Evidence about Consumer Experiences

Consumer Experiences in a Consumer-Driven Health Plan

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Objective. To assess the experience of enrollees in a consumer-driven health plan (CDHP).

Data Sources/Study Setting. Survey of University of Minnesota employees regarding their 2002 health benefits.

Study Design. Comparison of regression-adjusted mean values for CDHP and other plan enrollees: customer service, plan paperwork, overall satisfaction, and plan switching. For CDHP enrollees only, use of plan features, willingness to recommend the plan to others, and reports of particularly negative or positive experiences.

Principal Findings. There were significant differences in experiences of CDHP enrollees versus enrollees in other plans with customer service and paperwork, but similar levels of satisfaction (on a 10-point scale) with health plans. Eight percent of CDHP enrollees left their plan after one year, compared to 5 percent of enrollees leaving other plans. A minority of CDHP enrollees used online plan features, but enrollees generally were satisfied with the amount and quality of the information provided by the CDHP. Almost half reported a particularly positive experience, compared to a quarter reporting a particularly negative experience. Thirty percent said they would recommend the plan to others, while an additional 57 percent said they would recommend it depending on the situation.

Conclusions. Much more work is needed to determine how consumer experience varies with the number and type of plan options available, the design of the CDHP, and the length of time in the CDHP. Research also is needed on the factors that affect consumer decisions to leave CDHPs.

Key Words. Consumer-driven, personal care account, enrollee satisfaction, health plan rating

The label "consumer-driven health plan" (CDHP) has been used to describe a wide variety of different health benefit designs that shift more health care costs to consumers at the point of service, on the presumption that it is desirable to give consumers incentives to pay greater attention to the cost and quality consequences of their health care choices (Shaller et al. 2003). Recently, however, the most common use of the term has been in reference to benefit

plans with three core features: a personal care account; insurance coverage designed to create a "gap" between the dollars in the account and the level at which a deductible is reached; and various Internet support tools intended to facilitate more extensive, better-informed consumer involvement in health care decisions (Christianson, Parente, and Taylor 2002). These features distinguish CDHPs from other benefit designs, such as tiered hospital networks, that also are intended to provide incentives for consumers to consider cost and quality in selecting providers.

Consumer-driven health plans with these core features are offered now by a relatively small number of employers, but they seem to be gaining momentum, with several large national firms recently adding them as benefit options and established insurers expanding their product lines to include CDHPs (Davis 2003a). Consumer-driven health plans generally are not marketed to employers as an immediate "solution" to their rising health care costs, but rather as a constructive employer response to employee demands for more choice, fewer restrictions, and less involvement on the part of employers and health plans in health care decisions. Employer advocates of CDHPs believe the plans have the potential to moderate employer cost increases in the long run, as employees become more involved in their health care decisions, more conscious of prices and better equipped to make price–quality trade-offs (Gabel, Lo Sasso, and Rice 2002).

From a broader perspective, some analysts forecast a "consumer revolution" in health care with CDHPs and similar insurance arrangements in the vanguard. They expect this revolution to eventually change traditional relationships between consumers and health care providers resulting in a more efficient, more responsive health care system (Davis 2003c). In contrast, skeptics see CDHPs as simply being vehicles for shifting a greater share of health care costs to consumers, especially consumers with high medical care

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needs (Swartz 2001/2002), and doubt the ability of a diffuse, consumer-driven market to create change in an increasingly concentrated provider system (Devers et al. 2003). They also point to the complexity of the CDHP benefit design as potentially impeding the ability of enrollees to act as aggressive, informed health care consumers, and they question whether consumers actually want to play this role (Gabel, Lo Sasso, and Rice 2002).

Clearly, assumptions about consumers and their behaviors are central to how one views CDHPs and their potential impact on America's health care system. However, at this time, little data are available that relate directly to the experience of enrollees in CDHPs. How satisfied are they with these plans? How do they use the plan features touted by CDHPs, and how satisfied are they with these features? How does the experience of CDHP enrollees vary by individual characteristics? In this article, we begin to address these issues using data collected through a survey of employees at the University of Minnesota.

