5	83.9	-0.20
Tricyclics and Other Norepinephrine-reuptake Inhibitors^	28160428	0.005	0.001	-15.8	71.0	-0.22
Estrogens^	68160400	0.005	0.006	-21.9	42.9	-0.51
Antimuscarinics/Antispasmodics	12080800	0.005	0.012	-7.9	258.3	-0.03
Histamine H2-Antagonists^	56281200	0.005	0.001	-17.1	74.1	-0.23
Mineralocorticoid (Aldosterone) Receptor Antagonists^	24322000	0.004	0.001	-14.0	83.7	-0.17
5-alpha-Reductase Inhibitors^	92080000	0.004	0.007	-28.0	174.5	-0.16
beta-Adrenergic Blocking Agents^	52400800	0.004	0.004	-36.5	140.1	-0.26
Aminopenicillins	8121608	0.004	0.001	-2.2	151.0	-0.01

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Therapeutic class name (1)	AHFS code (2)	Claim share (3)	Spend share (4)	%ΔQ (5)	%ΔOOP (6)	Elasticity (7)
---------- Table continues from previous page ----------						
Atypical Antipsychotics^	28160804	0.004	0.013	1.4	292.7	0.00
Thiazolidinediones^	68202800	0.004	0.016	14.7	303.6	0.05
Skeletal Muscle Relaxants	12200000	0.004	0.001	-9.1	91.8	-0.10
Central alpha-Agonists^	24081600	0.004	0.002	-12.7	124.3	-0.10
Cyclooxygenase-2 (COX-2) Inhibitors^	28080408	0.004	0.010	-35.3	124.8	-0.28
Corticosteroids^	52080800	0.004	0.002	-27.8	196.5	-0.14
Calcium-Channel Blocking Agents^	24280000	0.004	0.002	-17.5	175.7	-0.10
Leukotriene Modifiers^	48102400	0.004	0.009	-19.5	152.9	-0.13
First Generation Cephalosporins	8120604	0.003	0.001	-1.7	62.6	-0.03
Antibacterials	52040400	0.003	0.003	-11.7	71.7	-0.16
Anti-inflammatory Agents	52080000	0.003	0.004	-25.5	104.4	-0.24
Estrogen Agonists-Antagonists^	68161200	0.003	0.008	-56.1	151.7	-0.37
Sulfonamides	8122000	0.003	0.001	-3.2	70.1	-0.05
Serotonin Modulators^	28160424	0.003	0.000	-7.5	46.1	-0.16
Nonergot-derivative Dopamine Receptor Agonists^	28362008	0.003	0.005	-10.9	282.0	-0.04
Urinary Anti-infectives	8360000	0.003	0.002	-6.4	174.0	-0.04
Cathartics and Laxatives	56120000	0.003	0.001	-22.8	142.9	-0.16
Tetracyclines	8122400	0.003	0.001	-6.5	125.1	-0.05
Class III Antiarrhythmics^	24040420	0.003	0.003	-10.2	177.4	-0.06
Antiulcer Agents and Acid Suppressants, Miscellaneous	56289200	0.003	0.002	-17.5	195.1	-0.09
EENT Drugs, Miscellaneous^	52920000	0.002	0.004	-28.6	93.5	-0.31
Thiazide-like Diuretics^	40282400	0.002	0.001	-18.6	93.4	-0.20
