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Choice Set Size and Decision-Making: The Case of Medicare Part D Prescription Drug Plans

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Abstract

Background—The impact of choice on consumer decision-making is controversial in U.S. health policy.

Objective—Our objective was to determine how choice set size influences decision-making among Medicare beneficiaries choosing prescription drug plans.

Methods—We randomly assigned members of an internet-enabled panel age 65 and over to sets of prescription drug plans of varying sizes (2, 5, 10, and 16) and asked them to choose a plan. Respondents answered questions about the plan they chose, the choice set, and the decision process. We used ordered probit models to estimate the effect of choice set size on the study outcomes.

Results—Both the benefits of choice, measured by whether the chosen plan is close to the ideal plan, and the costs, measured by whether the respondent found decision-making difficult, increased with choice set size. Choice set size was not associated with the probability of enrolling in any plan.

Conclusions—Medicare beneficiaries face a tension between not wanting to choose from too many options and feeling happier with an outcome when they have more alternatives. Interventions that reduce cognitive costs when choice sets are large may make this program more attractive to beneficiaries.

Keywords

Medicare Part D; prescription drugs; choice; decision-making; insurance

I. Introduction

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) extended publicly subsidized prescription drug coverage to Medicare beneficiaries through a system of competing private insurers. The design of the new benefit departs significantly from the structure of the existing program. A single government insurer, the Centers for Medicaid and Medicare Services (CMS), administers coverage for Parts A and B, and beneficiaries have the option to replace their traditional coverage with a private sector managed care plan (Part C). For prescription drug coverage (Part D), in contrast, beneficiaries must choose among a set of private insurers with whom Medicare has

contracted to obtain coverage, placing an unprecedented degree of choice in the hands of beneficiaries.

The role of choice has been controversial since the program's inception. Proponents argue that, by generating competition among plans for enrollees, choice ultimately leads insurers to reduce their costs and offer better products (1). Others, however, have expressed concern over both the willingness and the ability of beneficiaries to make effective choices in this context (2, 3). Many Medicare beneficiaries are uninformed about their health insurance options and have difficulty interpreting comparative health plan information (4-6). An additional concern in the context of Medicare Part D is the number of plans from which beneficiaries choose. In 2009, at least 45 plans were available in each state (7). A growing literature documenting negative consequences of large choice sets for decision-making (8) has prompted proposals to restrict the number of Part D plans offered in a given market (9, 10).

The existing literature on the relationship between choice set size and decision-making, however, has important limitations for evaluating these types of proposals. While most Medicare beneficiaries are 65 or over, studies of choice set size generally focus on younger adults. Furthermore, previous studies examine less consequential decisions such as the choice of jams, chocolates, pens, coffee, magazines, and gift boxes (11-16).¹ The choice of a prescription drug plan, in contrast, has potentially important implications for the health and financial security of older decision makers.

The objective of our study is to determine how choice set size influences decision-making among Medicare beneficiaries choosing prescription drug plans. Drawing from both economics and psychology, we identify theoretical mechanisms by which choice set size may influence consumer decision-making. We then conduct an experiment in which we randomly assign Medicare beneficiaries to hypothetical choice sets of different sizes and ask them to choose a plan.

II. Conceptual Framework and Study Hypotheses

In order to obtain publicly subsidized coverage, Medicare beneficiaries must actively choose a plan among those offered by private insurers with whom Medicare has contracted in their region. The program's legislation specifies a minimum standard drug benefit, but allows private insurers to offer coverage that deviates from that structure in certain ways such as by using managed care mechanisms to control utilization, establishing preferred pharmacy networks, and offering mail-order purchasing. Insurers may offer plans that deviate from the standard benefit by modifying the cost sharing but maintaining actuarial equivalency, and by providing coverage that is more generous, although the extra costs are not subsidized by the government. Although the coverage is highly subsidized, most beneficiaries must pay a premium to enroll. The premium for a given plan is the difference between the plan's bid and 74.5% of the average bid for the plans offered by all insurers participating in the program in a particular year.

Choice set size may influence decision-making through a number of mechanisms in this context. Larger choice sets may benefit consumers with heterogeneous preferences by increasing the likelihood that they will have access to their preferred types of products. In the case of health plans, people are likely to have very different needs and preferences for prescription drug coverage, suggesting that larger choice sets which offer differentiated products may provide consumers with access to more desirable alternatives. However, larger

¹An exception is a study of the relationship between choice set size and participation in 401K plans (16).

choices sets may make the processes of searching for information more difficult and time consuming. Because prescription drug insurance is a product with multiple, complex attributes, search in this context may be particularly costly. In the classic economic model of information seeking behavior, consumers choose how much to search by equating the costs and expected benefits of seeking additional information (17). Thus, larger choice sets may influence decision-making by increasing the cost of search.

