

DO CONSUMERS USE HEALTH PLAN REPORT CARDS?

FINDINGS FROM TWO EVALUATIONS

**The National Committee for
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INTRODUCTION

Managed care plans can compete on value only when consumers have information about quality as well as cost. There has been a national interest in report cards as a market mechanism that helps consumers balance quality with cost information. Generally speaking, report cards are documents made available to consumers at the time of their enrollment decision that describe and compare managed care plans on a variety of performance measures related to health care.*

Although there had been local initiatives in the early 1980's, the nationwide report card effort did not begin until the National Committee for Quality Assurance (NCQA) launched the HEDIS[®] initiative. This effort was followed shortly by the Agency for Health Care Policy and Research (AHCPR) Consumer Assessment of Health Plans (CAHPS) project. Throughout the country, governments and employers are now producing report cards for consumers. In spite of this tidal wave of activity surrounding report cards, there has been little systematic evaluation of their effects on consumers.

Through the Consumer Information Project (CIP), the Commonwealth Fund commissioned NCQA to develop report cards and conduct research activities with the goal of informing some basic questions about report cards such as:

- How do consumers react to and use report cards?
- How can report cards be made more useful?
- What role do report cards play in influencing health care quality?

Between 1996 and 1997, NCQA conducted two evaluations that involved surveys of consumers who received report cards in St. Louis (employees of a large company, Monsanto), and in Denver (employees of small and medium sized businesses). The report cards presented included HEDIS quality measures, results of member satisfaction surveys, and plan descriptive information. The Health Research Center, Institute for Research and Education (HRC), assisted with the study design, data collection, analysis and reporting of findings.

This is a comprehensive volume of findings from the Denver and St. Louis evaluations. It begins with an overall summary of findings (Section I) that synthesizes the results of three separate analyzes conducted during the course of the project. To provide context for understanding how this research contributes to the body of knowledge about the role of report cards, Section II presents an overview of the relevant literature and the study design. Sections III through V present results from the three analyzes: combined results from Denver and St. Louis (Section III); results of Denver pre and post survey data (Section IV); and results of St. Louis post-survey data (Section V).

*Throughout this document, consumer report cards are referred to as either report cards or comparative performance reports.

I. OVERALL SUMMARY OF FINDINGS

Using a survey study design, NCQA in collaboration with HRC collected and analyzed data to improve our understanding of how consumers react to and use comparative health plan quality information. The following discussion frames the evaluation results into several fundamental questions:

1. Do consumers remember seeing report cards?

For a report card to influence the consumer's decision, the consumer must first remember receiving it. If consumers do not remember seeing the report card, then measuring its impact is fruitless. The rate of consumer recall varies from one market to the next. Only 47% of Denver respondents remembered seeing the report compared with 55% of the St. Louis respondents.

Whether respondents remembered seeing the report card did not depend only on distribution mechanisms. From our evaluations we have identified three types of people who are more likely to remember seeing report cards: (1) people who are already oriented toward using written comparisons of products, (2) people with a general interest in health and health care, and (3) people who have a need to know because they are considering switching plans.

Based on combined results from Denver and St. Louis, respondents who reported using information sources like *Consumer Reports* most or all of the time were more likely to remember seeing the report card than those who did not use such sources (Odds Ratio [OR] 1.42). General interest in reading about health was also related to remembering seeing the report card.

Respondents who owned four or more books on health were more likely to remember seeing the report card than respondents who owned no books (OR 1.68), while respondents who owned one to three books were not significantly different from those who owned none. Finally, respondents who thought a little, a fair amount, or a lot about switching health plans were more likely to remember seeing the report card than those who had not thought about switching plans (OR 1.62).

In another market, Minneapolis/St. Paul, fully three-quarters (76%) of respondents remembered seeing the report card from their employer (Knutson, 1996). The difference between this market and the Denver or St. Louis markets is probably explained by the fact that, in Minneapolis, employees were receiving report cards for the third time in six years, and the report cards had become a standard part of enrollment information. In Denver and St. Louis, the report card had never before been issued by employers.

These evaluations (Denver, St. Louis, Minneapolis) address report cards released by employers. Many states, however, plan to release report cards on a state-wide basis rather than through employers. The impact will undoubtedly be much less for these generally broadcast report cards. In an evaluation of a community-wide report card in Minnesota, only one-quarter of respondents remembered seeing the report card (Knutson, 1996).