Antilipemic Agents, Miscellaneous^	24069200	0.002	0.006	-21.7	146.9	-0.15
Antifungals	84040800	0.002	0.001	-10.9	190.4	-0.06
Dipeptidyl Peptidase-4 (DPP-4) Inhibitors^	68200500	0.002	0.007	19.9	191.8	0.10
Antibacterials	84040400	0.002	0.001	-20.7	141.5	-0.15
Direct Vasodilators^	24082000	0.002	0.001	-12.3	236.5	-0.05
Antiemetics	56220000	0.002	0.000	-20.3	140.4	-0.14
Nucleosides and Nucleotides^	8183200	0.002	0.003	-9.8	303.8	-0.03
Skin and Mucous Membrane Agents, Miscellaneous	84920000	0.001	0.004	-40.5	183.8	-0.22
Lincomycins	8122820	0.001	0.000	-8.0	144.9	-0.05
Antiallergic Agents	52020000	0.001	0.002	-36.0	102.0	-0.35
Azoles	8140800	0.001	0.001	0.1	153.9	0.00
Nonsteroidal Anti-inflammatory Agents^	28080400	0.001	0.004	15.3	198.6	0.08
Antimalarials^	8300800	0.001	0.001	-12.6	144.6	-0.09
Nonsteroidal Anti-inflammatory Agents	52082000	0.001	0.001	-19.6	60.8	-0.32
Hydantoins^	28121200	0.001	0.001	-8.7	99.0	-0.09
Class Ic Antiarrhythmics^	24040412	0.001	0.001	-27.6	342.1	-0.08
Antidiarrhea Agents^	56080000	0.001	0.000	-10.0	71.9	-0.14
Antipruritics and Local Anesthetics	84080000	0.001	0.003	-26.7	311.1	-0.09
Prokinetic Agents	56320000	0.001	0.000	-10.2	57.6	-0.18
Carbonic Anhydrase Inhibitors^	52401200	0.001	0.001	-38.6	80.6	-0.48
Vaccines	80120000	0.001	0.002	-40.1	161.9	-0.25
Protectants^	56283200	0.001	0.001	-10.9	114.5	-0.10
Penicillins	8121600	0.001	0.000	-17.9	64.9	-0.28
Barbiturates^	28120400	0.001	0.000	-12.7	285.5	-0.04
Selective alpha-1-Adrenergic Blocking Agents^	12160412	0.001	0.001	-36.6	70.2	-0.52
Vitamin D^	88160000	0.001	0.000	-13.0	286.9	-0.05
Azoles	84040808	0.001	0.000	-17.3	182.9	-0.09
Macrolides	8121200	0.001	0.000	0.3	261.1	0.00
Disease-modifying Antirheumatic Drugs^	92360000	0.001	0.008	-17.4	184.8	-0.09
Anti-inflammatory Agents, Miscellaneous^	52089200	0.001	0.002	-42.1	202.6	-0.21
Respiratory Smooth Muscle Relaxants^	86160000	0.001	0.000	-1.0	96.3	-0.01
Phenothiazines^	28160824	0.001	0.000	-2.4	114.7	-0.02
Second Generation Cephalosporins	8120608	0.001	0.000	-0.1	209.9	0.00
Bile Acid Sequestrants^	24060400	0.001	0.001	-17.6	384.7	-0.05
Renin Inhibitors^	24324000	0.001	0.001	-19.2	78.0	-0.25
Anticoagulants	20120400	0.001	0.004	-6.6	258.1	-0.03
Antiprotozoals, Miscellaneous	8309200	0.000	0.000	-6.0	94.4	-0.06