Early research in psychology generally viewed the availability of choice positively, with numerous studies demonstrating a link between the provision of choice and increases in intrinsic motivation, perceived control, task performance and life satisfaction (see review by Iyengar and Lepper (11)). And more recent work demonstrates that consumers are attracted to choice (11, 18-20). For example, in a classic field experiment, Iyengar and Lepper (11) found that shoppers were more likely to stop at a tasting booth offering 24 different flavors of jam than at one offering only 6 flavors of jam.

Choosing may also lead to greater satisfaction with a decision outcome. Seminal work on cognitive dissonance demonstrated that people perceive the relative difference between two goods to increase after the individual chooses between them (21). Thus, the process of making a decision may cause people to bolster subjective evaluations of the decision outcome. Szrek and Baron (22) find evidence of this type of effect in the context of health plan choice - the preferred health insurance plan was valued more when it was offered alongside other alternatives than when it was offered alone.

The availability of choice may facilitate decision-making if the alternatives in the choice set provide consumers with information that helps them make a decision. This is more likely to be the case when product attributes are hard to understand or evaluate and when decision makers do not have very clearly defined preferences (23-27). Because the choice of a health plan requires considering products with complex and sometimes unfamiliar attributes, consumers may look to other plans in the choice set to inform their decision.

The availability of choice may negatively impact decision-making by increasing the costs of choice. We refer to the increased mental effort required by having more choices as the “cognitive” cost of choice. Loewenstein (28) identifies three types of costs associated with choice: time, error and psychic costs. The time cost of choice is the increased time that making a decision requires when there are more alternatives. Having more complex choice sets may also increase errors in decision-making. For example, when people are presented with many choices, they often seek a strategy to simplify their decision by adopting a heuristic that simplifies decision-making at the cost of eliminating potentially valuable options (29, 30).

Choosing among many alternatives may also increase the psychic/emotional costs associated with choice - the emotional effort required to be happy with one's decision (31). Tversky and Shafir (24) introduced the idea of choice conflict by illustrating that the tendency to delay choice can be increased by adding an option that boosts conflict. Negative emotions often arise when decision makers are required to make trade-offs among emotion-laden attributes (32). Because decisions regarding health insurance coverage are complex with important implications for financial security and health, the cognitive and psychic/emotional costs of choice may be particularly high.

More recently psychologists have emphasized the potential detrimental consequences of choice for consumers, particularly when the number of options is extensive (8, 11). Studies have demonstrated that offering people more options makes decision makers more likely to avoid or to delay making a decision, have lower confidence in and satisfaction with the choice they make, pay more for purchases that make them less happy, and rate their

subjective outcomes lower even when objective outcomes are seemingly better (see studies reviewed by Botti and Iyengar (19)).

Recent research reconciles these two groups of studies, the first that highlights strong preference for some choice and the latter that illustrates the negative consequences of extensive choice, by demonstrating that satisfaction from a choice and likelihood to purchase are both inverted U-shaped functions of the number of alternatives in the choice set (13, 15). Reutskaja and Hogarth (15) propose that both the costs and benefits increase with the number of options in the choice set and hence an inverse u-shaped relationship is a result of the benefits initially exceeding the costs of additional choices but later the costs exceeding the benefits. While these studies both show evidence of an inverse u-shaped relationship, they do not demonstrate that this is the effect of both increased benefits and costs.

Based on this framework, we tested the following study hypotheses:

1. The benefits of choice in the form of the ability to purchase a product that meets one's preferences and the ability to evaluate particular products increases with the size of the choice set.
2. The cognitive and emotional costs of choice increase with the size of the choice set.
3. Satisfaction with choice first increases and then declines with the size of the choice set due to these offsetting effects.

III. Empirical Methods

A. Experiment

We randomly assigned people 65 and older to sets of prescription drug plans of varying sizes (2, 5, 10, and 16) and asked them to make a hypothetical choice among the plans offered. Study participants made two choices among plans characterized by six attributes, and the second choice was randomly assigned to be from a different number of plans than the first choice. After each choice, respondents answered a series of questions about their decision.

