Early Experience with Employee Choice of Consumer-Directed Health Plans and Satisfaction with Enrollment

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Objective. To assess the initial impact of offering consumer-defined health plan (CDHP) options on employees.

Data Sources/Study Setting. A mail survey of 4,680 employees in the corporate offices of Humana Inc. in June 2001.

Study Design. The study was a cross-sectional mail survey of employees aged 18 and older who were eligible for health care benefits. The survey was conducted following open enrollment. The primary outcome is the choice of consumer-directed health plan or not; the secondary outcome is satisfaction with the enrollment process. Important covariates include sociodemographic characteristics (age, gender, race, educational level, exempt or nonexempt status, type of coverage), health status, health care utilization, and plan design preferences.

Data Collection Methods. A six-page questionnaire was mailed to the home of each employee, followed by a reminder postcard and two subsequent mailings to nonrespondents.

Principal Findings. The response rate was 66.2 percent. Seven percent selected one of the two new plan options. Because there were no meaningful differences between employees choosing either of the two new options, these groups were combined in multivariate analysis. A logistic regression modeled the likelihood of choosing the novel plan options. Those selecting the new plans were less likely to be black (odds ratio [OR] 0.46), less likely to have only Humana coverage (OR 0.30), and more likely to have single coverage (OR 1.77). They were less likely to have a chronic health problem (OR 0.56) and more likely to have had no recent medical visits (OR 3.21). They were more likely to believe that lowest premiums were the most important plan attribute (OR 2.89) and to think there were big differences in the premiums of available plans (OR 5.19). Employees in fair or poor health were more likely to have a difficult time during the online enrollment process. They were more likely to find the communications very helpful (OR 0.42) and the benefits information very understandable (OR 0.38). They were less likely to feel that they had enough time to make their enrollment decision (OR 0.47).

Conclusions. Employees who were attracted to the new CDHP plan options valued the attributes that distinguished these plans from other choices. The shift to consumer-defined plans and to the electronic provision of information, however, requires a significant increase in the communication support for all employees, but particularly for those in fair or poor health whose information needs are the most complex and individualized.

Key Words. Consumer-defined health plans, health plan choice, employee satisfaction

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Employers feel increasing pressure to address rising health care costs. One option to help reduce employer costs is to shift from a defined health care benefit, in which the employer provides and subsidizes one or more health plans, to a consumer-directed health plan (CDHP), in which the employer provides a defined payment linked to one plan option, and the employee selects a health plan, either paying any incremental premium difference or receiving credit for a lower-priced option (Bureau of National Affairs 2001). In theory, a CDHP model of health benefits encourages greater employee accountability, offers more flexibility in plan design options, and gives employees greater choice (Employee Benefit Research Institute 2003). It may also reduce cost growth (Nichols 2002).

Many types of CDHP options are emerging. The designs vary in the degree of employee responsibility, from health plans at one extreme that are Internet-based, in which the employees construct their own panel of care providers, to personal care accounts with a high deductible, to traditional plan choices in which only the financing method is changed (Christianson, Parente, and Taylor 2002; Robinson 2002; Jacob 2001). Although these various CDHP options have received extensive publicity, we know little about employees' responses to them (Kelly 2003; Halterman, Camero, and Maillet 2003; Reinhardt 2001).

In June 2001, Humana Inc. offered a new health care benefit program for the nearly 5,000 employees in its corporate headquarters in Louisville, Kentucky. Humana's rationale for the change of health care benefit coverage was three-fold: to provide employees with a greater choice of plans, to give them greater financial responsibility for their choice, and to contain costs to the employer. This new benefit structure had a CDHP design in which the corporation paid a fixed amount—79 percent of the reference plan. The reference plan was a preferred provider organization (PPO), the most popular health plan option with the highest premium. Employees could apply the

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corporate contribution to one of six health care options, keeping the difference if they selected an option other than the PPO. All the other options had less expensive premiums than the PPO.[1]

The two CDHP plan options were similar to health reimbursement arrangements (HRAs) (Gabel, Lo Sasso, and Rice 2002). Gabel defines health reimbursement accounts as plans that "establish an account from which consumers draw to make health care purchases. When the account is exhausted, enrollees must typically pay out of pocket until the annual deductible is met, after which the plan becomes a traditional major medical plan." One of these CDHP options provided an allowance of $500, then 80 percent coinsurance until $2,000 in further out-of-pocket charges were incurred, and finally 100 percent coinsurance. The second CDHP option was similar to the previous one with a $500 allowance, then a $2,000 deductible, and finally 100 percent coinsurance. These options were offered in lieu of HRAs because the tax-sheltered status of HRAs was unclear when the plans were being designed and implemented.