^ Classes that are classified as predominantly maintenance classes.

Table A5: Estimated Elasticities for All "Common" Drugs

Drug name (1)	Brand/Generic (2)	Claim share (3)	Spend share (4)	%ΔQ (5)	%ΔOOP (6)	Elasticity (7)
All common drugs	-	0.654	0.543	-11.7	247.4	-0.05
Simvastatin^	generic	0.034	0.011	-10.8	116.4	-0.09
Lisinopril^	generic	0.028	0.005	-12.4	57.8	-0.21
Atorvastatincalcium^*	brand	0.022	0.055	-48.3	145.1	-0.33
Levothyroxinesodium^~	brand	0.021	0.006	-21.5	14.5	-1.48
Levothyroxinesodium^~	generic	0.018	0.003	-13.6	39.4	-0.35
Amlodipinebesylate^*	generic	0.018	0.006	-17.5	115.9	-0.15
Omeprazole^*	generic	0.017	0.010	-24.2	254.3	-0.10
Warfarinsodium^	generic	0.017	0.004	-18.9	83.1	-0.23
Hydrocodonebitartrateandac	generic	0.017	0.003	-3.8	102.2	-0.04
Hydrochlorothiazide^*	generic	0.016	0.002	-20.4	38.9	-0.52
Atenolol^~	generic	0.016	0.002	-20.0	33.4	-0.60
Clopidogrelbisulfate^*	brand	0.015	0.047	5.1	234.7	0.02
Metforminhydrochloride^~	generic	0.014	0.003	-9.4	111.3	-0.08
Metoprololtartrate^	generic	0.014	0.001	-15.8	33.4	-0.47
Furosemide^*	brand	0.014	0.001	-11.3	29.4	-0.38
Metoprololsuccinate^	brand	0.012	0.009	-22.8	161.9	-0.14
Diltiazemhydrochloride^~*	generic	0.009	0.006	-15.4	297.0	-0.05
Potassiumchloride^*	generic	0.009	0.003	-13.3	156.7	-0.08
Alendronatesodium^	generic	0.009	0.003	-19.4	137.3	-0.14
Valsartan^~	brand	0.008	0.015	-32.7	95.3	-0.34
Amlodipinebesylate^~*	brand	0.008	0.004	-22.2	71.5	-0.31
Rosuvastatincalcium^	brand	0.007	0.019	-45.0	146.9	-0.31
Zolpidemtartrate	generic	0.007	0.002	-10.7	99.0	-0.11
Pravastatinsodium^	generic	0.007	0.003	-12.2	169.4	-0.07
Carvedilol^	generic	0.007	0.002	-11.2	155.8	-0.07
Triamtereneandhydrochlorot^~*	generic	0.007	0.001	-19.2	43.9	-0.44
Lisinoprilandhydrochloroth^~	generic	0.007	0.002	-7.8	90.6	-0.09
Prednisone	generic	0.007	0.001	-1.2	35.5	-0.03
Esomeprazolemagnesium^	brand	0.006	0.023	-32.2	275.1	-0.12
Donepezilhydrochloride^~	brand	0.006	0.020	19.9	317.1	0.06
Potassiumchloride^~*	brand	0.006	0.002	-15.6	97.4	-0.16
Metoprololsuccinate^	generic	0.006	0.004	-15.6	291.3	-0.05
Furosemide^*	generic	0.006	0.001	-11.2	58.7	-0.19
Citalopramhydrobromide^	generic	0.006	0.001	-4.9	77.4	-0.06
Lovastatin^~	generic	0.005	0.002	-4.6	176.3	-0.03
Escitalopramoxalate^	brand	0.005	0.009	-28.7	119.6	-0.24
Digoxin^*	generic	0.005	0.001	-10.9	37.2	-0.29
Ezetimibe^~	brand	0.005	0.012	-34.4	128.9	-0.27
Valsartanandhydrochlorothi^	brand	0.005	0.011	-44.0	119.0	-0.37
Tramadolhydrochloride	generic	0.005	0.001	-9.8	89.3	-0.11
Allopurinol^~*	generic	0.005	0.001	-17.6	30.4	-0.58
Tamsulosinhydrochloride^	brand	0.005	0.010	-36.2	166.6	-0.22
Glipizide^~*	generic	0.005	0.001	1.7	110.0	0.02
Memantinehydrochloride^	brand	0.005	0.014	18.2	271.6	0.07
Fluticasonepropionateandsa^	brand	0.005	0.018	-20.2	358.2	-0.06
Enalaprilmaleate^~	generic	0.005	0.001	-14.0	72.4	-0.19
Gabapentin^*	generic	0.005	0.002	-9.7	262.7	-0.04
Azithromycin*	generic	0.004	0.001	1.8	163.7	0.01
Amoxicillin	generic	0.004	0.000	-8.2	24.4	-0.34
Pioglitazonehydrochloride^~*	brand	0.004	0.015	15.1	321.5	0.05
Isosorbidemononitrate^*	generic	0.004	0.001	-1.1	103.6	-0.01
Meloxicam^	generic	0.004	0.001	-18.5	57.3	-0.32
Celecoxib^*	brand	0.004	0.010	-35.3	123.9	-0.28
Glimepiride^	generic	0.004	0.001	2.9	88.6	0.03
Fluticasonepropionate	generic	0.004	0.002	-27.2	283.1	-0.10