Plan Characteristics—We developed the hypothetical plans to closely resemble Medicare Part D plans and provided respondents with definitions of plan characteristics that resembled the information on the Medicare.gov website.² The characteristics of the experimental plans were almost identical to the ones described on the CMS site in 2006 in the first wave of Medicare Part D enrollment. The plan characteristics included the deductible (\$0, \$100, or \$250), formulary breadth defined as the number of top 100 drugs used by Medicare beneficiaries (75, 85, 95, and 100), the number of drugs on the formulary with copayments of \$20 or less (20, 50, 75, and 95), the number of drugs on the formulary requiring prior authorization (0, 10, 20, 40), coverage in the gap (none, generic only, or brand and generic coverage), and monthly premium. More generous plans had correspondingly higher premiums, estimated using data from the first year of the program (33).³

Because plans with more generous benefits had correspondingly higher premiums, respondents chose from sets in which none of the plans was clearly superior to the other. In addition to randomly assigning respondents to different choice set sizes, we randomly chose

²Our experiment can be viewed at http://www.stanford.edu/group/health_surveys/cgi-bin/ex/mkb1.htm.

³The formula we used in calculating the premium was: monthly premium=4+0.4*Formulary Breadth -0.12*Prior Authorization + 0.05*Copayment + 10.0*Generic gap + 25*Brand and Generic Gap -10*\$100 Deductible -25*\$250 Deductible.

from a pre-defined group of differentiated plans the specific plans to fill each set. The pre-defined plans in each set were created by systematically varying alternative attributes of the plans, choosing values of each attribute within ranges observed among plans offered in the market. We also randomized the order in which the plans were presented within each set.⁴ While the respondents received information on the definition of each attribute, they did not receive information on the possible ranges of values. For example, for the attribute of formulary breadth, respondents were told that plans were not required to cover all prescription drugs, and that the formulary breadth attribute indicated how many of the most frequently used drugs by Medicare beneficiaries (the top 100 Medicare drugs) were covered by each plan. Finally, they were advised that plans with numbers closer to 100 have larger formularies, whereas plans with fewer than the top 100 drugs have more restrictive formularies.

Dependent Variables—After respondents selected each plan, we showed them their chosen plan and asked them questions about their chosen plan, the choice set they chose from, and about their decision process. The dependent variables are presented in Table 2.

B. Data and Analysis

We fielded the experiment during December 2007 on a sample of individuals 65 years and older drawn from an Internet-enabled panel developed and maintained by Knowledge Networks (www.knowledgenetworks.com).⁵ 534 eligible panel members were contacted and 347 (65%) started the survey. We used data from 295 respondents who participated in at least one experiment for a response rate of 55%. Because we restricted the sample to Internet users, our study population is not representative of the U.S. population age 65 and over. The study population is younger, disproportionately male, more highly educated, and more likely to be married than a nationally representative population. The appendix table provides details.

In Table 1, we present characteristics of the study sample by the number of plans in the choice set for two choices made by each respondent. Because of randomization, differences by choice set size in respondent characteristics are not statistically significant.

We estimated ordered probit models of the effects of choice set size on each outcome. We condensed the responses from a seven-point Likert scale into three groups: 1-3, 4, and 5-7.⁶ The models also include a control for whether the observation was the respondent's second choice, both to control for and to demonstrate the potential effects of learning or experience on decision-making.⁷ Finally, the models include the set of individual socioeconomic and demographic characteristics from Table 1 (although the results are not sensitive to including them), and standard errors are clustered by respondent.

⁴Our experiment included an additional manipulation in which we randomized respondents to receiving sets of plans that varied in the extent of differentiation between products. Thus, technically choice sets for respondents in the low differentiation arm were randomly chosen from a pre-defined set of low differentiation choice sets and choice sets for respondents in the high differentiation arm consisted of a randomly chosen group of plans from a highly differentiated choice set.

⁵The Knowledge Networks Panel includes non-Internet users with access via Web-TV, but we did not use this group because we had a pre-programmed study.

⁶Our results do not differ qualitatively when we retain the original 7-point scale in the ordered probit models. We use the collapsed 3-category scale for ease of interpretation and exposition.

⁷In the experiment, we also randomized respondents to two arms in which the plans were characterized by low and high differentiation in plan characteristics (the former having a smaller range and the latter having a larger range for the plan attributes). In the models presented in this paper, we also controlled for the differentiation arm, although our results are not sensitive to including this control.