The provider networks overlapped widely across these options. The HMO Plan had the most restrictive network and was also used as the first tier of the Tiered PPO, PPO Standard, and the two CDHPs. Although the enrollment process was supported with web-based information and decision-support tools, there was no ongoing Internet support to monitor expenses or evaluate care choices for employees who enrolled in the CDHP options.

All health care coverage options covered the same benefits, including pharmacy benefits. Concomitant with the change in structure, however, were two significant changes in benefits. The pharmacy benefit was restructured from a three-tier to a four-tier program (Tier 1: $10 copayment: included lower-cost generic drugs and some brand name drugs; Tier 2: $20 copayment: included higher-cost generic drugs and some brand name drugs; Tier 3: $40 copayment: included higher-cost, mostly brand-name drugs that may have generic or therapeutic equivalents in Tier 1 and 2; and Tier 4: 25 percent coinsurance for high-technology drugs with a $2,500 out-of-pocket maximum). The other major benefit change was the addition of a $100 per day inpatient hospital copayment for both the Tiered PPO and HMO options.

The Enrollment Process

Employees had no systematic comparative information on the quality of the options, such as a report card. For the first time, they had access to an online

decision support tool that queried the employee about their coverage needs and preferences. This tool then ranked the plan options according to the employee's responses.

The enrollment design originally called for all employees to enroll electronically (positive enrollment). The design was revised, however, to include a default option, in which employees who did not enroll online were assigned to the new plan option most similar to their previous plan option. Employees could also decline coverage.

The designers of the health plan options had estimated that 5 percent to 10 percent of employees would select one of the two new options that would save them $15 per pay period ($400 per year) for employee-only coverage and upward of $45 per pay period for family coverage (approximately $1,200 per year). (The employee plus spouse rate was roughly 2 times the employee-only rate; the family rate was 3.2 times; and the employee plus child[ren] rate was 1.9 times the employee-only rate.)

Evaluation Questions

The evaluation focused on two questions: (1) How did employees who chose the CDHP options compare with those who did not? (2) Which employee characteristics were related to their perceived ratings of the enrollment process?

Outcomes of Interest

The primary outcome was the employee's self-reported choice of health plan option, specifically selection of either of the two CDHP options. For comparative analyses, employees were combined into two categories: (1) employees who selected the CDHP options, and (2) employees who selected any of the other plan options. The four secondary outcomes related to satisfaction with the enrollment process included: helpfulness of corporate communications, adequacy of time to review materials and enroll, understandability of benefits information, and ease of finding needed information.

Data and Methods

We used a cross-sectional study design and surveyed all benefit-eligible employees ($N = 4{,}680$) immediately after the open enrollment period,

excluding those who helped with the questionnaire. The survey content areas covered: sociodemographic characteristics, health insurance coverage, health care utilization, importance of plan characteristics for plan choice, health information-seeking behavior, the employee's relationship with a primary care physician, and the employee's perceptions of the new online benefits information and enrollment process. Relevant questionnaire items that had been tested and used in previous surveys (Braun et al. 2003; Fowles et al. 2000; Knutson et al. 1998) were incorporated into the questionnaire. New items were pretested by cognitive testing of the questionnaire with a convenience sample of five Humana employees by telephone. The authors developed the questionnaire with advice from Humana project staff in the human resources department. The study protocol and questionnaire were reviewed by an Institutional Review Board for the protection of human subjects.

The survey was conducted between July 27 and October 1, 2001. Following an initial letter from the Humana chief executive officer alerting employees to the forthcoming survey, the evaluator mailed the survey and followed it with a postcard reminder and two additional complete mailings to nonrespondents.