Because our analysis is based on employees from one employed group enrolled in a single CDHP in one health care market at a specific point in time, it should be viewed as a first, limited attempt to shed light on the important consumer issues raised by CDHPs. In the concluding discussion, we suggest directions for future research, based on the results of our analysis.

Background

As indicated above, CDHPs attempt to distinguish themselves from competitors in part through innovative product features directed at consumers (Christianson, Parente, and Taylor 2002; Gabel, Lo Sasso, and Rice 2002). Perhaps the CDHP feature that deviates the most from features offered by other health plans is the personal care account (PCA) (sometimes called a personal spending account, health spending account, or health care reimbursement account). The amount of money in the account varies by type of contract (e.g., individual versus family). The employee uses the account to pay for health care expenses. Money left in the account at the end of the contract year is carried forward into the next year, if the employee continues in the plan. If the employee retires, leaves the company, or stays with the company, but switches health plans, employers have different rules regarding disposition of any dollars left in the account.

A second important feature of CDHPs is their flexibility with respect to benefit design (Davis 2003b). The personal care account (PCA) is paired with rather traditional high-deductible health care coverage, typically featuring

coinsurance for expenses above the deductible and an "out-of-pocket" limit on expenses to protect the enrollee against the financial consequences of a catastrophic health care event. The plan deductible is set at a level greater than the amount of dollars put in the PCA by the employer. If the enrollee exhausts the PCA during the contract year, he or she must bear the entire cost of any further services used, until the deductible is reached, and the coinsurance feature takes hold. Typically, however, CDHPs provide "first-dollar" reimbursement for preventive services, so that enrollees do not need to use PCA dollars to pay for these services. Clearly, benefit coverage under CDHPs can be "customized" along a number of dimensions (size of PCA and deductible, level of coinsurance, out-of-pocket maximum, PCA rollover rules, and reimbursement for preventive services) in order to achieve the combination of employee premium and point-of-service cost sharing desired by the employer.

The third core feature of CDHPs is a reliance on Internet tools to help employees "manage" their health care expenses and treatment options (Gabel, Lo Sasso, and Rice 2002). Three types of tools are commonly found in CDHPs. First, there are tools aimed at helping enrollees track expenditures in their PCAs, analogous to tools used in "online" banking. Enrollees can access their accounts through the plan's website and monitor expenditures charged against the account. The idea is that, because enrollees see expenditures accumulate, and see the prices attached to different services as they are charged against the account, they will become more cost conscious in their purchase decisions; this is reinforced by the ability to "roll over" unused dollars in the account into the next year. Second, there are tools designed to help enrollees "shop" for medical care, including price lists and comparisons of physician qualifications and hospital performance measures. Typically, these tools are made available through contracts with other Internet health care "content" providers. Third, CDHP websites provide links to other Internet educational resources (sometimes "rebranded" under the plan's name) relating to health promotion, disease management, and general medical information. These last two sets of tools are becoming relatively common features of health plans, but play a more central role in CDHPs, with their emphasis on achieving greater consumer involvement in the selection of providers and in decisions around the treatment process itself.

In our analysis, we take two general approaches to examining the experience of CDHP enrollees. First, we compare enrollee experience in CDHPs with experiences of enrollees in more traditional health plans. We begin by examining satisfaction with customer service; because CDHPs

market themselves as "consumer-driven," and many CDHP features may be new to enrollees, this is a particularly relevant dimension of CDHP performance. Second, we compare CDHPs to other health plans on overall enrollee satisfaction, employing a measure used in the Consumer Assessment of Health Plans (CAHPS) survey. Third, we contrast plan-switching behavior on the part of CDHP and other health plan enrollees after one year.

In the second part of our analysis, we focus only on CDHP enrollees. We examine their use of different CDHP features and their assessment of the usefulness of those features, controlling for enrollee characteristics. This helps us understand how CDHP enrollees with different characteristics experience their health plan. We also assess their overall experience in the CDHP using three different measures: willingness to recommend the plan, having a particularly positive experience in the plan and having a particularly negative experience in the plan.