IV. Results

In Table 2, we present the distribution of responses for each outcome.⁸ Overall, respondents appeared to be relatively satisfied with their chosen plan. However, the responses to questions regarding the size of the choice set were less favorable, with a majority indicating they had either too many or too few options. Further, respondents generally did not view the decision process favorably. Fifty-eight percent indicated they did not enjoy making the choice, and 61% indicated they found it difficult to make a decision. Respondents were approximately equally positive and negative in their perceptions of control in decision-making and the extent to which they felt they made an informed decision.

Effects of Choice Set Size on Outcomes

In Tables 3 and 4, we present results from ordered probit models of the outcomes as a function of choice set size. The tables present the marginal effects – the change in the probability of a response of 1-3 and 5-7 relative to a response of 4 for the corresponding change in the independent variable.

Choice set size had a positive effect on the likelihood that a respondent liked his or her plan (Table 3 – Model 1). Respondents selecting from choice sets with 5, 10 and 16 plans were 14, 19, and 16 percentage points, respectively, more likely to indicate they liked their plan than to report a neutral response than those selecting from choices sets with 2 plans, and these differences were statistically significant. Similarly, respondents were 10, 14, and 11 percentage points less likely to indicate they did not like their plan. While the magnitudes of the estimates indicate that the proportion of respondents satisfied with their plan peaked at choice set sizes of 10, we cannot reject the hypothesis that the effect of a choice set size of 16 is the same as that of a choice set size of 10.

Respondents choosing from larger sets were also more likely to indicate that the plan they chose was similar to their ideal plan (Table 3 – Model 2). Because the plans in the choice sets were differentiated, this is evidence that larger choice sets provided respondents with plans that more closely matched their preferences.

In contrast to existing literature, the results provide little evidence that choice set size was related to the probability of enrolling in a plan (Table 3 – Model 3). While the probability of enrolling in a plan first increased and then declined with the number of plans in the respondent's choice set, none of the effects are statistically significant. We note that many of the control variables in these models had statistically significant effects in expected directions, providing reassurance over the validity of the finding. For example, the likelihood of enrolling increased with the number of drugs taken regularly and with household income (result not shown).

Although respondents were generally more satisfied with their chosen plan as the number of alternatives from which they chose increased, they became less satisfied with the size of the choice set (Table 3 – Model 4). This effect was large and statistically significant.

In Table 4, we present models of the effects of choice set size on respondents' decision processes. While respondents generally did not enjoy making the choice (Table 2), we find little evidence that this varied with the size of the choice set (Table 4 – Model 1). However, respondents found it more difficult to make a decision as the size of the choice set increased (Table 4 – Model 2), which was most pronounced with 16 plans.

⁸We have different sample sizes for some of the variables because respondents were allowed to leave answers blank. We did not eliminate respondents from any of the analysis, but some respondents were naturally excluded by non-response.

Respondents facing larger choices sets generally felt both more in control of their decision and that they made a more informed decision (Table 4 – Models 3 and 4). This feeling of greater control, however, dissipated when respondents were choosing among 16 plans – they were about as likely to report they felt in control of their decision as those choosing between 2 plans. Respondents were also more likely to feel well-informed when they had more alternatives from which to choose.

Effects of Second Choice on Outcomes—Our data include two choices from most respondents, and we included an indicator of whether the choice was the respondent's second choice. In general, the estimates of the effects of the indicator of second choice were small and not statistically significant. However, in the models of decision processes, the direction of the estimates indicates that decision-making was easier for respondents when making the choice for the second time (Table 4 – Models 1-4). Respondents enjoyed making the choice more, found it less difficult to make a decision, felt more in control of their decision, and were more likely to feel they made a well-informed decision in their second choice. Consistent with these results, when making their second choice, respondents were 8 percentage points more likely to indicate the choice set should have been larger and 6 percentage points more likely to say it had too few options than when they made their first choice. Taken together, these results indicate that either learning or experience reduces the costs of decision-making in this context, making respondents more receptive to larger choice sets.

