A Online-Only Appendix

A.1 Alternative Outcomes and Specifications

In Table A.3, I investigate whether an announcement response can be observed for alternative outcome measures – number of prescriptions conditional on use, total expenditures, and out-of-pocket expenditures. Again, I estimate the model in Equation 2. I also estimate a probit model for the probability that an individual purchases any prescriptions during the year. The announcement and implementation have no effect on the probability of any drug use as the estimates are approximately zero with small confidence intervals. This is not surprising given the nearly universal use of drugs among the elderly. However, these results may mask important changes in the initiation or discontinuation of individual drug products. Given that there is no utilization effect along the extensive margin, the estimates for prescriptions conditional on use are very similar to the unconditional estimates.

As would be predicted, the expenditure estimates in Columns 7 through 10 have the opposite pattern of the utilization results. Any decline in expenditures relative to trend resulting from the anticipatory utilization dip *reinforces* the predicted negative implementation effect of Part D on expenditures. Thus, unlike with utilization, failing to include the announcement effect biases the implementation effect *downwards* in absolute value. Focusing on log expenditure results, which account for the skewness in the expenditure distribution, we can see that including the announcement effect increases the absolute size of the implementation effect slightly from -0.010 to -0.014 percent. The announcement effect represents a 0.3 percent decline which is statistically insignificant.[35] Out-of-pocket expenditures are likely to be more responsive than total expenditures since individuals who intertemporally substitute aim to reduce out-of-pocket costs. The announcement effect is much larger in this case, but is still statistically insignificant. After controlling for the announcement effect, the implementation effect changes from -12.9 to -15.6 percent.

Finally, in Table A.4, I estimate alternative specifications that control more flexibly for time trends. The estimates are mostly robust across specifications. First, I include a quadratic time trend. The coefficient on the linear term drops to -0.17 and its standard error increases sharply, suggesting a collinear relationship with the quadratic term. Given that 6 years of data provides too limited a range to estimate a quadratic trend precisely,

[35] Some of the loss in precision may reflect measurement error for expenditures, which may be less accurately reported relative to the count of purchases.

the quadratic term is dropped in subsequent models. Second, I allow for a slope shift in the linear trend after the announcement in Column 2. I add the variable "Years Since Announce" to Equation 2, which is defined as the year minus 2003 (during the announcement period), so that it takes on a value of 1 in 2004 and a 2 in 2005, and zero otherwise. Allowing for a slope shift produces an estimate of the announcement effect in 2004 (the linear combination of the coefficients of Announce + Years Since Announce) that is nearly identical to the estimate from only a level shift. Third, I estimate the trend non-parametrically by including a full set of year dummies. One advantage of this specification is that a structural break is not imposed in any particular year. Still, the model identifies a trend break in 2003. The results in the bottom panel comparing the one-year change in utilization from 2003 to 2004 relative to the change from 2002 to 2003 indicate a statistically significant decline of 2.32 prescriptions after the announcement. Furthermore, there is no statistically significant difference in the change from 2002 to 2003 relative to the change from 2004 to 2005. This result provides further support for using a linear specification to approximate the time trend. In Table A.5, I also test whether the aggregate results are robust to estimating a negative binomial model which accounts for the count nature of the prescription data and its overdispersion. The negative binomial and OLS results are similar in magnitude and significance.

A.2 Marginal Effects for Negative Binomial

Figure A.4 plots the marginal effects and z-statistics for the interaction of the announcement and chronic indicators for each person in the sample as a function of their predicted prescription count. Characteristics that predict higher drug use are associated with a larger negative chronic announcement effect (within the chronic and acute observations).[36] Computing marginal effects for interaction terms in non-linear models requires explicit calculation of the cross-partial or (in this case) "double-difference" of the conditional expectation function, rather than the single-difference as is appropriate for non-interacted variables (Ai and Norton, 2003). The main interaction term of interest in this study is the difference between chronic and acute drugs in the change in utilization before and after the announcement. This effect is expressed in conditional expectations notation as

[36] Acute and chronic observations have different, non-overlapping ranges of values for predicted prescriptions. The announcement interaction effect becomes more negative at the high end of each range. This may partially reflect measurement error of the classification method in the median classification rule.

Ω_i in Equation 4 below.

$$\begin{aligned}\Omega_i = &\{E[Y_{itg}|T_{ig}=1, ANNOUNCE_t=1, X_{it}] - E[Y_{itg}|T_{ig}=1, ANNOUNCE_t=0, X_{it}]\} \\ &- \{E[Y_{itg}|T_{ig}=0, ANNOUNCE_t=1, X_{it}] - E[Y_{itg}|T_{ig}=0, ANNOUNCE_t=0, X_{it}]\}\end{aligned} \tag{4}$$

I compute the average marginal effect (weighted by population sampling weights) for the interaction term analytically as follows in equation 5 and apply the Delta method to estimate standard errors.[37] The individual marginal effects and z-statistics in the figure are computed in an analogous way.

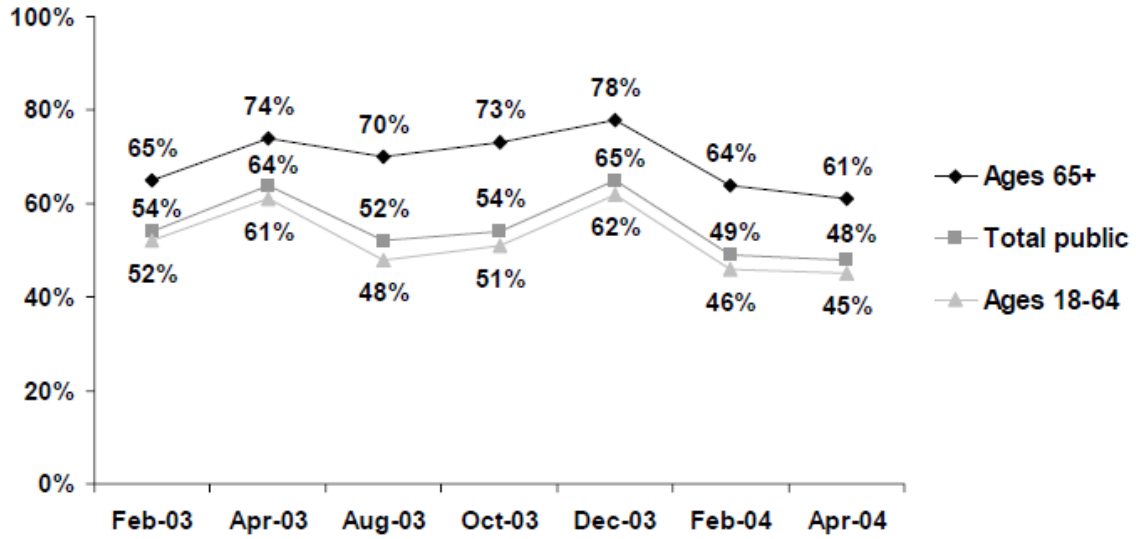
$$AME = \frac{\Delta E[Y_{itg}|X_{it}]}{\Delta T_{ig} \Delta ANNOUNCE_t} = \frac{1}{\sum_{n=1}^{N} \omega_i} \sum_{n=1}^{N} \omega_i \{\Omega_i\} \tag{5}$$