The Plan Choice Model. The model predicts that plan choice will be dependent on four domains: sociodemographic characteristics (including coverage type), health status, previous and anticipated health care utilization (including relationship with primary care physician), and the perceived importance of various plan characteristics. As described by Scanlon and colleagues in their review of health plan choice (Scanlon, Chernew, and Lave 1997), we used logistical regression analysis to model dichotomous plan choice. We tested for collinearity among the health status variables and found none. The results, using a phi coefficient as a measure of correlation between dichotomous variables (Fleiss 1981), can be found in Appendix 1.

The Satisfaction with Enrollment Model. Using a multivariate logistic regression, we modeled responses to each of four attributes of the enrollment process: helpfulness of communications in preparing for enrollment, having enough time to review enrollment information and enroll at work, understandability of benefits information, and ease of finding needed information. The independent variables used in these analyses were education, race, and health status.

FINDINGS

The response rate was 66.2 percent. Using administrative data to compare respondents with nonrespondents, we found that respondents were significantly different from nonrespondents on several characteristics: respondents were older (mean age 40 years versus 35 years), more likely to hold exempt positions (56 percent versus 37 percent), less likely to have employee-only coverage (38 percent versus 43 percent), or to enroll in the HMO option (29 percent versus 40 percent).

Question 1: How Did Those Who Chose the Consumer-Defined Health Plans Compare with Those Who Did Not?

Two-hundred-four employees selected one of the CDHP options (7.3 percent). At the bivariate level (Table 1), the employees who selected the CDHPs differed from those who selected other plan options in sociodemographic characteristics, health status, health care utilization, preferences for plan attributes, and responses to the enrollment process. Those selecting the CDHPs were more often college educated, white, male, and in exempt positions than employees who selected other plan options. They more frequently had employee-only coverage from Humana and also additional coverage from another source. Those selecting a CDHP option were significantly healthier on every dimension measured. They more often reported excellent health status, and less often had a covered member receiving regular medical treatment. They less often had a personal physician. Although they less frequently believed that the health plan decision was extremely important, they more often found the decision difficult, probably because of the novelty of the choice. Those who selected a CDHP option more frequently rated premiums as the most important feature of the plan. They more often used the decision support tool and agreed with how it ranked the plan options. An analysis of the comments made by those who selected the CDHPs reflected the widespread need to have more detailed information about these novel options. A common concern was how the initial $500 allowance would be calculated.

Results from Multivariate Logistic Regression Analysis. In the multivariate analysis, variables from each of the four domains (sociodemographic characteristics, health status, health care utilization, and perceived importance of plan attributes) were related to plan choice (Table 2). Among the sociodemographic characteristics, employees who were black

Table 1: Characteristics of Employees Who Chose an HRA-like Option with Those Who Chose Another Plan Type (%)

Independent Variables	*Chose an HRA-like Plan (n = 204)*	*Chose a Different Plan Type (n = 2,580)*	P-*value*
Sociodemographic Characteristics			
Gender: Female	59	71	.0007
Education			<.0001
High school graduate or less	7	13	
Vocational or junior college graduate	26	43	
College graduate	35	25	
Post-baccalaureate	31	18	
Race			.0002
White	88	76	
Black	6	17	
Other	5	6	
Job Classification: Exempt	77	55	<.0001
Coverage Source: Humana only (no dual coverage)	90	96	.0002
Coverage Type			.0003
Employee only	51	37	
Employee and spouse	14	15	
Employee and children	10	17	
Employee and family	24	31	
Health Status			
Functional Health Status			<.0001
Poor	0	1	
Fair	2	6	
Good	17	32	
Very good	51	43	
Excellent	31	18	
Think about Own Health			<.0001
Never	1	1	
Rarely	23	10	
Sometimes	34	34	
Often	31	40	
Very often	11	15	
Health Utilization			
Receiving Treatment for Chronic Condition	21	44	<.0001
Hospitalized in Past 12 Months	12	22	.0004
Visits in Past 4 Weeks			<.0001
No medical visits	60	37	
1 or 2 visits	34	44	
3 or more visits	5	19	
Anticipated Medical Care			.0011
Same as this year	73	69	
More in next year	8	17	
Less in next year	20	14	
Have a Personal Physician	67	79	<.0001

Table 1. (Continued)