V. Discussion and Conclusion

Choice creates both benefits and costs for Medicare beneficiaries choosing among prescription drug plans. The results provide the first empirical evidence consistent with the framework introduced by Reutskaja and Hogarth (15) in which both the benefits and costs of choice increase with the number of items in the choice set. Older adults choosing from more alternatives were more likely to like their plan and were more likely to rate it similar to their ideal plan than those with limited choice. Because larger choice sets offered more varied products in our experiment, they may have offered beneficiaries a plan that more closely matched their preferences. The product differentiation value of choice is consistent with evidence documenting that people are more likely to enroll in a plan when an employer offers choice, even though the generosity of the plan in which they enroll is often lower (34). The result is also consistent with evidence that health insurance choice has a value in and of itself (22).

We also find, however, that larger choice sets make decision-making more costly. People were more likely to find the decision difficult when faced with the largest choice sets (16 plans) relative to 2 plans. They were also much more likely to report that the choice set had too many plans as the number of alternatives increased. While our study did not examine decision quality, these results are consistent with other research that suggests that larger choice sets may lead beneficiaries to make normatively worse decisions (35, 36). One important avenue for future work is to understand if an unfavorable view of the decision process is inherent to health care decisions, and whether some of the cognitive costs of the decision are realized even before the decision is made. In contrast to the generally negative effect of choice set size on decision costs, we also found that people were more likely to feel they made an informed choice when choosing among larger choice sets. Respondents viewing larger choice sets may have viewed a wider range of product attributes making them feel more informed about the plan they chose. Thus, it may be possible for more choice to sometimes decrease decision costs for unfamiliar decisions. More generally, our results identify an important tension between not wanting more options (wanting to simplify the decision) and feeling happier with an outcome when the decision set has more options.

This finding is consistent with economic theory but in contrast with many prior studies that suggest that people want to have a lot of choice but that they are happier with the outcome when there are fewer choices (8, 11, 31).

Our findings are also consistent with data from public opinion surveys of older adults' experience with the Medicare prescription drug benefit that highlight that a majority of beneficiaries agree that having insurance companies compete improves their options, while at the same time recognizing that it complicates their decisions (37). The results from the current study suggest that these apparently conflicting statements reflect different mechanisms by which choice influences decision-making. Despite providing evidence of these competing effects of choice set size, in contrast, to other studies, we do not find evidence that satisfaction with the choice first increases and then declines with choice set size. While it is possible that this type of effect would have emerged in our experiment if we had included larger choice sets, it is also possible that the effect of too much choice has been over-represented in the literature (38).

While we find evidence that experience reduces cognitive costs when respondents are making two consecutive decisions, making people more receptive to larger choice sets, it is not clear to what extent experience reduces cognitive costs when the decisions are made from year to year. How the ability and desire of older adults to make these types of choices adapts over a longer timeframe is another important research question.

In general, an important consideration for our results is that they were generated from an experiment based on hypothetical choices, rather than actual decisions. Because both the benefits and costs of the decision are larger in a real choice task, our experiment cannot determine the optimal size of the choice set. However, our experiment does help us understand the processes underlying choice by identifying increased benefits and increased costs for older adults with larger choice sets. Studies of hypothetical choices in this context are likely to have value in identifying the mechanisms that influence decision-making, which can then be used to develop decision aids and interventions to aid decision-making, as well as schema for public policy analysts to understand how different aspects of a choice affect decision makers.

An important question is the extent to which our results are generalizable to other settings. The setting we examine is novel in two ways: (1) the focus is on older as opposed to younger adults, and (2) the choice of drug plans is an important decision with consequences for respondents. Recent research finds that older adults make more errors (35) and have weaker preference for choice in this type of setting than younger adults (39). These studies suggest that choice is more costly for older adults. However, the benefits of choice may also be higher in this context due to the importance of the product. These offsetting effects may also explain why we do not find evidence of a choice overload effect.

Our study has important implications for considering choice set size as a policy instrument in the Medicare Part D Prescription Drug benefit. First, it is important to consider the benefits of larger choice sets when deciding whether to constrain the number of plans available to beneficiaries. In our experiment, we find that people are more likely to find a plan that more closely matches their preferences when presented with larger choice sets. Similarly, using a structural model of health plan choice in the context of Part D (40) estimate significant reductions in consumer surplus associated with restrictions in the size of the choice set facing consumers. These results suggest caution in adopting policies that eliminate potentially valuable product differentiation and point to the value of additional research to obtain a better understanding of the effects of choice set size on decision-making as well as the mechanisms driving these effects.