The average announcement and implementation marginal effects for chronic and acute drugs are very similar to the OLS results. The change in chronic drug utilization relative to acute use after the announcement is -1.34 compared to -1.42 in the OLS model and is statistically significant at the 1% level. As before, acute drug use does not respond significantly to the announcement.

[37] Given that the conditional mean for the negative binomial is $exp(X'\beta)$, the actual computation of Ω_i is as follows using estimated coefficients:

$$\begin{aligned}\Omega_i = &exp(\theta_0 + \theta_1 t + \theta_2 + \theta_3 IMPLEMENT_t + \theta_4 + \theta_5 t + \theta_6 + \theta_7 IMPLEMENT_t + X'_{it}\Gamma) \\ &- exp(\theta_0 + \theta_1 t + \theta_3 IMPLEMENT_t + \theta_4 + \theta_5 t + \theta_7 IMPLEMENT_t + X'_{it}\Gamma) \\ &- exp(\theta_0 + \theta_1 t + \theta_2 + \theta_3 IMPLEMENT_t + X'_{it}\Gamma) \\ &+ exp(\theta_0 + \theta_1 t + \theta_3 IMPLEMENT_t + X'_{it}\Gamma)\end{aligned}$$

Figure A.1—Percent who said they followed news about the Medicare prescription drug debate "very closely" or "somewhat closely"

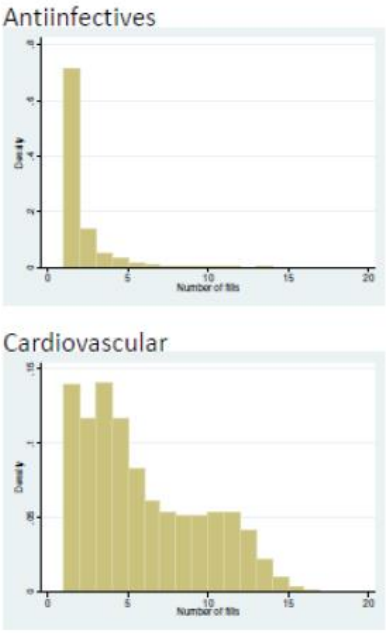


Source: Kaiser Family Foundation Health Poll Report, 2004

Figure A.2 –-- Illustration of how Drugs are Classified into Chronic or Acute Categories

ID	Year	Drug Name	Drug Class	# of fills
1	2002	AMOXICILLIN	Antiinfectives	1
1	2002	CEFACLOR	Antiinfectives	2
1	2002	CEFACLOR	Antiinfectives	2
1	2002	ZOCOR	Cardiovascular	5
1	2002	ZOCOR	Cardiovascular	5
1	2002	ZOCOR	Cardiovascular	5
1	2002	ZOCOR	Cardiovascular	5
1	2002	ZOCOR	Cardiovascular	5
2	2002	LIPITOR	Cardiovascular	7
2	2002	LIPITOR	Cardiovascular	7
2	2002	LIPITOR	Cardiovascular	7
2	2002	LIPITOR	Cardiovascular	7
2	2002	LIPITOR	Cardiovascular	7
2	2002	LIPITOR	Cardiovascular	7
2	2002	LIPITOR	Cardiovascular	7
3	2003	ACETAMINOPHEN/CODEINE	Analgesics	1
3	2003	PERCOCET	Analgesics	1
3	2003	PROPOXY-N/APAP	Analgesics	1
3	2003	TERAZOL	Antiinfectives	1
3	2003	ZOCOR	Cardiovascular	6
3	2003	ZOCOR	Cardiovascular	6
3	2003	ZOCOR	Cardiovascular	6
3	2003	ZOCOR	Cardiovascular	6
3	2003	ZOCOR	Cardiovascular	6
3	2003	ZOCOR	Cardiovascular	6

MCBS 2002-2003 pooled, Ages 65+



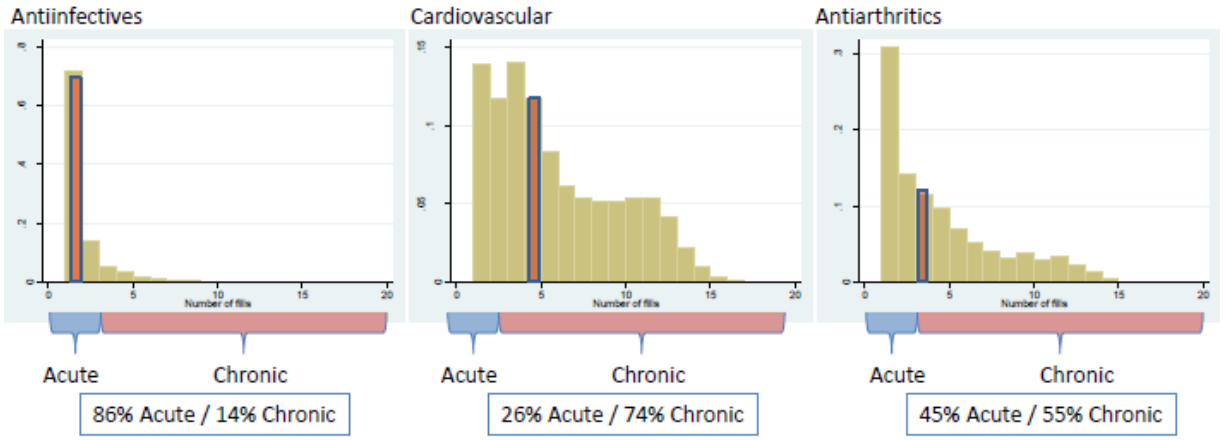
Classification assignment rules in order of increasing stringency:

	Drug Class is…		
Classification Method	Acute if:	Chronic if:	Excluded from sample if:
>50% in drug group (Median rule)	if median<= 2	if median> 2	No exclusions
>55% in drug group	if 55th percentile<=2	if 45th percentile> 2	Neither statement is true
>60% in drug group	if 60th percentile<=2	if 40th percentile> 2	Neither statement is true
>65% in drug group	if 65th percentile<=2	if 35th percentile> 2	Neither statement is true
>70% in drug group	if 70th percentile<=2	if 30th percentile> 2	Neither statement is true
>75% in drug group	if 75th percentile<=2	if 25th percentile> 2	Neither statement is true

Notes: In the first step, I generate empirical distributions of the number of prescriptions filled in a year for drugs in each therapeutic class. These distributions are generated by counting the number of purchases of each drug for each person/year in the pre-announcement period. For example, person ID number 1 would contribute a 1 and a 2 to the distribution of fills for the Antiinfectives class and a 5 to the Cardiovascular class. In the second step, I assign a chronic or acute designation to each therapeutic class by using the rules listed in the above table applied to the empirical distribution of each class. Finally, I assign this classification to all drugs in the class for all years of the survey.

Figure A.3 – An Example Comparison of Empirical Distributions with Physician Classifications

Panel A: Empirical Distributions



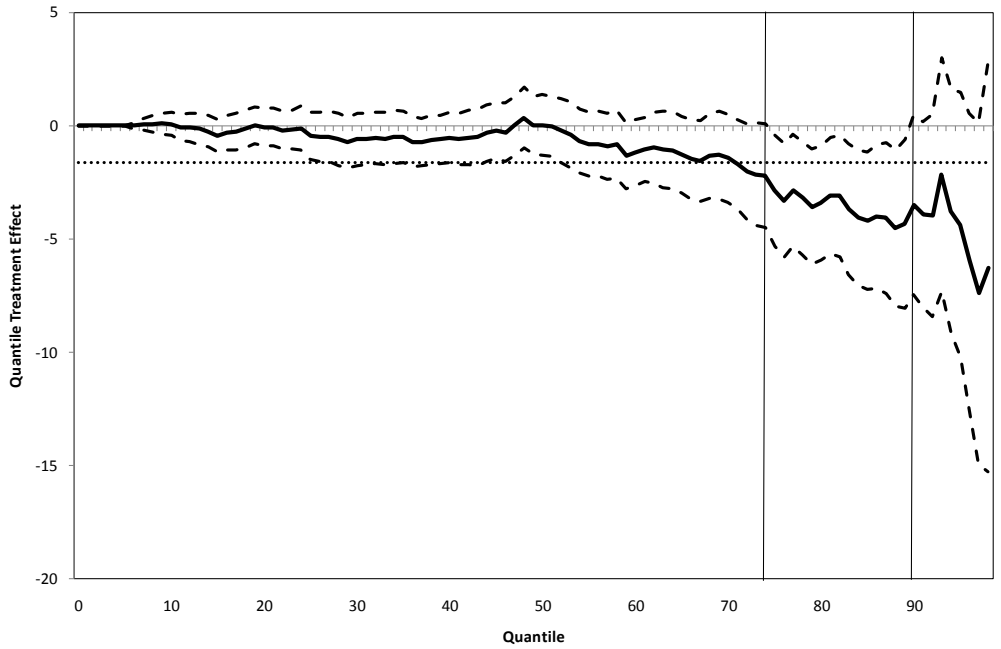
Panel B: Physician Classifications

Therapeutic Drug Class	Much more likely to be **ACUTE** than CHRONIC	Somewhat more likely to be **ACUTE** than CHRONIC	Somewhat more likely to be **CHRONIC** than ACUTE	Much more likely to be **CHRONIC** than ACUTE
1. Antiinfectives Ex. Amoxicillin, Cephalexin, Zithromax, Terazol, Doxycycline	3			
2. Cardiovascular Ex. Lipitor, Zocor, Prinivil, Diovan, Lisinopril				3
3. Antiarthritics Ex. Celebrex, Vioxx, Allopurinol, Naproxen, Mobic		1	1	1

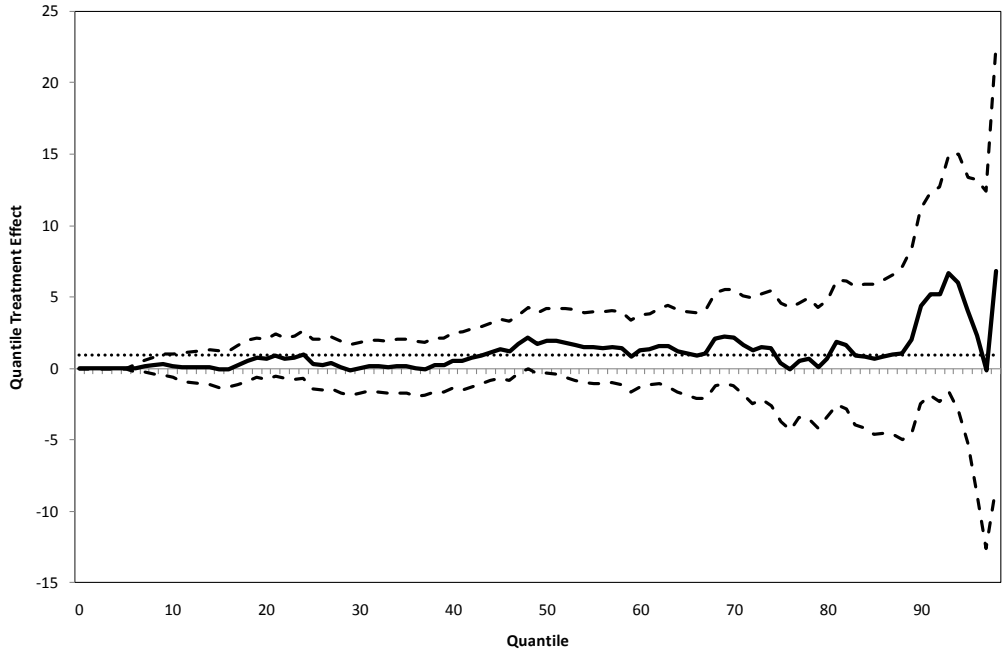
Notes: Panel A shows the empirical distribution of fills for 3 drug classes. The median is represented with a bold bar. Under the median classification rule, Antiinfectives would be classified as Acute, Cardiovascular as Chronic, and Antiarthritics as Chronic. Under the 65\% classification rule, for example, Antiinfectives are Acute, Cardiovascular are Chronic, and Antiarthritics are excluded from the estimation sample because it is a borderline category in which neither 65\% of the drugs can be classified as Chronic or Acute. The results from three physicians' independent coding in Panel B mirror these empirical classifications. There is strong agreement in coding for Antiinfectives and Cardiovascular classes among the three physicians and disagreement among the physicians for Antiarthritics (which mirrors the empirical result that this class is on the borderline of being Chronic or Acute).