2. *How do consumers evaluate report cards?*

In spite of major sociodemographic differences between the respondents in St. Louis and those in Denver, their evaluation of report cards is strikingly similar. Of those who remembered seeing the report card:

- 40% read most or all of the report card
- 95% found the report card somewhat or very trustworthy
- 82% found the report card somewhat or very helpful in learning about plan quality
- 66% found the report somewhat or very helpful in deciding to stay or switch plans
- 50% were made somewhat or much more confident in their decision by the report card

3. *Do report cards improve individual decision-making?*

There are two ways to measure the effects of report cards on decision-making. Effects on decision-making can be either directly stated, or they can be revealed through observation of changes over time or comparing changes between two groups. We measured the self-reported effects of report cards on decision-making in both Denver and St. Louis. As indicated above, two-thirds of respondents stated that the information was very or somewhat helpful in their decision to stay with their current health plan or to switch plans.

The effect of report cards on decision-making can also be captured by using some specific study designs. The pre- and post- study design that we used in Denver allows us to measure changes in perceived knowledge and attitudes. Comparing responses before and after receiving the report card, we found no difference on how much respondents thought that they knew about their health plan choices, or on how easy or difficult it was to judge the quality of health plans. After receiving the report card, however, respondents increased the importance rating of two items: knowing whether or not a health maintenance organization (HMO) has been accredited and knowing the percentage of HMO members who decide to leave the HMO because they are dissatisfied. To the extent that the report card broadens people's understanding of what constitutes quality, report cards may improve decision-making.

The pre- and post- study design is not a strong design for testing specific effects because other intervening events may also be responsible for the change in attitude. Our observation gains strength, however, because people who saw the report card (a subset of all the respondents) were more likely to cite these measures as important at post-enrollment. We may infer that the report card had some role in this change, although without a randomized control group who did not see the report card, we cannot be certain. Other factors about enrollment besides the report card may have influenced the shift in responses.

A stronger test of the effect of report cards compares the responses of an intervention group (who received a report card) with a control group (who did not receive a report card) before and after open enrollment. One previous study has used this design. To determine the effect of survey-based, health plan report cards on employees as they selected their 1995 health plan, Knutson and colleagues surveyed two groups of State of Minnesota employees, one who received the report card and one who did not (Knutson, 1998). Both groups were surveyed before and after their

enrollment. The authors looked for effects of report cards on relative changes in the employees' knowledge of health plan benefits, and their ratings of quality and cost attributes, as well as their plan choice, rates of switching plans, and willingness to pay higher premiums. The only report card effect found was an increase in perceived knowledge about health plans for employees with single coverage. We should keep in mind, however, that this rigorous evaluation examined the impact of a report card that did not include performance measures, accreditation status, or disenrollment information.

4. Do report cards promote better quality of care?

To answer the question of whether or not report cards promote better care, we need to look at other types of evaluations. We are beginning to have information about how health plans and providers (rather than consumers) respond to report card information. These reports suggest that providers and health plans respond to report cards more than their modest demonstrated effect on the marketplace would appear to warrant. Three studies of hospitals and one study of health plans indicate that providers attempted to redress quality issues identified in the report cards (Bentley and Nash, 1998, Fowles 1998, Longo et al. 1997, Rainwater et al., 1998). Hospitals also took corrective action based on report cards that described cardiac surgeons' outcomes, even though referral rates were not influenced. Public release of quality information is more likely to be effective in removing "bad apples" than are internal quality improvement efforts.

5. Who finds report cards useful?

In both the Denver and St. Louis evaluations, we included two measures of usefulness -- helpfulness in learning about health plan quality, and helpfulness in the decision to stay or switch health plans.

Based on the combined results from Denver and St. Louis, women were somewhat more likely than men to find the report card helpful in learning about health plan quality (OR 2.08). This finding suggests that report cards are reaching part of their target audience because women traditionally make most of the health care decisions in a household.

Respondents who were somewhat or very satisfied with their health plan were more likely to find the report card helpful in learning about plan quality than those who were neutral or dissatisfied with their health plan (OR 2.15). This finding reinforces the notion that when people first encounter report cards they use them to confirm their health plan choice.