---------- Table continues in the next page ----------

Drug name (1)	Brand/Generic (2)	Claim share (3)	Spend share (4)	%ΔQ (5)	%ΔOOP (6)	Elasticity (7)
---------- Table continues from previous page ----------						
Paroxetinehydrochloride^	generic	0.004	0.001	-16.4	181.7	-0.09
Spironolactone^~*	generic	0.003	0.001	-13.6	81.7	-0.17
Oxycodonehydrochlorideanda	generic	0.003	0.001	-5.1	264.2	-0.02
Ramipril^	generic	0.003	0.002	-19.8	201.0	-0.10
Montelukastsodium^*	brand	0.003	0.008	-19.6	163.8	-0.12
Albuterolsulfate^	brand	0.003	0.002	-10.2	23.6	-0.43
Tiotropiumbromide^	brand	0.003	0.012	-5.8	297.2	-0.02
Insulinglargine^	brand	0.003	0.009	-3.4	207.3	-0.02
Amitriptylinehydrochloride^	generic	0.003	0.000	-14.9	31.1	-0.48
Cephalexin*	generic	0.003	0.000	-0.9	56.6	-0.02
Clonidinehydrochloride^	generic	0.003	0.000	-14.2	53.6	-0.26
Losartanpotassium^~	brand	0.003	0.005	-32.4	51.1	-0.63
Pantoprazolesodium^	brand	0.003	0.007	-32.5	197.3	-0.16
Ranitidinehydrochloride^	generic	0.003	0.001	-18.3	70.9	-0.26
Trazodonehydrochloride^*	generic	0.003	0.000	-6.9	40.3	-0.17
Sertralinehydrochloride^*	brand	0.003	0.001	-10.0	81.2	-0.12
Amlodipinebesylateandbenaz^	brand	0.003	0.005	-37.2	210.6	-0.18
Alendronatesodium^~	brand	0.003	0.005	-58.3	56.2	-1.04
Sertralinehydrochloride^*	generic	0.003	0.001	-17.9	124.6	-0.14
Tamsulosinhydrochloride^	generic	0.003	0.002	-14.1	152.9	-0.09
Benazeprilhydrochloride^~	generic	0.003	0.001	-2.6	81.6	-0.03
Sulfamethoxazoleandtrimeth	generic	0.003	0.000	-3.1	42.2	-0.07
Fluoxetinehydrochloride^	generic	0.003	0.001	-12.5	117.7	-0.11
Finasteride^	generic	0.002	0.003	-19.7	390.8	-0.05
Amlodipinebesylateandbenaz^~	generic	0.002	0.004	-26.2	343.6	-0.08
Losartanpotassium^~	generic	0.002	0.001	10.9	132.2	0.08
Irbesartan^~	brand	0.002	0.004	-29.8	60.6	-0.49
Mirtazapine^	generic	0.002	0.001	-3.7	134.7	-0.03
Cyclobenzaprinehydrochlori	generic	0.002	0.000	-5.6	50.1	-0.11
Glyburide^~*	generic	0.002	0.001	-3.7	141.1	-0.03
Warfarinsodium^	brand	0.002	0.002	-28.8	22.3	-1.29
Quetiapinefumarate^	brand	0.002	0.006	0.4	272.6	0.00
Azithromycin*	brand	0.002	0.001	-3.6	127.5	-0.03
Polyethyleneglycol3350	generic	0.002	0.001	-26.0	226.0	-0.12
Losartanpotassiumandhydroc^~	brand	0.002	0.003	-38.6	65.3	-0.59
Pregabalin^	brand	0.002	0.005	-10.2	163.2	-0.06
Naproxen^	generic	0.002	0.000	-14.4	67.6	-0.21
Venlafaxinehydrochloride^	brand	0.002	0.004	-22.8	210.5	-0.11
Gabapentin^~*	brand	0.002	0.001	-15.6	221.8	-0.07
Triamtereneandhydrochlorot^~*	brand	0.002	0.000	-21.5	33.0	-0.65
Sitagliptin^~	brand	0.001	0.006	25.3	192.6	0.13
Duloxetinehydrochloride^	brand	0.001	0.004	-20.6	211.6	-0.10
Digoxin^~*	brand	0.001	0.000	-21.9	5.7	-3.84
Famotidine^	generic	0.001	0.000	-14.1	77.8	-0.18
Ramipril^~	brand	0.001	0.002	-27.0	57.0	-0.47
Pantoprazolesodium^	generic	0.001	0.002	-23.9	311.2	-0.08
Glipizide^~*	brand	0.001	0.001	-11.0	150.6	-0.07
Zolpidemtartrate	brand	0.001	0.003	-26.6	174.7	-0.15
Ciprofloxacinhydrochloride	generic	0.001	0.000	-12.5	49.4	-0.25
Promethazinehydrochloride	generic	0.001	0.000	-5.9	84.9	-0.07
Losartanpotassiumandhydroc^~	generic	0.001	0.001	-2.8	151.3	-0.02
---------- Table continues in the next page ----------						