Figure A.4 – Conditional Quantile Announcement and Implementation Effects

Panel A: Announcement Effects



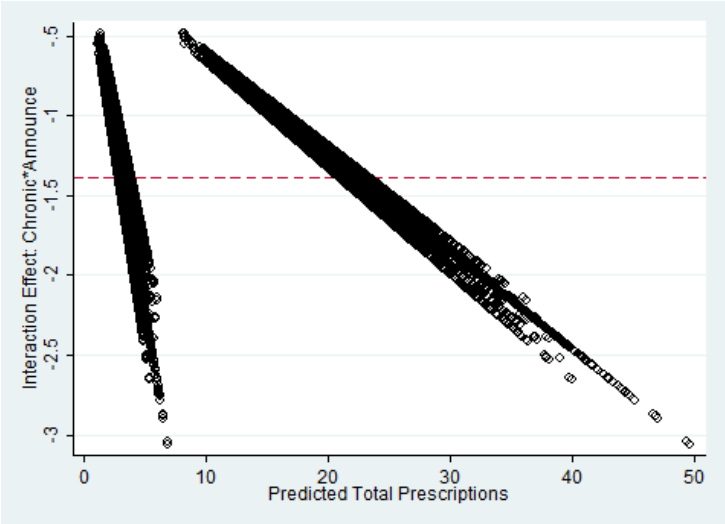
Panel B: Implementation Effects



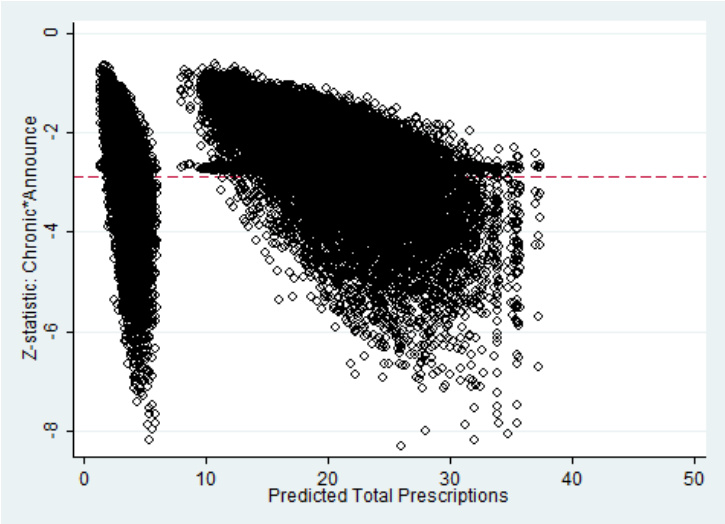
Notes: Solid line represents quantile announcement (implementation) effects for every quantile of the distribution of total prescriptions conditional on the implementation (announcement) and a full set of control variables. Dashed lines represent block bootstrapped 95% confidence intervals (750 replications) and the dotted line is the mean treatment effect. Regressions are weighted and Medicaid beneficiaries are included. MCBS 2001-2006.

Figure A.5 – Interaction Effects and Z-statistics as a Function of Predicted Total Prescriptions

Panel A: Marginal effects for the interaction of the Announce and Chronic drug indicators

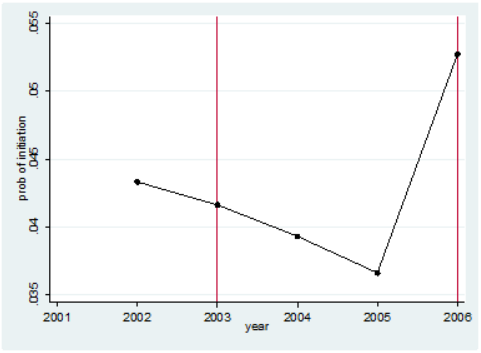


Panel B: Z-statistics for the Interaction Effects



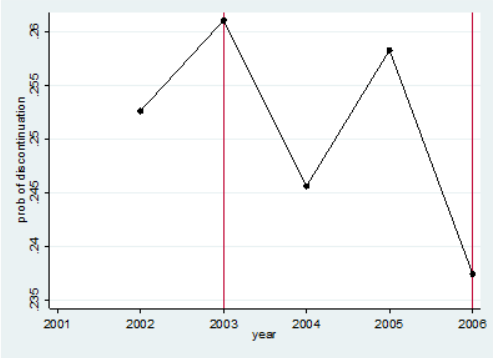
Notes: MCBS 2001-2006, weighted; The points represent the estimate of marginal effect of the interaction between the chronic and announce indicator and the corresponding z-statistic for each person in the sample ages 66-74.

Figure A.6-- Probability of initiation (conditional on not filling a drug in the therapeutic class in t-1)



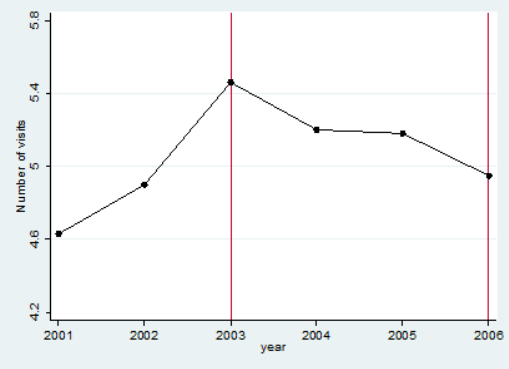
Notes: MCBS 2001-2006, weighted; The points represent the probability of initiating treatment-- defined as an indicator which equals 1 if a person uses at least one drug in class j in period t conditional on not having used any drugs in that class in period t-1.