Study Setting

Our study setting is the University of Minnesota, which had about 16,000 covered employees in its health plans in 2002. Previous to 2002, university employees were part of the State of Minnesota employee health insurance program where they had six health plan options. There was standardized benefit coverage across these options. However, one option was structured like a typical preferred provider organization (PPO), with the enrollee facing a deductible and coinsurance for use of nonnetwork providers. Among the other five options, there was some variation in network size and composition. An important distinguishing feature among these options was that, in two plans, the enrollee could self-refer to an in-network specialist, while three plans were more restrictive, requiring a referral from a primary care physician.

The university split from the State of Minnesota program to become self-insured and to be able to tailor its benefit plan more closely to the needs and demands of its employees. The health benefits plans offered by the university during the fall 2001 open-enrollment period, including two CDHP options, are described in Parente, Feldman, and Christianson (2004, this issue). Under both CDHP options, enrollees had access to a nationwide provider network and no referrals were required to see any provider in or out of the network. First dollar coverage was provided for preventive health services, including routine physical and gynecological examinations, cancer screening, laboratory tests, diagnostic imaging, immunizations, and routine hearing and eye

examinations. At the end of the year, any dollars left in the PCA would be carried forward to the next year. Enrollees leaving employment at the university or switching from the CDHP to another plan would lose the money accumulated in their PCA.

Employee Survey and Respondent Characteristics

During the fall 2001 open enrollment period, only 349 individuals and 346 families selected the CDHP plan. The most popular plan was the HealthPartners HMO, with 5,027 individual enrollees and 3,967 families. The Patient Choice product enrolled 2,091 individuals and 2,808 families.

A telephone survey was administered from April through June 2003, in which employee respondents were asked to report on their own experiences in their health plans during calendar year 2002. They were not asked to provide information about family members, nor were they asked about the experience of family members in the chosen health plan. The only exception was that the employee respondent was asked if he or she or any family member had a chronic illness. The survey yielded 430 completed interviews of CDHP enrollees (a 63 percent response rate) and 501 of enrollees in other health plans (a 73 percent response rate). The details of this survey are found in Parente, Feldman, and Christianson (2004, this issue).

There were several statistically significant differences between the CDHP respondents and respondents who were enrolled in other plans (Table 1). For example, CDHP respondents were older (48.3 versus 43.9 years), less likely to purchase a family contract (44 percent versus 52 percent), and less likely to be in a civil service bargaining unit (23 percent versus 50 percent), but more likely to be academic professionals/administrators (31 percent versus 23 percent) or faculty (36 percent versus 14 percent). Not surprisingly, given these differences, CDHP enrollees also reported much higher incomes than enrollees in other plan options. CDHP respondents were also more likely to have been enrolled in a PPO option previously and less likely to have been in one of the more restrictive plan options. Because of these significant differences, we used multivariate regression or logistic regression to control for employee characteristics in subsequent analyses. We note that the proportion of respondents who said they or a family member had a chronic illness was not significantly different in the CDHP versus other plans. Based on our survey question, it would appear that the CDHP was neither more nor less attractive to people with chronic illness than other plan options.

Table 1: Characteristics of Survey Respondents

	Responders		*Nonresponders*	
Variable	*CDHP*	*Other*	*CDHP*	*Other*
Age (in years)	48.3	43.9*	49.3	44.7
Female	46%	44%	58%	53%#**
Chronic Illness	35%	37%	N/A	0
Family Contract	44%	52%*	46%	52%
Income	$71,406	$48,148*	$83,533	$49,344#
Job Classification				
Academic Professionals and Administrators	31%	23%*	24%	25%
Civil Service V Class	10%	13%	4%	7%#**
Civil Service/Barg Unit	23%	50%*	18%	43%**
Faculty	36%	14%*	54%	25%#**
Prior Health Plan				
Type 1: Standard PPO	17%	3%*	21%	4%
Type 2: No self-referral to in-network specialist	59%	79%*	60%	76%
Type 3: Self-referral to in-network specialist	13%	8%*	7%	7%#
No Prior Plan	12%	11%	12%	12%
Response Rate	63%	67%		
Sample	433	504	259	248

*Statistically significant difference between mean values of respondents for CDHP and Other at the .01 level (t-test).

#Statistically significant difference between mean values of CDHP respondents and nonrespondents the .01 level (t-test).