Report cards can also introduce new information to people who are thinking about switching health plans. Evidence from the Denver study indicates that the report card introduced information that was at variance with people's previous information, and yet they used that information in their health plan decision.

Respondents in Denver and St. Louis who thought that it was extremely important to know "what patients who were surveyed said about how well the health plan's medical doctors listened to them" were more likely to find the report card helpful in learning about plan quality (OR 1.99).

The degree of difficulty of health plan choice also played a role, although not a straightforward one. Respondents who found the choice neither hard nor easy were more likely to find the report

card helpful in their health plan decision than those who found the decision easy (OR 1.62). Those who found the decision hard, however, were no more or less likely to find the report card helpful than those who found the decision easy.

Respondents who used information from patient surveys in their choice of health plan were much more likely to find the report card helpful in learning about plan quality (OR 3.59). Similarly, respondents who thought that it was extremely important to know the percentage of plan members who leave their health plan because they were dissatisfied were more likely to find the report card helpful in their decision (OR 2.04). These results indicate that, for some respondents, there is a match between the information that they seek and the information they find in the report card.

The number of visits for health care in the previous 12 months was inversely related to the likelihood of finding the report card somewhat or very helpful in the plan decision. Respondents with two to five visits were less likely than respondents with one or no visits to find the report card helpful (OR 0.44). An increasing number of visits was associated with a decreased likelihood of finding the report card helpful (six to nine visits - OR 0.40; ten or more visits - OR 0.33). This finding makes sense because people with many visits have extensive first-hand experience on which to base their choice.

In the Denver and St. Louis evaluations we do not have information about the presence of chronic disease in the covered household, but results from the Minneapolis evaluation indicate that having a person with a chronic disease in the covered household did not play a role in report card use. The explanation is similar to the one above -- people with chronic diseases have intensive information networks that are both broader and deeper than information available in report cards that have been evaluated to-date.

6. What is the current bottom line for report cards?

In these and other studies, we have not found a large effect of report cards on consumer decision-making. There are some hopeful signs, however. Readership of report cards is more likely to be found among people who are familiar with, and attracted to, this type of comparative information. This is an important finding because it is widely believed that a relatively small proportion of consumers who are knowledgeable about quality can shape the entire market for a given product (Pauly, 1986).

People for whom the choice of health plan is an important decision are also more likely to read report cards than those for whom it is not an important decision. This finding suggests that report cards are sought by those who we hope would seek information about the quality of health plans. It is also clear from our studies, however, that choosing a health plan is important only for a small proportion of the total market. Methods for impressing people with the meaning of report card information should be sought and tested. Such methods may include advance publicity campaigns, and using formal and informal information brokers.

7. Under what conditions will report cards affect decision-making?

Many factors influence the likelihood that report cards will help consumers choose their health plan. First, there must be a measurable and important difference among the plans that are

evaluated. In part, this difference may be achieved by having non-overlapping physicians and hospitals. We do not currently know how big a difference on any measure is important to consumers, although there is ongoing research on this question. We should test report cards in markets where we have evidence of greater variation in health plan quality.

Second, consumers must feel that there are consequences of their choice. Some consequences may be felt if there is a perceived difference in quality among the plans available. Consequences will be higher for users of health care than for non-users. Consumers also are more likely to perceive consequences when they face a large annual premium contribution.

Third, consumers must perceive the relevance of the content of report cards. The report cards evaluated above were designed to report on quality measures identified by professionals. We are beginning to understand what constitutes quality from the perspective of consumers. The work by the Foundation for Accountability has been helpful for framing some of the HEDIS measures in terms that have meaning for consumers. CAHPS has also been developing measures based on what consumers report is important to them. Undoubtedly, consumers are not all interested in the same information. We must be able to provide targeted information so that the consumer can quickly find what is relevant to him or her.

Fourth, the unit of analysis must be meaningful to consumers. Consumers believe that physicians are more responsible for the quality of care than health plans, so they are more interested in information about the quality of physicians than the quality of health plans.

Finally, we do not have the most effective dissemination approaches. We have not yet tested any kind of mediated dissemination, using formal intermediaries such as benefit managers or informal information brokers or opinion leaders.