Figure A.7-- Probability of discontinuation (conditional on filling a drug in the therapeutic class in t-1)



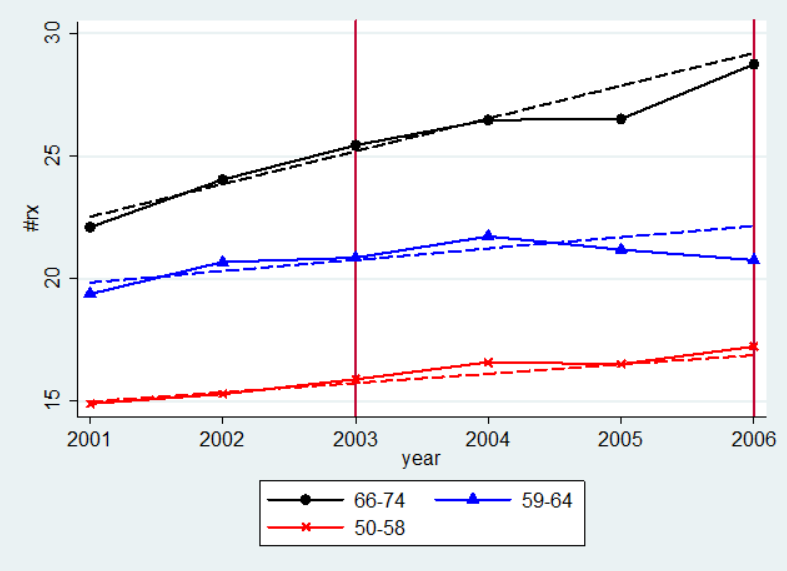
Notes: MCBS 2001-2006, weighted; The points represent the probability of discontinuing treatment-- defined as an indicator which equals 1 if a person does not use a drug in class j in period t conditional on using at least one drug in that class in period t-1.

Figure A.8—Mean Doctor Visits, 2001-2006



Notes: MCBS 2001-2006, weighted; The points represent the raw mean number of doctor visits per person.

Figure A.9 – Age-Eligible and Age-Ineligible Announcement and Implementation Effects



Notes: MCBS 2001-2006, weighted. The points represent weighted sample means. The dashed line shows the preannouncement predicted trends from the model described in Equation 1 excluding controls. The graph corresponds to the results in Table A.12.

Table A.1-- Classification of Therapeutic Categories

Therapeutic Drug Class	Proportion with <=2 fills	Mean # of fills (2002-2003)	Std Deviation of fills (2002-2003)	# of prescriptions filled (2002-2003)	Chronic?*
EENT preparations	0.60	3.15	3.07	15,127	N
Analgesics	0.64	3.12	3.39	12,461	N
Antiinfectives	0.86	1.70	1.65	8,789	N
Antihistamines	0.58	3.19	3.02	6,356	N
Antiinfectives, miscellaneous	0.82	1.91	2.00	4,906	N
Skin preparations	0.79	2.04	2.07	4,263	N
Cough and cold preparations	0.80	2.05	2.26	2,428	N
Muscle relaxants	0.67	2.85	3.00	1,627	N
Anesthetics	0.88	1.77	3.22	203	N
Psychotherapeutic drugs	0.75	2.00	1.41	16	N
Misc. medical supp., devices, & other	1.00	1.25	0.46	10	N
Cardiovascular	0.26	5.44	3.72	86,696	Y
Cardiac drugs	0.27	5.59	3.90	44,709	Y
Diuretics	0.27	5.38	3.74	35,892	Y
Autonomic drugs	0.21	5.88	3.85	29,957	Y
Gastrointestinal preparations	0.47	4.03	3.51	27,208	Y
Psychotherapeutic drugs	0.34	5.08	3.81	25,831	Y
Hypoglycemics	0.20	6.21	4.17	22,743	Y
Antiarthritics	0.45	4.08	3.40	19,167	Y
Blood	0.28	5.64	4.10	17,159	Y
Hormones	0.43	4.13	3.71	16,735	Y
Thyroid preparations	0.18	5.97	3.77	16,352	Y
Antiasthmatics	0.42	4.44	3.77	12,884	Y
Electrolyte, caloric, & fluid rep.	0.34	4.93	3.65	11,606	Y
CNS drugs	0.32	5.21	3.85	5,950	Y
Sedative and hypnotic drugs	0.42	4.59	3.75	4,197	Y
Vitamins, all others	0.36	4.54	3.45	3,672	Y
Antineoplastics	0.33	5.26	3.81	2,552	Y
Antiparkinson drugs	0.30	5.75	4.35	2,373	Y
Diagnostic	0.31	4.81	3.69	77	Y
Anti-obesity drugs	0.47	3.94	3.25	67	Y
Pre-natal vitamins	0.17	5.33	4.13	32	Y

Notes: All figures are from the pooled MCBS 2002-2003 for elderly ages 65+. * This classification of chronic and acute drugs is for the median classification rule.

Table A.2-- Announcement and Implementation Effects-by Medicaid Status

Panel A: Aggregate Effects

Dependent variable:	Total Prescriptions			Log (Total Prescriptions)		
Sub-sample:	Full Sample	Non-Medicaid	Medicaid	Full Sample	Non-Medicaid	Medicaid
	(1)	(2)	(3)	(4)	(5)	(6)
Announce	-1.6064***	-1.5008**	-2.3606	-0.0342	-0.0407	0.0178
	(0.621)	(0.631)	(2.553)	(0.030)	(0.031)	(0.100)
Implement	0.9064	0.5658	3.4781	0.0237	0.0146	0.1036
	(1.115)	(1.126)	(4.523)	(0.050)	(0.053)	(0.159)
t	1.7788***	1.5027***	3.9806***	0.0616***	0.0591***	0.0813**
	(0.240)	(0.245)	(0.965)	(0.011)	(0.012)	(0.035)
Observations	20,072	17,763	2,309	20,072	17,763	2,309

Panel B: Chronic vs. Acute Effects

Classification Method:	>50%	>65%	>50%	>65%	>50%	>65%
Subsample:	Full Sample		Non-Medicaid		Medicaid	
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: Total Prescriptions						
Chronic*Announce	-1.5667***	-1.4160***	-1.4060***	-1.2576***	-3.3603	-3.1078*
	(0.509)	(0.444)	(0.511)	(0.450)	(2.088)	(1.760)
Chronic*Implement	1.5100	1.4074*	1.0340	0.9944	4.2849	3.8017
	(0.924)	(0.807)	(0.919)	(0.808)	(3.716)	(3.177)
Dependent variable: Log (Total Prescriptions)						
Chronic*Announce	-0.0543	-0.1127***	-0.0592	-0.1106***	-0.0287	-0.1454
	(0.035)	(0.036)	(0.037)	(0.038)	(0.115)	(0.119)
Chronic*Implement	-0.0618	-0.1060*	-0.0597	-0.1023	-0.0925	-0.1513
	(0.058)	(0.060)	(0.062)	(0.063)	(0.177)	(0.181)
Observations	40,144	40,144	35,526	35,526	4,618	4,618

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted. Panel A includes a full set of control variables. Panel B includes indicators for Announce, Implement, Chronic, a linear time trend t, Chronic*t, and a full set of control variables (these coefficients are not reported to conserve space). The Non-Medicaid columns exclude Medicaid Dual-Eligibles, the Medicaid columns include only Medicaid Dual Eligibles. MCBS 2001-2006; Ages 66-74.