Second, our findings suggest an alternative mechanism for addressing problems relating to choice set size – reducing the cognitive costs for beneficiaries. A potential explanation for the absence of evidence of choice overload in our experiment is that the information was presented in an organized tabular format, reducing the cognitive costs of large choice sets. A variety of potential strategies may accomplish this objective including improving both the types and form of information available on the alternatives facing beneficiaries, making information more accessible, and restructuring the choice set in ways that preserve the availability of choice but provide a safety net for those for whom decision-making is prohibitively difficult.

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Appendix

Appendix Table

Study Sample Characteristics Relative to Nationally Representative Samples

Characteristics		Analysis Sample	MEPS 2005	HRS 2006
Age	65-69	0.47	0.28	0.28
	70-74	0.32	0.23	0.23
	75 and over	0.20	0.49	0.49
Sex	Male	0.49	0.43	0.43
	Female	0.51	0.57	0.57
Education	Less than High School [*]	0.10	0.28	0.26
	High School Graduate	0.35	0.35	0.36
	More than High School	0.54	0.37	0.39
Employment Status ^{**}	Not Employed	0.83	0.85	n.a.
	Employed	0.17	0.15	n.a.
Marital Status	Married	0.72	0.53	0.57
	Not Currently Married	0.28	0.47	0.43
Race	White	0.91	0.86	0.89
	Other	0.09	0.99	0.11
Self-Reported Health Status	Excellent	0.10	0.14	0.09
	Very Good	0.38	0.28	0.28
	Good	0.37	0.32	0.32
	Fair or Poor	0.16	0.17	0.31

Note: MEPS statistics generated using MEPSnet (http://www.meps.ahrq.gov/mepsweb/data_stats/meps_query.jsp).

^{*} includes missing and/or not reported for MEPS

^{**} categories not defined similarly for the HRS.

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Table 1

Study Sample and Randomization

	Unique Responde nts	Choice Set Size			
		2 plans	5 plans	10 Plans	16 plans
Age 65-69	0.47	0.51	0.46	0.48	0.44
Age 70-74	0.32	0.32	0.32	0.32	0.33
Age 75+	0.20	0.16	0.22	0.20	0.23
Education: < High School	0.10	0.11	0.09	0.09	0.10
Education: High School Graduate	0.32	0.31	0.30	0.32	0.35
Education: > High School	0.58	0.58	0.61	0.58	0.54
White	0.85	0.82	0.84	0.85	0.91
Female	0.49	0.43	0.51	0.50	0.51
HH Income: < \$30,000	0.20	0.16	0.21	0.17	0.25
HH Income: \$30,000 to <\$75,000	0.60	0.65	0.60	0.60	0.56
HH Income: >\$75,000	0.20	0.19	0.20	0.24	0.19
Household Size > 2	0.74	0.78	0.72	0.75	0.73
Currently Employed	0.20	0.21	0.23	0.19	0.17
Currently Married	0.72	0.71	0.72	0.73	0.72
Number of Drugs Taken Regularly: 0	0.10	0.11	0.10	0.07	0.10
Number of Drugs Taken Regularly: 1-2	0.38	0.35	0.35	0.42	0.39
Number of Drugs Taken Regularly: 3-5	0.37	0.38	0.38	0.35	0.38
Number of Drugs Taken Regularly: 6 or more	0.16	0.16	0.17	0.16	0.13
N	295	136	152	151	134

Note: The difference by choice set size in each characteristic is not statistically significant at $p \leq 0.10$.

Table 2

Responses to Questions about Chosen Plan, Choice Set, and Decision Process

	N	Percent		
		(1-3)	(4)	(5-7)
How much do you like the plan you decided to pick? *(1=Not at all, 7=Extremely)	567	25	29	46
How different/similar is the plan you chose from the 'ideal' plan you would like to purchase for yourself? *(1=Ideal plan would be very different from the plan I chose now, 7=The plan I chose now is the ideal one)	561	32	22	45
If presented with the choice of the above plans, how likely would you be to enroll in ANY plan (where the alternative is going without a plan)? *(1=Certain NOT to enroll, 4=Equally likely to enroll and not to enroll, 7=Certain to enroll)	568	16	21	63
Do you think the selection should have included more plans? *(1=I had too few options to choose from, 4=I had the right number of options to choose from, 7=I had too many options to choose from)	562	26	32	42
Do you think that the selection should have included a greater variety of plans? *(1=I had too little variety, 4=I had the right amount of variety, 7=I had too much variety)	567	31	32	37
How much did you enjoy making the choice? *(1=Not at all, 7=Extremely)	567	58	22	20
Did you find it difficult to make your decision? *(1=Not at all, 7=Extremely)	564	25	14	61
How much did you feel in control of your decision? *(1=Not at all, 7=Extremely)	558	41	19	40
Do you feel that you made a well-informed decision when you picked your plan? *(1=Not at all, 7=Extremely)	565	38	19	43

Note: Data represent 2 choices at most from 295 unique respondents.