8. *What can we learn from “diffusion of innovation” theory?*

Report cards are a new tool or innovation. There is a wealth of research about the diffusion of innovations that may be helpful in understanding what the impact of report cards will be and how soon we will see it. Everett Rogers (1995), one of the pioneers in this field, has summarized much of the research.

Innovations have characteristics that make them more or less easily adopted. These characteristics include (1) relative advantage (the degree to which an innovation is perceived as better than the idea it supersedes), (2) compatibility (the degree to which an innovation is perceived as consistent with existing values and past experience), (3) complexity (the degree to which an innovation is perceived as difficult to understand), (4) trialability (the degree to which an innovation may be experimented with on a limited basis), and (5) observability (the degree to which the results of the innovation are observable to others).

The relative advantage of the report card over other sources of information is not clear, although the willingness of people to read it and find it useful suggests that it has advantages for some. Compatibility will be determined by the alignment of the content with people’s perception of important measures of quality. The complexity of report cards is currently an area of intensive research as investigators attempt to match report card content and formats with what we know is

effective from decision analysis. The trialability of report cards is limited because the enrollment decision based on report card content remains in effect for one year. The application of report cards is relatively unobservable, suggesting that diffusion may be relatively slow on this account. In sum, many of the attributes of this innovation suggest that we can anticipate a relatively slow adoption period.

Most innovations diffuse at a disappointingly slow rate. A person's decision to use an innovation is not an instantaneous decision, but is a process that occurs over time. The sequential stages have been identified by Rogers as (1) knowledge – an understanding of what the innovation is and how it functions, (2) persuasion – forming a favorable or unfavorable attitude toward the innovation, (3) decision – accepting or rejecting the innovation, (4) implementation – putting the innovation to use, and (5) confirmation – seeking reinforcement of the decision to use or abandon the innovation. In this context, we understand that looking for changes in behavior related to the report card is jumping to stage four of the diffusion model without considering the need to pass through the earlier steps. Evaluations should measure these earlier steps in the diffusion process that anticipate stage four.

Adoption of innovations occurs at different rates for different people. Rogers describes five categories of adopters: innovators, early adopters, early majority, late majority, and laggards. Our results suggest that we are already reaching some of the early adopters.

9. Where do we go from here?

As suggested by the preceding discussion, we must take a broader approach in order to achieve a more complete theoretical understanding of the role of report cards. We need to enrich our theoretical approach to this complex problem, turning to decision theory, communication theory, and other social psychological paradigms.

The body of research exploring the role of report cards is in a nascent stage and target audiences are still relatively inexperienced in their use of report cards. We cannot truly assess the potential impact of information about plan quality until we explore more fully how dissemination strategies, including the use of benefit intermediaries and the use of other media (e.g. computer-based decision tools) affect the consumer's experience with report card information.

A. OVERVIEW OF THE ENVIRONMENT

Supporters of a managed competition approach to health care reform have argued that consumers need more and better information to make truly informed choices among health plans. In theory, creating better informed consumers will encourage health plans to compete on quality of care and enrollee satisfaction, in addition to cost (Eisenberg, 1998; Enthoven, 1993; Hibbard and Weeks, 1987).

National debate over health care reform focused attention on the types and amounts of information available to assist consumers in making health care choices, as well as the ability of consumers to process and act on that information (Sofaer and Hurwicz, 1993). Some have suggested that informing and protecting consumers should be an end in itself and not just a means to a working marketplace (Sofaer, 1993). Others have stressed that a minimal number of reasonably informed consumers is sufficient to encourage competition among providers (Pauly, 1986).

In the private sector, large purchasers of health care have initiated efforts to expand information available to health plan enrollees to include quality and member satisfaction measures (Cronin, 1994; Business & Health, 1995). These efforts have traditionally involved single purchasers and individual health plans. Typically, a large firm collects data from its employees about satisfaction with services provided by each health plan. Employers often request that health plans supplement these data with information about services provided to the employed group, such as immunization rates, other measures of preventive care, and outcomes that can be measured using administrative claims data (Jordahl, 1992). The employee uses the resulting information to select among health plans.