Table A.3-- Aggregate Announcement and Implementation Effects-Alternative Outcomes

Dependent variable:	Total Prescriptions		Prescriptions Conditional on Use		Any Use		Log (Total Expenditures)		Log (OOP Expenditures)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Announce		-1.6064***		-1.7570***		-0.0017		-0.0027		-0.021
		(0.621)		(0.655)		(0.008)		(0.057)		(0.037)
Implement	2.9943***	0.9064	3.1684***	0.8822	-0.0007	-0.0029	-0.0103	-0.0139	-0.1285***	-0.1559***
	(0.724)	(1.115)	(0.757)	(1.169)	(0.007)	(0.012)	(0.056)	(0.094)	(0.034)	(0.061)
t	1.2970***	1.7788***	1.3117***	1.8396***	0.0042**	0.0047*	0.1324***	0.1332***	0.0938***	0.1001***
	(0.177)	(0.240)	(0.183)	(0.254)	(0.002)	(0.003)	(0.015)	(0.021)	(0.009)	(0.014)
Observations	20,072	20,072	18,478	18,478	20,072	20,072	20,072	20,072	20,072	20,072

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. MCBS 2001-2006; Ages 66-74.

Table A.4-- Aggregate Announcement and Implementation Effects—Alternative Specifications

Dependent variable:	Total Prescriptions				Log (Total Prescriptions)			
Specification:	Linear with level shift	Linear with level and slope shift	Quadratic	Non-parametric	Linear with level shift	Linear with level and slope shift	Quadratic	Non-parametric
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Announce	-1.6064***	-3.5157***	-2.9121***		-0.0342	-0.0309	-0.0400	
	(0.621)	(0.834)	(0.682)		(0.030)	(0.037)	(0.031)	
Implement	0.9064	2.4147*	-3.5316**		0.0237	0.0211	0.0042	
	(1.115)	(1.364)	(1.657)		(0.050)	(0.062)	(0.068)	
Year 2002				0.8695**				0.025
				(0.444)				(0.023)
Year 2003				2.8029***				0.1246***
				(0.576)				(0.027)
Year 2004				2.4165***				0.1403***
				(0.639)				(0.031)
Year 2005				5.7221***				0.1992***
				(0.716)				(0.032)
Year 2006				9.2464***				0.3202***
				(0.757)				(0.032)
t	1.7788***	1.4017***	-0.1693		0.0616***	0.0623***	0.053	
	(0.240)	(0.288)	(0.726)		(0.011)	(0.014)	(0.033)	
t-squared			0.3903***				0.0017	
			(0.134)				(0.006)	
Years Since Announce*		1.9040***				-0.0033		
		(0.702)				(0.030)		
Announce + Years Since Announce		-1.6117***				-0.0342		
		(0.620)				(0.029)		
(Yr 2004- Yr 2003) - (Yr 2003- Yr 2002)				-2.3198***				-0.0838**
				(0.763)				(0.036)
(Yr 2005- Yr 2004) - (Yr 2003- Yr 2002)				1.3722*				-0.0406
				(0.783)				(0.034)
(Yr 2006- Yr 2005) - (Yr 2003- Yr 2002)				1.5909*				0.0215
				(0.856)				(0.036)

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. Medicaid beneficiaries are included. The bottom panel presents linear combinations of the coefficients and their standard errors. * The variable "Years Since Announce" is defined as the year minus 2003 in the announcement period, so that it takes on a value of 1 in 2004 and a 2 in 2005, and zero otherwise. The linear combination of the coefficients of Announce + Years Since Announce provides the estimate of the announcement effect in 2004. MCBS 2001-2006; Ages 66-74; N=20,072.

Table A.5-- Aggregate Announcement and Implementation Effects—Negative Binomial (Marginal Effects)

Dependent Variable:	Total Prescriptions					
Model:	Negative Binomial			OLS		
	(1)	(2)	(3)	(4)	(5)	(6)
Announce		-1.8263***	-1.5640**		-2.1140***	-1.6064***
		(0.385)	(0.622)		(0.430)	(0.621)
Implement	2.5853***		0.4761	2.9943***		0.9064
	(0.714)		(1.120)	(0.724)		(1.115)
t	1.3165***	1.8860***	1.7878***	1.2970***	1.9667***	1.7788***
	(0.185)	(0.1485)	(0.257)	(0.177)	(0.157)	(0.240)
Observations	20,072	20,072	20,072	20,072	20,072	20,072

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. Medicaid beneficiaries are included. Columns 4-6 are identical to Table 2. MCBS 2001-2006; Ages 66-74.

Table A.6— Announcement and Implementation Effects, by Health Status

Dependent variable:	Total Prescriptions						
	Self-Reported Health Status is…			*Number of Conditions:*			
Sub-sample:	Excellent or Very Good	Good	Fair or Poor	0	1	2-4	5+
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Announce	0.5422	-2.4104*	-5.0804**	-0.4351	-0.9653	-0.7272	-4.6446**
	(0.754)	(1.251)	(2.061)	(0.870)	(0.940)	(0.769)	(2.079)
Implement	2.9804**	-1.0677	-0.4108	0.5009	0.5845	4.3792***	2.0366
	(1.319)	(2.080)	(3.685)	(1.743)	(1.845)	(1.623)	(4.565)
t	1.1035***	1.9304***	3.5108***	0.261	0.9166**	0.5962*	2.8608***
	(0.287)	(0.458)	(0.751)	(0.356)	(0.389)	(0.349)	(0.998)
Dep. Variable Mean	19.19	31.63	47.11	6.46	13.18	29.66	52.04
Observations	9,738	6,442	3,810	1,493	3,037	9,685	2,678

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. Conditions include: hardening of arteries, hypertension, CHD, heart attack, stroke, diabetes, arthritis, psychiatric disorder, osteoporosis, emphysema/asthma/COPD, and cancer. MCBS 2001-2006; Ages 66-74.