Table 3

Choice and Choice Set Satisfaction

	Model 1		Model 2		Model 3		Model 4	
	How Much Do You Like Your Plan?		How Different/Similar Is The Plan You Chose To Your Ideal Plan?		How Likely Would You Be To Enroll?		Should The Selection Have Included More Plans?	
	Pr(Do Not Like Plan)	Pr(Like Plan)	Pr(Plan Differs from Ideal)	Pr(Plan Similar to Ideal)	Pr(Not Likely to Enroll)	Pr(Likely to Enroll)	Pr(Too Few Option)	Pr(Too Many Options)
5 Plans in Choice Set	-0.103 ^{***} [0.038]	0.140 ^{***} [0.054]	-0.041 [0.048]	0.047 [0.056]	-0.036 [0.030]	0.064 [0.054]	-0.095 [*] [0.037]	0.129 [*] [0.054]
10 Plans in Choice Set	-0.137 ^{***} [0.036]	0.190 ^{***} [0.054]	-0.095 [*] [0.046]	0.110 [*] [0.055]	-0.013 [0.031]	0.023 [0.055]	-0.213 ^{***} [0.031]	0.316 ^{***} [0.051]
16 Plans in Choice Set	-0.114 ^{***} [0.037]	0.158 ^{***} [0.056]	-0.123 ^{***} [0.046]	0.145 [*] [0.057]	0.005 [0.033]	-0.008 [0.058]	-0.268 ^{***} [0.028]	0.430 ^{***} [0.049]
Second Choice	-0.036 [0.030]	0.045 [0.038]	-0.011 [0.035]	0.012 [0.039]	0.013 [0.023]	-0.023 [0.039]	0.060 [*] [0.030]	-0.077 [*] [0.038]
Observations	565		559		566		560	

+ p<0.1

Note: The cells in the table are the marginal effects [standard errors] from order probit models of the indicated outcome. Models include controls for age, education, race, gender, household income, household size, employment status, marital status, and number of drugs taken regularly as well as an indicator of the study arm.

^{***} p<0.01

^{*} p<0.05

Table 4

Decision Processes

	Model 1		Model 2		Model 3		Model 4	
	How Much Did You Enjoy Making the Choice?		Did You Find It Difficult to Make Your Decision?		Did You Feel In Control of Your Decision?		Did You Make a Well-Informed Decision?	
	Pr(Not At All)	Pr(Extremely)	Pr(Not At All)	Pr(Extremely)	Pr(Not At All)	Pr(Extremely)	Pr(Not At All)	Pr(Extremely)
5 Plans in Choice Set	-0.106 ⁺ [0.059]	0.076 ⁺ [0.044]	0.009 [0.047]	-0.012 [0.058]	-0.114 [*] [0.056]	0.117 [*] [0.059]	-0.101 ⁺ [0.052]	0.110 ⁺ [0.058]
10 Plans in Choice Set	-0.021 [0.059]	0.014 [0.041]	-0.071 [0.044]	0.09 [0.056]	-0.099 ⁺ [0.055]	0.101 ⁺ [0.058]	-0.101 [*] [0.051]	0.110 ⁺ [0.057]
16 Plans in Choice Set	0.031 [0.061]	-0.021 [0.040]	-0.121 ^{**} [0.042]	0.155 ^{**} [0.056]	-0.01 [0.059]	0.009 [0.059]	-0.098 ⁺ [0.053]	0.107 ⁺ [0.059]
Second Choice	-0.064 [0.041]	0.044 [0.028]	0.048 [0.034]	-0.059 [0.041]	-0.055 [0.040]	0.054 [0.040]	-0.045 [0.038]	0.047 [0.040]
Observations	531		528		525		529	

Note: The cells in the table are the marginal effects [standard errors] from order probit models of the indicated outcome. Models include controls for age, education, race, gender, household income, household size, employment status, marital status, and number of drugs taken regularly as well as an indicator of the study arm.

**
p<0.01

*
p<0.05

⁺
p<0.1