In recent years, coalitions of employers have formed, in part, to standardize data for comparison of health plans by employers and to enhance the leverage that employers can exert on health plans in contract negotiations (Epstein, 1995). In response to these efforts, some health plans have begun to work closely with employer groups to design data collection instruments and forms for displaying the results (Jordan, 1995). An important example of this type of collaboration is the Health Plan Employer Data and Information Set[®] (HEDIS) effort, which began in 1992 and is now under NCQA's sponsorship. HEDIS measures include areas of plan performance such as rates of preventive services, measures of appropriateness of care, and patient satisfaction (NCQA, 1996).

In parallel with these highly visible national efforts, some large employers began experimenting with comparative health plan report cards that employees could use in conjunction with health plan cost and benefit information for selecting a health care plan from among the set of plans offered by employers. These comparative performance reports typically contained data from employee surveys, but varied widely in their comprehensiveness, sophistication, and presumed usefulness to consumers. Most often, the report cards compared health plans on the basis of access to care, quality of communication, health plan administrative procedures and overall ratings of satisfaction (McGee and Knutson, 1994).

The literature that describes the most direct attempts to assess health plan report cards has generally been limited to the results of focus groups. The purpose of the focus groups typically has been to

determine what information consumers want to have or what reporting formats are most understandable (Gibbs, Sangl, and Burrus, 1996; Hibbard and Jewett, 1996; Jewett and Hibbard, 1996; Hibbard and Jewett, 1997; NCQA, 1995; State Health Watch, 1996; Moskowitz, 1997). These focus group studies often have been conducted as part of the development and evaluation of a specific report card. The overall objective of these focus groups is to improve the content and reporting formats of report cards (Robinson and Brodie, 1997; Sofaer, 1997). A few recent studies have been conducted using surveys of randomly selected samples of health care consumer populations (Tumlinson et al., 1997). While a few employers and alliances have begun to provide comparative performance reports for their employees, little has been done to measure the perceived usefulness and the nature and extent of the influence of those comparative performance reports when employees are choosing a health plan.

A notable exception is the work of Knutson et al., 1997. To determine the effect of survey-based, health plan report cards on employees as they selected their 1995 health plan, the authors surveyed two groups of State of Minnesota employees, one who received the report card and one who did not. Both groups were surveyed before and after their enrollment. The authors looked for report card effects on relative changes in the employees' knowledge of health plan benefits, and their ratings of quality and cost attributes, as well as their health plan choice, rates of switching health plans, and willingness to pay higher premiums. The only report card effect found was an increase in perceived knowledge for employees with single coverage. The development of a theoretical model for understanding the role of report cards in decision-making has just begun (Hibbard, Slovic, and Jewett, 1997).

B. PROJECT SETTING

The Commonwealth Fund grant (the subject of this report) provided support for the development and evaluation of health plan report cards designed for consumers. In the early phases of the project, NCQA tested consumers' reactions to different comparative formats through a series of focus groups in different regions of the country with commercially-insured individuals and Medicare and Medicaid beneficiaries. This research laid the groundwork for the content and design of report prototypes that NCQA developed for two health care purchasing cooperatives. The Alliance in Denver, Colorado, and The Gateway Purchasing Association (GPA) [now Gateway Purchasers for Health], in St. Louis, Missouri participated in the project as demonstration markets. The demonstration participant for The Alliance was their purchasing program for small and medium size businesses, the CHIP (Cooperative for Health Insurance Purchasing). In St. Louis, the demonstration participant was Monsanto, a large employer member of Gateway.

NCQA refined the Denver and St. Louis report prototypes through one-on-one interviews with employees in both cities. They used their feedback on content, format, and comprehensibility to create final performance reports for distribution during open enrollment to employees in the St. Louis and Denver demonstration markets.

During open enrollment in 1996, Monsanto provided its employees with a report card that compared three of the health plan choices available to employees. A fourth plan option, the company plan (Monsanto Plan), was not included in the comparison. A post-enrollment survey of 900 Monsanto employees evaluated the effect of the report card

The Denver report card included four HMOs offered by the CHIP. The Denver evaluation is based on pre-enrollment and post-enrollment questionnaires from employees whose open enrollment occurred in autumn 1997

1. Denver Market

In Denver, the HMO market began in 1969 with the introduction of Kaiser Permanente, a staff model HMO. Since that time, the market has grown steadily, so that by 1997 (the year of our study) about 38% of the employed population was enrolled in one or another health plan. In 1997, there were 20 licensed HMOs in Colorado.