Independent Variables	*Chose an HRA-like Plan (n = 204)*	*Chose a Different Plan Type (n = 2,580)*	P-*value*
Importance of Plan Characteristics			
Deductible			<.0001
Extremely important	27	50	
Very important	46	37	
Somewhat important	23	11	
Not very important	3	2	
Hospitals Available			<.0001
Extremely important	16	34	
Very important	39	37	
Somewhat important	31	25	
Not very important	15	4	
Physicians Available			<.0001
Extremely important	29	48	
Very important	40	36	
Somewhat important	25	13	
Not very important	6	3	
Freedom to Choose Specialists			.0003
Extremely important	33	48	
Very important	31	26	
Somewhat important	23	18	
Not very important	13	8	
Knowledge of Humana Plan Options			.0595
A lot	41	32	
Fair amount	44	53	
A little	13	14	
Nothing	1	1	
Most Important Characteristic of Plan for Choice			<.0001
Lowest premium	43	16	
Lowest copayment	4	14	
Lowest deductible	4	8	
Hospitals available	0	1	
Physicians available	20	24	
Freedom to choose any specialist	18	23	
Multiple reasons, including premium	4	6	
Multiple reasons, not including premium	7	8	
Perceived Differences among Plan Options			
Premiums			<.0001
No difference	74	34	
Small difference	25	59	
Big difference	1	7	
Deductibles			.0303
No difference	63	54	
Small difference	34	39	
Big difference	3	6	

Table 1. (Continued)

Independent Variables	*Chose an HRA-like Plan (n = 204)*	*Chose a Different Plan Type (n = 2,580)*	P-*value*
Physician Networks			.0325
No difference	19	28	
Small difference	58	53	
Big difference	22	20	

Source: Park Nicollet Institute's Survey of Humana Benefits Enrollment Medical Plan Selection, 2001.
N = 2,784

Table 2: Adjusted Odds Ratio of Factors Related to Choice of HRA-like Options

Independent Variables	*Odds Ratio*	*95% Confidence Interval*	P-*value*
Sociodemographic Characteristics			
Gender (Ref: Male)			
Female	1.01	0.70, 1.45	.9688
Education (Ref: Less than college graduate)			
College graduate or more	1.13	0.75, 1.70	.5591
Race (Ref: White)			
Black	**0.46**	**0.23, 0.85**	**.0186**
Other than black	0.49	0.22, 0.99	.0609
Job Classification (Ref: Nonexempt)			
Exempt	**1.60**	**1.02, 2.55**	**.0426**
Coverage Source (Ref: Dual-coverage)			
Humana only	**0.30**	**0.16, 0.55**	**<.0001**
Coverage Type (Ref: Employee+dependent)			
Employee only	**1.77**	**1.25, 2.53**	**.0014**
Health Status			
Functional Health Status (Ref: good, fair, or poor)			
Excellent	**1.64**	**1.01, 2.68**	**.0465**
Very good	1.45	0.95, 2.24	.0931
Think about Own Health (Ref: Never, rarely, sometimes)			
Often or very often	0.72	0.52, 1.00	.0534
Health Utilization			
Receiving Treatment for Chronic Condition (Ref: No)			
Yes	**0.56**	**0.37, 0.84**	**.0053**
Hospitalized in Past 12 Months (Ref: No)			
Yes	0.70	0.41, 1.16	.1822

Table 2. (Continued)

Independent Variables	*Odds Ratio*	*95% Confidence Interval*	P-*value*
Visits in Past 4 Weeks (Ref: 3 or more visits)			
No medical visits	**3.20**	**1.65, 6.80**	**.0012**
1 or 2 visits	2.00	1.03, 4.23	.0518
Anticipated Medical Care (Ref: Same as this year)			
More in next year	0.79	0.43, 1.39	.4319
Less in next year	1.47	0.92, 2.31	.0961
Have a Personal Physician (Ref: No)			
Yes	**0.68**	**0.47, 0.99**	**.0420**
Plan Characteristics			
Importance of Plan Feature (Ref: Very important, somewhat important, not very important)			
Deductible is extremely important	**0.56**	**0.38, 0.84**	**.0046**
Hospitals available are extremely important	0.76	0.43, 1.33	.3400
Physicians available are extremely important	0.83	0.50, 1.34	.4526
Freedom to choose any specialist is extremely important	1.05	0.68, 1.64	.8145
Knowledge of Humana Plan Options (Ref: A fair amount, a little, nothing at all)			
A lot	**1.54**	**1.10, 2.17**	**.0127**
Most Important Characteristic of Plan for Choice (Ref: Multiple reasons, not including premium)			
Lowest premium	**2.89**	**1.55, 5.68**	**.0013**
Lowest copayment	**0.34**	**0.13, 0.85**	**.0243**
Lowest deductible	0.49	0.18, 1.24	.1429
Hospitals available	0.25	0.01, 1.53	.2123
Physicians available	0.88	0.46, 1.79	.7240
Freedom to choose any specialist	0.84	0.42, 1.73	.6197
Multiple reasons, including premium	1.05	0.39, 2.70	.9167
Perceived Differences among Plan Options (Ref: No differences, small differences)			
Big differences in premiums	**5.18**	**3.60, 7.55**	**<.0001**
Big difference in deductibles	1.12	0.79, 1.61	.5185
Big difference in physician networks	**0.44**	**0.29, 0.66**	**<.0001**