**Statistically significant difference between mean values of other plan respondents and nonrespondents at the .01 level (t-test).

Table 1 also provides data on the general characteristics of plan respondents and nonrespondents. There were statistically significant differences between these groups by gender and by job classification. Females made up a larger proportion of nonrespondents, as compared with respondents, and civil service workers were a smaller proportion of nonrespondents, while faculty were a larger proportion, as compared with respondents.

Comparisons across Health Plans: Results

Table 2 contains comparisons of CDHP enrollees and enrollees in other plans in three areas: service experience, overall satisfaction with their plan, and decision to switch plans at the end of the contract year. Regarding experience, survey respondents were requested to answer with respect to the previous calendar year (2002). It is possible that experience in the plan during the first

Table 2: Service Experience, Satisfaction, and Plan Switching: All Survey Respondents

	CDHP	*Other Health Plans*
Services		
Called customer service = 1, else 0	63%	48%*
If yes, then problem getting answer = 1, else 0	36%	33%*
Health plan paperwork experience = 1, else 0	52%	43%*
If yes, then problem with paperwork = 1, else 0	50%	43%*
Overall Satisfaction with Health Plan (Scale: 0 = worst to 10 = best)	7.46	7.55*
Switched Health Plan after Year 1 (e.g., CDHP to HMO)**	8%	5%*

Notes:

All results are regression adjusted means by health plan choice.

Regression covariates include: age, gender, chronic illness, contract type, income, job type, prior health plan.

*Statistically significant difference at the .01 level (t-test) between regression adjusted mean values.

**Subset of respondents; omits respondents who changed jobs or failed to elect health insurance for 2003.

part of that year might not be recalled with the same degree of accuracy as experience in the latter part of the year. However, unless this potential problem occurs to a different extent in the two comparison groups, it should not influence tests of differences between the groups. Throughout the survey, respondents were reminded of the period addressed by the survey questions.

Service Experience

With respect to service experience, we expected CDHP enrollees to be more likely to contact a customer service representative, because the plan design was new to them and, in particular, because managing the personal care account could raise questions. This expectation was supported by the data, as 63 percent of CDHP respondents contacted a representative versus 48 percent of respondents in other plans. Female respondents were less likely to contact a service representative while holders of family contracts were more likely to do so. This latter finding could reflect contacts made by the enrollee on behalf of family members as well as herself. In the CDHP, 36 percent of respondents reported that they had a problem getting the help they needed when they contacted a service representative, versus 33 percent of respondents in other

plans. Supporters of CDHPs could view this as a favorable finding, given that enrollees are new in these plans and have no experience in managing personal care accounts. On the other hand, CDHPs often emphasize superior customer service when marketing to employers, which suggests that their enrollees should experience fewer problems having their questions answered than enrollees in other plans.

We also asked respondents if they had any experience with health plan paperwork (e.g., getting an ID card, having records changed, processing forms and other paperwork related to getting care). If they did, we asked if they encountered any problems related to plan paperwork. Health plan paperwork is a commonly reported consumer irritant. In fact, in their early years, HMOs emphasized a reduction in health plan paperwork hassles as an attractive feature when marketing to potential enrollees. Because CDHPs are relatively new organizations, and because their benefit design features a deductible and coinsurance, we expected CDHP respondents to be more likely to report experience with paperwork. The survey responses indicate that more CDHP enrollees did have experience with paperwork (52 percent versus 43 percent), and that they were more likely to report a problem with paperwork (50 percent of CDHP respondents with paperwork experience versus 43 percent of respondents in other plans). Again, respondents with family contracts were more likely to report experience with paperwork.

Overall Satisfaction

In addition to questions about customer service and health plan paperwork experience, we asked all survey respondents to rate their health plans. We used the scaling approach of the Consumer Assessment of Health Plans survey instrument: a score of 0 indicates the worst plan possible and 10 equals the best. There was a significant difference in the average CDHP value (7.46) and the average value for respondents in other plans (7.55), although the absolute difference was quite small. These values are similar to averages reported in other studies (Fowler, Gallagher, and Nederland 1999; Carlson et al. 2000; Morales et al. 2001; Roohan et al. 2003). Again, interpretation of this finding depends on one's prior views of CDHPs. Skeptics would argue that early enrollees in CDHPs, in a multiple plan option environment, would be heavily predisposed to like the plan. That being the case, the fact that their average rating was lower than the ratings for other plans could indicate more dissatisfaction with the CDHP than expected. In contrast, CDHP supporters might consider the small difference as favorable, given that at least some who

selected this new option may not have fully understood its implications and therefore could be expected to rate the plan poorly.