At the time of the evaluation, the CHIP had 1,100 employers, representing small, medium, and large Colorado businesses each with 1 to 400 employees. The CHIP offered four managed care plans covering about 8,000 lives. CHIP plans offer a fixed set of benefits, although the premium varies by plan. Each member company must pay at least 50% of the lowest premium for single coverage, but may pay up to 100% of all plans. The most common payment is 75% of the lowest single premium.

a. Employee choices

The four plans offered by the CHIP in Denver included the three largest in the market in 1997. Three of the four plans have broadly overlapping provider networks. FHP (now Pacificare) is a large IPA model network that covers every hospital in the geographic area known as the “front range” and has the second highest enrollment. HMO Colorado (Blue Cross/Blue Shield) has a “pod” type of network with statewide coverage. At HMO Colorado, members first pick the hospital in which they are interested and then select an affiliated primary care provider. Kaiser maintains a traditional staff model HMO. Although Kaiser now also has contracted providers, it did not at the time of this study. HMO Colorado and Kaiser share about 40 to 50% of the market. Frontier Community Health Plans (now Aetna US Healthcare), the smallest plan, is an IPA that was taken over by Aetna as of May 1, 1997. All the plans offered by CHIP require referrals from the primary care provider to specialists, and have had a gatekeeper design for some time. Switching among plans appears almost non-existent.

In the fall enrollment period in 1997, Frontier (Aetna) offered the lowest premium, Kaiser the next lowest, and FHP (Pacificare) and HMO Colorado were the highest. The comparative premiums in 1997 were somewhat different from those of the equivalent quarter in 1996. As in 1997, Frontier bid the lowest premium, HMO Colorado was the next lowest with Kaiser and Pacificare the most expensive. The companies’ open enrollments are staggered through out the calendar year.

b. Report Card

The CHIP performance report is a 12 page, approximately 10 by 8 inch, glossy two-color booklet (Appendix A). The report begins with a description of ways that HMOs provide quality care: keeping members healthy; assuring quality of care by doctors, and coordinating care and services. The HMO ratings are divided into three sections: eight

performance goals including overall satisfaction, clinical measures, access issues, and customer service issues; six consumer satisfaction measures including getting a referral to a specialist and how well the whole system coordinates care; and HMO accreditation with a description of the six areas on which NCQA bases its accreditation status. The final section is a worksheet to help the individual organize the material in the performance report, compare costs (although cost information must be obtained from other enrollment materials, not the performance report), and consider the convenience of location.

For each measure, data are displayed in bar charts by health plan showing the percent responding to each response category, e.g., poor to excellent. The measures are also displayed in a Consumer Report style showing the plan's rating as either lower than, similar to, or higher than most Denver Health plans.

The content of the comparative performance showed that Kaiser Permanente excelled in consumer satisfaction measures, with five of the six measures rated higher than most Denver health plans. Frontier was lower than most plans on one of the satisfaction measures and similar to the other plans on five measures. On the performance goals, FHP, HMO Colorado, and Kaiser Permanente each did not meet three of the eight goals. Frontier did not meet two performance goals and, because it was a new plan, data were not available on two other goals. On the final measure, accreditation status, only Kaiser Permanente had achieved full accreditation; FHP and HMO Colorado received one-year accreditation status, and Frontier had not been in operation for the required 18 months to be reviewed.

c. Distribution

The Denver performance report was initially intended to be distributed by health insurance brokers to the employers who would then distribute them to employees. As we began to collect post-enrollment information from Denver employees, we realized that many respondents reported that they had not seen the comparative performance report. On the basis of this information, the distribution method was revised. The report was distributed with the enrollment information from each employer directly to employees at their homes.

2. St. Louis Market

In St. Louis, the HMO market began in 1982 with the introduction of the GHP group model HMO. Since that time, the market has grown steadily, so that by 1996 (the year of our study) about 20 to 25% of the employed population was enrolled in one or another health plan.