Source: Park Nicollet Institute's Survey of Humana Benefits Enrollment Medical Plan Selection, 2001.

Note: Adjusted odds ratio for values in boldface type are significant at $p < .05$.

$N = 2{,}784$

were half as likely to select the CDHP options (OR 0.46). Those having only Humana Inc. coverage were also less likely to select the CDHP options (OR 0.30). In contrast, those with exempt job classifications and those electing employee-only coverage were more likely to select the CDHP options (OR 1.61 and 1.77, respectively).

Health status remained a predictive characteristic; those in excellent health were more likely to select a CDHP (OR 1.45). Health utilization was also related to plan choice. Employees with a covered family member receiving treatment for a chronic disease were half as likely to select a CDHP. Those with no visit to a provider in the last four weeks were three times more likely to select one of the new plans compared with those who had at least one visit.

The perceived importance of several plan attributes remained significantly related to the selection of a CDHP. Employees who thought premiums were the most important plan feature were more likely to select a CDHP option (OR 2.89). Those who thought there were big differences in the plan premiums were more than five times as likely to select a CDHP. Those who thought the deductible was extremely important were half as likely to select these options. Similarly, those who thought that there were big differences in the networks of the plans offered were half as likely to select a CDHP.

Question 2: Which Employee Characteristics Were Related to Their Evaluation of the Enrollment Process?

Employees evaluated four aspects of the enrollment process: helpfulness of communications in preparing for enrollment, having enough time to review enrollment information and enroll at work, understandability of benefits information, and ease of finding needed information. These factors are somewhat interrelated; phi coefficients range from 0.1925 to 0.4776, the highest between finding needed information very easily and finding the benefits information very understandable. We include each dependent variable because of the content validity and utility to Humana program planners. The correlation matrix can be found in Appendix 2.

Overall, more employees found communications from Humana, such as articles in their in-house communications, very helpful in preparing for the enrollment process (45 percent very helpful) than in understanding why Humana was offering new products (33 percent very helpful).

The online enrollment process and the accompanying tools were new to Humana employees. The three tools included: a web site that provided benefits information on plan options, provider networks, and rates; a decision support tool that allowed employees to answer questions about their preferences and provided a list of plans ranked according to these preferences; and an enrollment tool for making the enrollment selection online. In evaluating the three tools, more employees reported that the enrollment tool was very easy to use and understand (40 percent) than considered the benefits

web site very easy or the decision support tool very easy (27 percent and 28 percent, respectively).

Results from Multivariate Logistic Regression Analysis. In the multivariate analyses, educational level was inversely related to the evaluation of enrollment (see Table 3). That is, employees with higher educational levels were less likely to find the materials very helpful (OR 0.80), benefits information very understandable (OR 0.78), or find it very easy to obtain needed information (OR 0.70). This result may reflect the efforts to prepare communications at a lower reading level. The materials were more successful for those with a lower educational level than those with higher educational attainment.

Employees' health status was strongly related to their assessment of the enrollment process. Those in fair or poor health were less likely than those in very good or excellent health to find the written communications very helpful in preparing for enrollment (OR 0.42), benefits information very understandable (OR 0.53), or find it very easy to obtain needed information (OR 0.38). They were less likely to believe they had enough time at work to review materials and enroll (OR 0.47). Even those with good health were less satisfied with enrollment than those in excellent or very good health.