Plan Switching

The decision to switch plans also could be seen as a measure of overall enrollee satisfaction with the plan. Of our CDHP respondents, 8 percent switched from the CDHP to another plan at the end of the contract year. This did not include people who left the university or declined benefits. Among respondents in other plans in 2002, 5 percent moved to a different plan at the end of the contract year. In absolute terms, the percent of enrollees switching plans at the end of the year was not large for either CDHP or other plan enrollees, which could be viewed favorably by CDHP supporters. However, the difference between CDHP and other plan enrollees in percent switching was statistically significant and, in relative terms, substantial. CDHP skeptics could interpret this difference as evidence that early CDHP enrollees are less happy with their plans than other employees.

CDHP Enrollee Results

In this section we examine the experience of CDHP enrollees with the features of the CDHP. For this analysis, we note where there are statistically significant differences in the experiences of subgroups of CDHP enrollees defined by age, gender, presence of chronic illness in the family, family versus individual contract, and income. In assessing overall experience in the plan we also control for whether or not the enrollee had a PCA account balance at the end of the year and enrollee assessment of the quality of the information provided by the plan.

CDHP Members: Experience with Specific Plan Features

We asked survey respondents who were CDHP enrollees about their use of Internet support tools offered by the plan (Table 3). In marketing to employers, CDHPs emphasize the availability of these tools to provide consumers with the information they need to make informed decisions regarding their care. Specifically, we asked CDHP enrollees whether they had visited the CDHP website in 2002 for the provider directory, disease management information, or pharmacy pricing information. For individuals who had used each information source, we asked how useful that source was (1 = very useful; 4 = not useful at all).

Table 3: Experience with Specific CDHP Features: CDHP Enrollees Only

		Demographic Factors				
		Coefficient Signs & Significance				
Feature Use and Ranking	*Mean Response*	*Age*	*Gender*	*Chronic Illness*	*Family Contract*	*Income*
Use of CDHP's Web Site	34%	–	ns	ns	ns	ns
Provider Directory (1 = used, 0 = not used)	30%	–	ns	ns	ns	ns
Usefulness Rating (1 = Very Helpful – 4 Not Useful)	1.91	ns	ns	ns	ns	ns
Disease Management (1 = used, 0 = not used)	8%	ns	ns	ns	ns	ns
Usefulness Rating (1 = Very Helpful – 4 Not Useful)	2.38	ns	ns	ns	ns	ns
Pharmacy Pricing (1 = used, 0 = not used)	12%	–	ns	ns	ns	ns
Usefulness Rating (1 = Very Helpful – 4 Not Useful)	2.12	ns	ns	ns	+	ns
Satisfaction with CDHP Features (1 = Very Satisfied – 4 = Very Dissatisfied)						
Amount and Quality of Information Provided by the CDHP	1.87	ns	ns	ns	ns	ns
Limitations on Which Healthcare Services Can Be Paid by the CDHP	1.79	ns	ns	ns	ns	ns

Overall, 34 percent of CDHP enrollees indicated that they had visited the CDHP website at some time during the year. The provider directory, accessed by 30 percent of respondents, was the most commonly used tool and also was rated the most useful of the tools (mean scale score = 1.91). Logit regression analyses indicated that older respondents were less likely to use the online provider directory. There was no statistically significant association between any respondent characteristics and their rating of usefulness of the directory. The disease management and pharmacy pricing tools were less likely to be used (8 percent and 12 percent of respondents, respectively). This is not surprising, as these tools presumably would be of greatest value to the

minority of respondents (35 percent) reporting that they or a family member had a chronic illness. It is surprising, however, that no measured characteristics, including having a chronic illness, are associated with use of the disease management site or ratings of its usefulness (mean scale score = 2.38). With respect to pharmacy pricing, older respondents are less likely to use the tool. Although holders of family contracts were not more likely to use the pharmacy pricing tool than other contract holders, they were more likely to find the online pharmacy pricing information to be useful (mean scale score = 2.12).