At the time of the evaluation, the GPA had 26 member companies and offered seven managed care plans. Because the participating employers offer different plans and benefits at different costs, NCQA designed the St. Louis report card specifically for Monsanto, one of the employers participating in the GPA.

a. Employee choices

In 1996, the employees of Monsanto had a choice of three HMOs offered through the GPA and one point-of-service plan directly sponsored by Monsanto. The three plans offered by Monsanto were the three oldest plans in the market, and they were the highest cost plans available through the GPA. All three plans had broadly overlapping provider networks. GenCare (now United Select) was developed by McDonnell Douglas and has the strongest gatekeeper design; United Choice (formerly PHP) is an open access model established in 1986. United Choice is known as the Cadillac plan because of its open access structure.

The Monsanto performance report presented results for the three HMOs offered through the GPA, but not for the Monsanto Plan because standardized performance data were not available. Monsanto employees faced significant premium differences based on their health plan choices. For employees with two or more dependents, some HMO premiums were 46% of the company plan in 1997. The relative premiums comparing each HMO option with the company plan are shown in Table 1.

Table 1

Relative Premium Amounts Paid by Employees: Monsanto, 1996

Plan Choice		Self		Self plus One		Self plus Two or More	
1996	1997	1996	1997	1996	1997	1996	1997
Monsanto Plan	Monsanto Plan	1	1	1	1	1	1
GHP Access	GHP Access	.92	.98	.44	.46	.43	.46
PHP	United Choice	1.39	1	.66	.80	.66	.81
Gen Care	United Select	.98	1.03	.46	.49	.46	.49

b. Report Card

The Monsanto comparative performance report is divided into three sections that include general plan information (including NCQA accreditation status, information pertaining to access such as number of physicians in the plan), HEDIS measures reflecting plan performance on disease prevention and screening, and results of a health plan member satisfaction survey (Appendix A). The 6-page fold-out design presented the data using graphical displays (e.g., bar graphs), and included benchmark data, where appropriate, for comparison. The GPA and Monsanto agreed to include only those HEDIS measures that had been validated through an audit and used a third party survey firm to administer the standardized consumer satisfaction survey. The GPA's goal for the Monsanto comparative performance report was to create a succinct document that presented a balance of plan descriptive information and performance data. Compared with the comparative performance report that NCQA produced for the Denver demonstration site, the Monsanto comparative performance report includes less data and less text.

The content of the report showed that no plan performed best in both categories of measures – satisfaction and the HEDIS disease prevention and screening measures. United Choice, which does not have a gatekeeper requirement, consistently had the highest rating for one of the measures -- satisfaction. United Choice's performance on the HEDIS measures, however, was similar to that of the other plans.

c. Distribution

During open enrollment in September 1996, Monsanto distributed the comparative performance report to its employees. Along with other information about the cost of each plan and benefits covered, the report was mailed to each employee's home.

C. METHODS

1. Study Design

Denver

In Denver, we employed pre-enrollment and post-enrollment measures, separated by the distribution of the comparative performance report. The CHIP comprises many small and medium sized businesses. Rather than a single, annual re-enrollment month, re-enrollment occurs during an assigned month for each business. The number of employees eligible during a particular month was about 300. To obtain an adequate sample size, we recruited respondents over three consecutive months beginning with the October 1997 re-enrollment. The total three month sample was 962. enrollment packets containing the performance report were mailed directly to employees homes during the post-enrollment data collection period.

St. Louis

The research design for the Monsanto project was a cross-sectional survey conducted following employees' open enrollment season. While this design is not appropriate for testing causal hypotheses, it is useful for generating hypotheses and for analyzing the relationships among different characteristics and outcomes of interest.

2. Sample Stratification (St. Louis only)

Monsanto employees are disproportionately enrolled in the Monsanto Plan; over three-quarters of employees have selected this option. The Monsanto Plan, however, had not been included among the plans in the comparative performance report because standardized performance data for the plan were not available. A simple random sample would have reflected the three-quarters of the employees for whom the comparative information was possibly not relevant. To avoid this bias, we stratified the sample based on whether or not the employee was enrolled in the Monsanto Plan in 1996. One-quarter of our sample was randomly drawn from employees who had coverage through the Monsanto Plan in 1997, and three-quarters was drawn from employees enrolled in health maintenance organizations included in the comparative performance report. We maintained a portion of the sample reflecting Monsanto Plan members because we were curious about patterns of general interest in comparative plan information of this kind. It was also important to capture the attitudes of respondents within the Monsanto Plan population who may have been thinking about switching. Our sample size for Monsanto was 900.