CONCLUSIONS

Employees who chose the new plan options place high importance on the attributes that distinguished these plans from other options. They were more likely to find the lowest premium the most important attribute and less likely to find the lowest copayment most important. They were more likely to perceive big differences in the premiums. Although they were more likely to express difficulty with the plan decision, they were also more likely to believe they knew a lot about the plan options and to be satisfied with the variety of plan options. The inclusion of stated preferences in choice models is relatively uncommon, but has been demonstrated to significantly improve the fit of choice models (Harris and Keane 1999; Harris, Schultz, and Feldman 2002). The role of stated preferences in this study is consistent with that of Harris and colleagues who also found that consumer preferences corresponded with the explicit premium structure.

Table 3: Adjusted Odds Ratio of Employee Characteristics to Their Evaluation of the Enrollment Process

	Communications in Preparing for Enrollment Were Very Helpful			*Employee Had Enough Time to Review and Enroll at Work*			*Benefits Information Was Very Understandable*			*Finding Needed Information Was Very Easy*		
Employee Characteristic	*OR*	*95% CI*	P-*value*	*OR*	*95% CI*	P-*value*	*OR*	*95% CI*	P-*value*	*OR*	*95% CI*	P-*value*
Educational Level:												
Less than college	1.00			1.00			1.00			1.00		
College or more	**0.80**	**0.68, 0.93**	**.0051**	**1.24**	**1.02, 1.51**	**.0289**	**0.78**	**0.67, 0.92**	**.0032**	**0.70**	**0.58, 0.83**	**<.0001**
Race:												
White	1.00			1.00			1.00			1.00		
Black	**1.53**	**1.24, 1.89**	**<.0001**	0.88	0.68, 1.12	.2909	1.19	0.96, 1.48	.1072	1.01	0.79, 1.28	.9483
Other	1.02	0.75, 1.40	.8868	**0.65**	**0.46, 0.93**	**.0158**	1.01	0.73, 1.39	.9476	0.97	0.67, 1.38	.8657
Health Status:												
Very good or excellent	1.00			1.00			1.00			1.00		
Good	**0.72**	**0.60, 0.85**	**.0001**	0.93	0.76, 1.14	.4902	**0.74**	**0.62, 0.88**	**.0008**	**0.66**	**0.54, 0.80**	**<.0001**
Fair or poor	**0.42**	**0.30, 0.58**	**<.0001**	**0.47**	**0.34, 0.66**	**<.0001**	**0.53**	**0.37, 0.74**	**.0003**	**0.38**	**0.24, 0.58**	**<.0001**

Source: Survey of Humana Benefits Enrollment Medical Plan Selection, 2001.
Note: Adjusted odds ratio for values in boldface type are significant at $p<.05$.

This analysis also suggests that Humana's new CDHP plans may have segmented the risk pool. Employees who were receiving treatment for a chronic condition were less likely to select the CDHP options, whereas those who had received no care in the previous four weeks were more likely to select these options. The impact of this segmentation is a critical factor, not for self-insured plans like Humana, but for employers using multiple insurance carriers. Employers need to consider the impact of risk segmentation on the long-term survival of multiple plan options (Taylor 2002). A fuller analysis of the risk selection issues awaits a more detailed claims analysis.

The study findings highlight a previously unexplored characteristic in plan choice—that of race. In our review of the plan choice literature, we found no research that included race as a variable. The emergence of race as an independent predictor of plan choice was unexpected, and what construct underlies the relationship of race and choice is not understood. It may be that employees who were not white reacted with distrust for the novel new plans, based on their experience with health care generally (Smedley, Stith, and Nelson 2002).

Two factors may have contributed to limited enrollment in the CDHPs by Humana employees. First, these plan options used the most restrictive provider network, and employees whose provider was not included may have disregarded this option. Second, providing a default enrollment option meant that employees did not have to consider all the available plan options. It is unclear how many of the survey respondents who used the default option (22 percent) reviewed all the plan options. Because they responded to the survey and answered the evaluation questions, it is probable that many allowed the default option to eliminate the final task of enrolling.