Respondents also were asked about their satisfaction with two general aspects of their CDHP: amount and quality of information provided by the CDHP and limitations on which health care services were paid for by the CDHP (1 = very satisfied; 4 = very dissatisfied). In each case, the responses were favorable, with a scale score of 1.87 for the former and 1.79 for the latter. No respondent characteristics were significantly associated with these satisfaction measures (Table 3).

CDHP Members: Overall Experience

We analyzed three measures of enrollee overall experience in the CDHP: whether or not the respondent would recommend the plan to a friend, family member, or colleague; whether the respondent had a particularly positive experience with the plan; and whether the respondent had a particularly negative experience with the plan. Response options for the first measure were: yes, would definitely recommend; yes, would recommend depending on their friend's situation; and no. Thirty percent said they would definitely recommend the plan, while 87 percent said they definitely would recommend the plan or would recommend it depending on the situation. In addition to enrollee characteristics, we included two other variables in our logit analysis of this response: whether the respondent had dollars left in his or her personal care account (1 = dollars left, 0 = otherwise) and satisfaction with the amount and quality of information provided by the plan. Satisfaction with limitations on services paid for by the plan was not included because it was highly correlated with satisfaction with information. We estimated logit equations for both specifications of the "recommend" variable: 1 = definitely, 0 = otherwise; and 1 = definitely or depending on situation and 0 = otherwise, with the latter findings reported in Table 4. In each equation, no demographic characteristics were significantly associated with whether the respondent would recommend the plan to a friend, family member, or colleague.

Table 4: Overall Experience with Plan: CDHP Enrollees Only

		Demographic Factors						
		Coefficient Signs & Significance						
	Mean Response	*Age*	*Gender*	*Chronic Illness*	*Family Contract*	*Income*	*Account Balance*	*Information Quality*
Would Recommend to Friend	87%	ns	ns	ns	ns	ns	+	+
Had a Particularly Positive Experience	46%	ns	ns	ns	ns	ns	−	+
Had a Particularly Negative Experience	24%	ns	ns	ns	ns	ns	−	−

Respondents who were satisfied with the information provided by the plan, or who had an account balance, were *more* likely to recommend the plan.

Forty-six percent of CDHP enrollees reported that they had a particularly positive experience with the plan, while 24 percent said they had a particularly negative experience. Again, there was no significant relationship between any of the demographic variables and this response. However, individuals who rated highly the quality of the information provided by the plan were more likely to report a positive experience, and less likely to report a negative experience. Having dollars left in the personal care account was associated with a lower probability of reporting a positive experience and also a lower probability of reporting a negative experience. This result could occur because enrollees with dollars left in their PCA had relatively little "contact" with the CDHP during the study year, and thus little opportunity to report either a particularly positive or negative experience.

DISCUSSION

In the University of Minnesota employed group, employees with higher education levels (as proxied by job classification) and incomes make up a much larger share of CDHP enrollees, as compared with other plans. The enrollment decision is examined in depth in another paper in this issue of HSR (Parente, Feldman, and Christianson 2004), but this single comparison is striking. It may be that these individuals are more comfortable assuming

greater decision-making responsibility under the CDHP, or that they are less concerned about incurring out-of-pocket expenses if they exhaust their PCA.

We also found that respondents reporting that they or a family member had a chronic illness were represented in roughly the same proportions in the CDHP and other plans. More importantly, the self-reported chronic illness measure we used was not statistically significant in any of the analyses reported in this paper, suggesting that people with chronic illnesses had similar experiences across health plan types (CDHP versus other) and, for CDHP enrollees only, experienced the CDHP similarly to enrollees not reporting a chronic illness. In this particular employed population, it did not appear that chronically ill enrollees perceived that they were disadvantaged in a CDHP, contrary to concern expressed by some analysts.