Drug name (1)	Brand/Generic (2)	Claim share (3)	Spend share (4)	%ΔQ (5)	%ΔOOP (6)	Elasticity (7)
---------- Table continues from previous page ----------						
Allopurinol^~*	brand	0.001	0.000	-15.1	21.7	-0.70
Venlafaxinehydrochloride^	generic	0.001	0.002	-18.9	397.8	-0.05
Fentanyl	generic	0.001	0.002	-8.5	450.1	-0.02
Hydrochlorothiazide^~*	brand	0.001	0.000	-23.5	46.9	-0.50
Carvedilol^	brand	0.001	0.002	-19.4	124.9	-0.16
Glyburide^~*	brand	0.001	0.000	-0.3	96.9	0.00
Ibuprofen^	generic	0.001	0.000	-9.4	48.5	-0.19
Diltiazemhydrochloride^~	brand	0.001	0.001	-20.7	207.5	-0.10
Fluticasonepropionate^	brand	0.001	0.002	-34.9	214.4	-0.16
Oxycodonehydrochloride	generic	0.001	0.000	1.6	236.8	0.01
Olanzapine^~*	brand	0.001	0.003	20.0	416.0	0.05
Risperidone^~	brand	0.001	0.001	1.3	333.0	0.00
Carisoprodol	generic	0.001	0.000	-4.8	66.6	-0.07
Risperidone^	generic	0.001	0.001	-0.2	526.5	0.00
Levetiracetam^	generic	0.000	0.001	3.5	587.8	0.01
Divalproexsodium^	generic	0.000	0.000	2.7	362.9	0.01
Oxycodonehydrochloride	brand	0.000	0.002	23.7	338.7	0.07
Lansoprazole^	brand	0.000	0.002	-54.8	178.6	-0.31
Morphinesulfate	generic	0.000	0.000	-12.5	400.5	-0.03
Spironolactone^~*	brand	0.000	0.000	-15.1	82.3	-0.18
Lamotrigine^	generic	0.000	0.000	-1.3	449.4	0.00
Divalproexsodium^~	brand	0.000	0.001	-8.3	186.3	-0.04
Lansoprazole^	generic	0.000	0.001	-36.3	215.3	-0.17
Levetiracetam^~	brand	0.000	0.001	22.4	371.2	0.06
Albuterolsulfate^	generic	0.000	0.000	-18.7	164.6	-0.11
Glimepiride^~	brand	0.000	0.000	-13.8	71.0	-0.19
Metforminhydrochloride^~	brand	0.000	0.000	1.6	82.6	0.02
Lamotrigine^	brand	0.000	0.001	17.3	350.8	0.05
Isosorbidemononitrate^~*	brand	0.000	0.000	2.1	165.4	0.01
Ciprofloxacinhydrochloride	brand	0.000	0.000	2.1	89.5	0.02
Morphinesulfate	brand	0.000	0.000	4.9	364.6	0.01
Simvastatin^	brand	0.000	0.000	-30.8	69.6	-0.44
Pravastatinsodium^~	brand	0.000	0.000	-25.0	69.4	-0.36
Atenolol^~	brand	0.000	0.000	-36.4	23.0	-1.58
Lovastatin^~	brand	0.000	0.000	-37.8	153.5	-0.25
Metoprololtartrate^~	brand	0.000	0.000	-18.1	40.0	-0.45
Mirtazapine^~	brand	0.000	0.000	0.6	135.4	0.00
Fentanyl	brand	0.000	0.000	-19.1	301.4	-0.06
Enalaprilmaleate^~	brand	0.000	0.000	-48.8	89.4	-0.55
Fluoxetinehydrochloride^~	brand	0.000	0.000	19.4	141.9	0.14
Lisinopril^~	brand	0.000	0.000	-45.8	11.0	-4.15
Finasteride^~	brand	0.000	0.000	-11.9	40.7	-0.29
Meloxicam^	brand	0.000	0.000	-13.1	101.8	-0.13
Tramadolhydrochloride	brand	0.000	0.000	-5.2	74.4	-0.07
Benazeprilhydrochloride^~	brand	0.000	0.000	-36.9	12.7	-2.90
Citalopramhydrobromide^~	brand	0.000	0.000	-53.0	61.3	-0.86
Paroxetinehydrochloride^~	brand	0.000	0.000	-53.5	106.8	-0.50
Carisoprodol	brand	0.000	0.000	-49.1	139.4	-0.35
Clonidinehydrochloride^~	brand	0.000	0.000	-10.3	60.7	-0.17
Famotidine^	brand	0.000	0.000	26.3	95.4	0.28
Ranitidinehydrochloride^	brand	0.000	0.000	45.3	131.7	0.34
Naproxen^	brand	0.000	0.000	-62.1	43.9	-1.42
Cyclobenzaprinehydrochlori	brand	0.000	0.000	-28.2	185.5	-0.15
Sulfamethoxazoleandtrimeth	brand	0.000	0.000	59.5	24.0	2.47

^ Maintenance drug.

~ Chronic drug.

* Drugs that are in the "Lower Substitution" subsample.