Table A.7—Chronic and Acute Announcement and Implementation Effects—Alternative Inference Procedure

Dependent Variable:	Difference in Mean Total Prescriptions (Chronic - Acute)		Difference in Mean Log Total Prescriptions (Chronic - Acute)	
Classification Method:	>50% in drug group	>65% in drug group	>50% in drug group	>65% in drug group
	(1)	(2)	(3)	(4)
Announce	-1.7098**	-1.3959**	-0.0557	-0.1149**
	(0.6862)	(0.5937)	(0.0450)	(0.0468)
Implement	2.3655**	1.4870	-0.0669	-0.1131
	(1.1229)	(0.9753)	(0.0697)	(0.0723)
t	1.0223***	1.0930***	0.0595***	0.0906***
	(0.2404)	(0.2061)	(0.0157)	(0.0163)
Observations	6	6	6	6

Notes: *** p<0.01, ** p<0.05, * p<0.1. This specification is motivated by Donald and Lang (2007). The procedure requires two steps. First, I estimate a non-parametric version of Equation 1, including separate chronic x year interaction terms, chronic indicator, year fixed effects, and controls. In the second step, I use the estimated coefficients on the chronic x year interaction terms, which represent the adjusted mean difference in prescriptions across chronic and acute drug groups in each year. I regress these coefficients on indicators for the announcement, implementation, and a linear trend (Column 1). This regression is estimated using weighted least squares (the inverse of the squared-standard errors of the coefficients are used as weights). Column 2 repeats the procedure for the more stringent classification rule. Columns 3-4 repeat the procedure for log total prescriptions. Wooldridge (2003) notes (see p. 136) that t-statistics from this procedure converge to the standard normal distributions as the number of observations in each cluster becomes large, allowing us to use the critical values from a standard normal distribution.

Table A.8—Chronic and Acute Announcement and Implementation Effects—Alternative Specifications

Dependent variable:	Total Prescriptions				Log (Total Prescriptions)			
Spec:	Linear with level shift	Linear with level and slope shift	Quadratic	Non-parametric DD	Linear with level shift	Linear with level and slope shift	Quadratic	Non-parametric DD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Chronic*Announce	-1.5667***	-2.1789***	-2.0091***		-0.0543	0.0001	-0.0259	
	(0.509)	(0.667)	(0.549)		(0.035)	(0.045)	(0.038)	
Chronic*Implement	1.5100	1.9925*	0.0065		-0.0618	-0.1047	0.0348	
	(0.924)	(1.128)	(1.312)		(0.058)	(0.070)	(0.083)	
Announce	-0.1567	-0.2241	-0.2162		-0.0179	-0.0168	-0.0186	
	(0.159)	(0.204)	(0.172)		(0.026)	(0.033)	(0.028)	
Implement	0.7608***	0.8145**	0.5585		0.1314***	0.1305**	0.1291**	
	(0.264)	(0.319)	(0.374)		(0.042)	(0.051)	(0.061)	
Chronic	15.4795***	15.7209***	16.1812***	16.7414***	1.4447***	1.4232***	1.3996***	1.5010***
	(0.495)	(0.547)	(0.753)	(0.367)	(0.033)	(0.037)	(0.050)	(0.025)
Chronic*Year2002				0.6445*				0.0422
				(0.371)				(0.026)
Chronic*Year2003				1.8532***				0.1378***
				(0.475)				(0.031)
Chronic*Year2004				1.1176**				0.1437***
				(0.525)				(0.035)
Chronic*Year2005				2.6545***				0.1583***
				(0.578)				(0.037)
Chronic*Year2006				6.5321***				0.2310***
				(0.644)				(0.037)
t	-0.0023	-0.0157	-0.0914		-0.0133	-0.0131	-0.0143	
	(0.058)	(0.070)	(0.168)		(0.009)	(0.011)	(0.027)	
t-squared			0.0178				0.0002	
			(0.030)				(0.005)	
Years Since Announce*		0.0673				-0.0011		
		(0.157)				(0.025)		
Chronic*t	1.0473***	0.9267***	0.3881		0.0582***	0.0689***	0.1005***	
	(0.196)	(0.238)	(0.587)		(0.013)	(0.016)	(0.038)	
Chronic*t^2			0.1321				-0.0085	
			(0.106)				(0.007)	
Chronic*Time Since Announce*		0.6102				-0.0542		
		(0.558)				(0.035)		
Chr*Announce + Chr*Yrs Since Announce		-1.5687***				-0.0542		
		(0.5081)				(0.0348)		
(Chr*2004-Chr*2003) - (Chr*2003-Chr*2002)				-1.9444***				-0.0897**
				(0.6179)				(0.0430)
(Chr*2005-Chr*2004) - (Chr*2003-Chr*2002)				0.3282				-0.0809**
				(0.6299)				(0.0405)
(Chr*2006-Chr*2005) - (Chr*2003-Chr*2002)				2.6689***				-0.0229
				(0.7073)				(0.0432)

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. Medicaid beneficiaries are included. Year fixed effects are included in columns 4 and 8. The bottom panel presents linear combinations of the coefficients and their standard errors. * The variable "Years Since Announce" is defined as the year minus 2003 in the announcement period, so that it takes on a value of 1 in 2004 and a 2 in 2005, and zero otherwise. MCBS 2001-2006; Ages 66-74; N=40,144.

Table A.9—Chronic and Acute Announcement and Implementation Effects—Negative Binomial (Marginal Effects)

Dependent Variable:	Total Prescriptions (>50% in group)		Total Prescriptions (>65% in group)		Total Prescriptions (>50% in group)		Total Prescriptions (>65% in group)	
Model:	Negative Binomial				OLS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Chronic*Announce		-1.3902***		-1.3429***		-1.5667***		-1.4160***
		(0.510)		(0.450)		(0.509)		(0.444)
Chronic*Implement	3.5534***	1.5716*	2.9433***	1.0381	3.5449***	1.5100	3.2464***	1.4074*
	(0.625)	(0.953)	(0.536)	(0.822)	(0.602)	(0.924)	(0.534)	(0.807)
Announce		-0.5975		-0.16124		-0.1567		-0.0322
		(0.577)		(0.530)		(0.159)		(0.090)
Implement	3.7194***	2.8062***	2.4047***	2.1605**	0.9651***	0.7608***	0.3655***	0.3230**
	(0.698)	(1.095)	(0.602)	(1.008)	(0.163)	(0.264)	(0.091)	(0.151)
Chronic	16.8814***	16.7514***	13.9825***	13.7410***	16.2625***	15.4795***	12.9526***	12.2450***
	(0.846)	(0.893)	(0.744)	(0.805)	(0.474)	(0.495)	(0.404)	(0.418)
t	-0.3401**	-0.1600	-0.2168*	-0.1682	-0.0494	-0.0023	-0.0048	0.0049
	(0.151)	(0.209)	(0.126)	(0.190)	(0.041)	(0.058)	(0.023)	(0.033)
Chronic*t	0.6343***	1.0547***	0.7541***	1.1610***	0.5777***	1.0473***	0.6883***	1.1127***
	(0.152)	(0.209)	(0.133)	(0.183)	(0.144)	(0.196)	(0.124)	(0.168)
Observations	40,144	40,144	40,144	40,144	40,144	40,144	40,144	40,144

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. Medicaid beneficiaries are included. The classification method used is the median assignment rule (more than 50% of drugs in the therapeutic class are either chronic or acute). Marginal effects for interaction terms in the negative binomial model are computed as the double difference as described in Appendix Section A.2. Columns 3 and 4 are identical to Table 4. MCBS 2001-2006; Ages 66-74.