Another result that bears discussion is the greater likelihood that CDHP enrollees will contact a plan customer service representative. Clearly, CDHPs will need to devote resources to assuring that their representatives meet the needs of enrollees, or they risk the loss of enrollees to other plans. This finding also underscores the importance to employers of conducting a careful assessment of customer service performance when contracting with a CDHP.

Consumer-driven health plan enrollees rated their plan at approximately the same level as the ratings of enrollees in other plans. And, their rating was very similar to plan ratings in other settings as well. However, a cautious approach regarding this finding seems warranted. It is based on the responses of a relatively small number of high-income, highly educated "early adopters" in an enrollment situation with multiple, diverse health plan choices. Additional comparative ratings of CDHPs versus other health plans in other settings clearly are needed.

Finally, we found that CDHP enrollees were more likely to switch health insurance, although the switching rate was relatively small. More analysis clearly needs to be done regarding enrollees who leave CDHPs, because our findings are based on a small number of switchers.

The portion of our analysis that focused only on CDHP enrollees suggests that their experience in the plan was generally favorable, and therefore supports the comparative plan ratings. A substantial portion of CDHP enrollees said they would recommend the plan to a family member, friend, or colleague, and about half reported a particularly favorable experience in the plan—twice as many as reported a particularly unfavorable experience. The most striking finding of the analysis focused on CDHP enrollees is that, for the most part, the characteristics of enrollees are not

significantly related to self-reported experience in the plan. For instance, while incomes are higher on average for CDHP enrollees versus enrollees in other plans, *within* the group of CDHP enrollees, income is not a significant predictor of experience with plan features.

Future Research

More research is needed to examine whether the findings in this paper can be generalized to enrollees in other CDHP plans or other CDHP plan designs. As pointed out at the beginning of the paper, a hallmark of CDHPs is their flexibility with respect to benefit design. The overall satisfaction of consumers in a CDHP may depend critically on plan design features, such as the amount of money contributed by the employer to the PCA; the level of the deductible relative to that amount; and the clarity with which plan features are communicated by employers and CDHPs to potential enrollees prior to enrollment.

Second, it will be important to examine consumer experience across settings where there is variation in the plan options available to employees. The broader the selection of options, the more likely that employees will sort into plans that best fit their preferences, a priori (Moran, Chernew, and Hirth 2001). When this occurs, one might expect comparable levels of satisfaction for employees across plans, as our findings suggest. Where employees are "forced" into CDHPs because there are no (or very few) other options, or the other options are unattractively priced, one would expect lower levels of overall satisfaction for CDHP enrollees and more negative assessments of CDHP features. Along these same lines, consumer assessments of experience in CDHPs relative to other plans depends in part on the quality of the comparison plans. If these plans are generally well regarded by consumers, it will be harder for CDHPs to demonstrate significant improvements over these plans. For example, in the Twin Cities (our study site) various surveys have found HealthPartners enrollees to be relatively satisfied with their plan.

A third potentially fruitful area of research involves tracking changes in CDHP enrollee perceptions over time. As CDHP enrollees become more familiar with the unique features of their plans, and possibly experience years when they spend all of the dollars in their PCAs, as well as years where money is left to roll over to the next year, will they regard PCAs more or less favorably? Will they make more frequent use of Internet support tools over time, and how will they rate these tools as they become more facile in their

use? Panel data on CDHP enrollees would be useful in addressing these questions.

Fourth, our survey was limited to employees, for both logistical and budget reasons. We did not collect information on the characteristics of family members or on family members' experience in CDHPs. This raises the possibility that the survey responses of employees under family contracts could reflect not only their own experience but that of family members as well. We controlled for contract type (individual versus family) in our analyses, but it clearly would be desirable in future survey research to control for differences in the characteristics of family members and to compare experiences of members in the same family.

Finally, we believe an important area of consumer research will emerge if CDHPs experience significant enrollment growth within specific employed groups. Research in other fields suggests that there can be important differences between "early adopters" of an innovation and later adopters (Rogers 1995), with early adopters more likely to be risk-takers in general. At present, in most employed groups, including the University of Minnesota, CDHP enrollees could be considered "early adopters." Later enrollees might evaluate their experiences in CDHPs quite differently than these early risk-takers.

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