The new options and switch to online enrollment posed a special information burden on the sickest employees. Those employees with poorer health status who would be most in need of detailed information did not find it very easy to locate. This evaluation stimulated a torrent of comments. Almost one-quarter of respondents made at least one comment, and many took the opportunity to write extensively. The volume and intensity of comments may reflect the importance of benefit coverage to employees. This intensity may be a relatively new phenomenon. Less than 25 percent of employees in 1995 and 1996 reported that the health plan decision was extremely important (Fowles et al. 2000; Knutson et al. 1998). In contrast, almost two-thirds (63 percent) of Humana employees stated that the decision was extremely important. These results, particularly the comments, point to the need for extensive product support. Employees need to be able to find detailed information; they also

need readily available and knowledgeable staff to answer questions relating to individual circumstances. Previous research on the understandability of enrollment materials has highlighted the information needs and confusion that those selecting health plans may experience (Gibbs, Sangl, and Burrus 1996; Lubalin and Harris-Kojetin 1999; McCormack et al. 2001). These results are also consistent with other findings that many employees struggle with online benefits (Cigna 2002; Landro 2002).

The reader should keep in mind study characteristics that may limit the generalizability of these findings. The study was conducted in one company at a time when consumer-directed plans were not generally known, and no special web support was available to enrollees in these plan options. Furthermore, the provider network was unusually restrictive compared with other consumer-directed plan options. This study represents an early assessment of the impact of consumer-defined health plans on employees.

The results of this evaluation underline the fact that conversion to a CDHP plan can be most challenging for those who are the sickest. Their plan decision is more important, more complex, and has more severe financial consequences. If their inquiries cannot be readily answered, they are unlikely to make changes in their current coverage. At the same time, employees appeared to have made logical decisions. Employers who consider adding CDHP options should be aware that many employees select plans appropriately if offered the choice between traditional and CDHP plans. Healthier people were more likely to choose the CDHP plans with account balance options, while those needing chronic care were more likely to choose traditional plans.

NOTE

1. Plan options and benefits. The six health care options, ranked from most to least expensive, were:
   a. Tiered PPO. A new PPO with some modifications from the previous PPO. It had an inexpensive network (with a $20 copayment), a more expensive network (with a $30 copayment), and out-of-network options (60 percent coinsurance).
   b. HMO Plan. An independent practice association (IPA) HMO, with a gatekeeper design similar to the one previously offered.
   c. PPO Standard Plan. A standard PPO with a $250 deductible ($20 copayment for primary care visits; $30 copayment for specialist visits; 90 percent in-network coinsurance).
   d. An option for any out-of-area employees or dependents.

e. A plan with a $500 allowance feature, next a $1,000 deductible, then 80 percent coinsurance until $2,000 in further out-of-pocket charges were incurred, and finally 100 percent coinsurance.
f. A plan similar to the previous one with a $500 allowance feature, then a $2,000 deductible, and finally 100 percent coinsurance.

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Appendix 1. Early Experience with Employee Choice of Consumer-Directed Health Plans and Satisfaction with Enrollment

Correlation Matrix of Health Status Measures (phi coefficient)

	Have Personal Physician	*Anticipated Care in Next Year*	*Think about Own Health*	*Receive Treatment for Chronic Condition*	*Visits in Last Four Weeks*	*Self-Reported Health Status*	*Hospitalized in Past Year*
Have personal physician	1	0.0388	0.1202	0.1670	0.1231	0.0858	0.0761
Anticipated care in next year		1	0.0850	0.1270	0.2795	0.0990	0.2428
Think about own health			1	0.0729	0.0700	0.0727	0.0173
Receive treatment for chronic condition				1	0.2899	0.2677	0.1477
Visits in last four weeks					1	0.1705	0.2380
Self-reported health status						1	0.0810
Hospitalized in past year							1

Appendix 2. Early Experience with Employee Choice of Consumer-Directed Health Plans and Satisfaction with Enrollment

Correlation Matrix among Dependent Variables Assessing the Enrollment Experience (phi coefficient)

	Helpfulness of Communication in Preparing For Enrollment	*Enough Time to Review and Enroll at Work*	*Understandability of Benefits Information*	*Ease of Finding Needed Information*
Helpfulness of communication in preparing for enrollment	1	0.2005	0.3312	0.3014
Enough time to review and enroll at work		1	0.1925	0.1836
Understandability of benefits information			1	0.4776
Ease of finding needed information				1