Table A.10— Announcement and Implementation Effects for Top Chronic and Acute Therapeutic Classes: Comparison with Classifications of "Deferability"

Panel A: Top 8 Chronic Drug Classes

Dependent Variable:	Total Prescriptions		Physician Coding		
				Borderline	
			Most likely to be	Deferrable/Non-	Most likely to
	Announce	Implement	Non-Deferrable	Deferrable	be Deferrable
Drug Class:	(1)	(2)	(3)	(4)	(5)
Cardiovascular	-0.3079*	0.9655***			
	(0.173)	(0.310)			X
Cardiac drugs	-0.0665	0.1012			
	(0.108)	(0.185)	X		
Diuretics	-0.2064**	-0.1903			
	(0.091)	(0.154)		X	
Hypoglycemics	-0.2360**	0.5286**			
	(0.113)	(0.209)		X	
Autonomic drugs	-0.0941	0.1252			
	(0.086)	(0.149)	X		
Psychotherapeutic drugs	-0.2197**	0.1103			
	(0.104)	(0.180)	X		
Gastrointestinal preparations	-0.2556***	0.0419			
	(0.092)	(0.156)		X	
Antiarthritics	-0.1277*	-0.1048			
	(0.068)	(0.118)		X	

Panel B: Top 8 Acute Drug Classes

Dependent Variable:	Total Prescriptions		Physician Coding		
				Borderline	
			Most likely to be	Deferrable/Non-	Most likely to
	Announce	Implement	Non-Deferrable	Deferrable	be Deferrable
Drug Class:	(1)	(2)	(3)	(4)	(5)
Analgesics	-0.1340**	0.1826			
	(0.063)	(0.112)	X		
EENT preparations	0.0312	0.2302*			
	(0.075)	(0.119)	X		
Antiinfectives	-0.0143	0.048			
	(0.038)	(0.062)	X		
Antihistamines	-0.0359	-0.0187			
	(0.046)	(0.075)	X		
Antiinfectives, miscellaneous	-0.0402	0.0826			
	(0.034)	(0.055)	X		
Skin preparations	0.0127	0.0554			
	(0.034)	(0.052)	X		
Muscle relaxants	-0.0091	0.0275			
	(0.020)	(0.034)	X		
Cough and cold preparations	0.0377*	0.1265***			
	(0.021)	(0.033)	X		

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Columns 1 and 2 are coefficients from 16 regressions of total prescriptions for the drug class on the announcement and implementation indicators, a linear time trend, and a full set of control variables. Regressions are weighted and Medicaid beneficiaries are included. Columns 3-5 represent a physician's classification of the drug class as deferrable vs. non-deferrable. This is discussed in more detail in the text. MCBS 2001-2006; Ages 66-74.

Table A.11— Announcement and Implementation Effects for Procedures Not Covered by Part D

Dependent variable:	Mammogram	Pap Exam	Prostate Exam (Rectal)	Prostate Exam (Blood Test)	Flu Shot
	(1)	(2)	(3)	(4)	(5)
Announce	0.0273	0.0371*	0.0160	-0.0135	0.0002
	(0.020)	(0.020)	(0.022)	(0.019)	(0.012)
Implement	0.0483	0.0279	0.0384	-0.0186	0.0288
	(0.031)	(0.031)	(0.035)	(0.030)	(0.020)
t	-0.0153**	-0.0182**	-0.0216***	0.0094	-0.0065
	(0.007)	(0.007)	(0.008)	(0.007)	(0.005)
Dep. Variable Mean	0.597	0.406	0.497	0.737	0.664
Observations	10,609	10,570	9,285	9,047	19,967

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. Each column shows the results of a linear probability model estimating the probability of receiving each procedure. MCBS 2001-2006; Ages 66-74.

Table A.12 –Announcement and Implementation Effects for Age-Eligible (Age 66-74) and Age-Ineligible (Age 50-58 and Age 59-64)

Dependent variable:	Total Prescriptions		Log (Total Prescriptions)	
	(1)	(2)	(3)	(4)
Age66-74*Announce		-0.7612		-0.0542
		(1.424)		(0.073)
Age66-74*Implement	0.1053	-0.8883	-0.0403	-0.1112
	(1.305)	(2.180)	(0.063)	(0.110)
Age59-64*Announce		-0.2371		-0.0982
		(1.429)		(0.078)
Age59-64*Implement	-1.3254	-1.6354	-0.0789	-0.2073*
	(1.169)	(2.091)	(0.068)	(0.116)
Announce		0.081		0.049
		(0.729)		(0.043)
Implement	0.0975	0.2036	-0.0025	0.0617
	(0.611)	(1.113)	(0.038)	(0.065)
Announce + Age66-74*Announce		-0.6802		-0.0052
		(1.223)		(0.059)
Implement + Age66-74*Implement	0.2028	-0.6846	-0.0428	-0.0496
	(1.153)	(1.874)	(0.050)	(0.089)
Announce + Age59-64*Announce		-0.156		-0.0492
		(1.187)		(0.063)
Implement + Age59-64*Implement	-1.2279	-1.4318	-0.0814	-0.1457
	(0.996)	(1.718)	(0.056)	(0.094)
Observations	40,694	40,694	40,694	40,694

Notes: *** p<0.01, ** p<0.05, * p<0.1. Clustered standard errors at the person level. Regressions are weighted and include a full set of control variables. Medicaid beneficiaries are included. The coefficients are from estimating Equation 1 with the age-eligible and two age-ineligible groups. Age group main effects and linear trends are included but not reported to conserve space. The bottom panel presents linear combinations of the coefficients and their standard errors to show absolute announcement and implementation effects for the 66-74 and 59-64 age groups. MEPS 2001-2006.