3. Data collection (Denver and St. Louis)

To encourage a high response rate, we used a multi-method approach to data gathering, including both mail and telephone methods. A prenotification letter was sent from Monsanto or from the CHIP (Appendix B). The letter described the study and gave the recipient an opportunity to refuse participation by calling a toll-free number. No one called to decline participation. We began data collection by mail. The mailing included a cover letter (Appendix C) and a questionnaire (Appendix D). To encourage respondents to respond, we included a \$2 bill. One week following the initial mailing, all of the sample was sent a postcard reminder. One follow-up mailing of non-respondents was conducted three weeks after the initial mailing. Six weeks after the initial mailing, we completed data collection using telephone interviews.

4. Response rates

Denver

In Denver, the pre-enrollment survey was conducted between July 1, 1997 and September 1, 1997. The response rate for the pre-enrollment survey was 77.3% (962/1244) of which 79.9% came from the mailed survey and 20.1% came from the telephone survey. The post-enrollment survey was conducted from October 1, 1997 through January 30, 1998. The response rate for the post-enrollment survey was 69.6% (670/962), of which 82% came from the mailed survey and 18% from the telephone interview.

St. Louis

In St. Louis, the survey was conducted from December 17, 1996 through February 28, 1997. The overall response rate for Monsanto was 87% (784/900). Of these responses, 88% came from mailed surveys and 12% came from telephone interviews.

5. Analysis of non-respondents

Denver

CHIP respondents to the pre-enrollment survey were compared with CHIP non-respondents on the basis of age, gender, type of coverage, and their health plan. Respondents were more likely to be older, female, have family coverage, and to be enrolled in Kaiser Permanente rather than the other plan choices.

CHIP respondents completing both pre-enrollment and post-enrollment surveys were compared with respondents completing only the pre-enrollment survey on the basis of age, gender and their pre-enrollment insurance plan. Although no differences were noted in gender and pre-enrollment insurance plan, those completing only the pre-enrollment survey were younger than those completing both surveys (40.3 vs. 42.6 years, $P = .006$).

St. Louis

Monsanto respondents were compared with non-respondents on the basis of age, gender, their 1996 plan choice, and whether they had changed plans from 1996 to 1997. There was no difference on any of these characteristics between respondents and non-respondents.

6. Questionnaire Development

The questionnaire used in Denver and St. Louis focused on the perceived usefulness of the comparative performance report and on the nature and extent of its influence on employees' decision-making process when selecting a new plan or deciding to stay with their current plan.

In addition, the questionnaire assessed different respondent characteristics that may be related to their use or evaluation of the comparative performance report. These characteristics include basic sociodemographic characteristics (age, gender, educational level) as well as situational characteristics (e.g., making the health plan decision for one person or more than one, presence or absence of chronic illness, other anticipated health care use) and attitudes (e.g., degree of provider attachment, propensity to use printed information sources).

We assessed respondents' evaluations of the relative importance of various components of the health plan decision--cost, access, and quality. The printed questionnaire was novel in that it included icons representing sections of the comparative performance report. Some questions were derived from the authors' earlier work and from other investigators in the field. The source of each item is described in Appendix E.

We used expert review to critique the items. The questionnaire was reviewed by NCQA staff and by our consultants, Judith Hibbard, DrPH and Jeanne McGee, PhD. It was also reviewed

by La Don Kessler at the CHIP and Dennis Novak at Monsanto, to ensure that the benefit and plan terminology was meaningful to their employees. The interviewers pre-tested the script of the telephone version of the questionnaire. They uncovered no problems, and these pretest interviews were incorporated into the final data set.

D. Analysis Plan

Comparisons were made between members of the CHIP in Denver and employees of the Monsanto company in St. Louis on the following variables: the sociodemographic characteristics and preferred sources of health plan information; past year health care utilization; perceived quality of available health plan choices; information deemed important in the report cards; and general health plan satisfaction. Chi-square analysis for categorical variables or Student's t-test for continuous variables were used.

Two self-reported measures of exposure to the comparative performance report (seeing the report and how much of the report was read) and two measures of the usefulness of the comparative performance report (helpfulness in learning about plan quality and helpfulness in deciding whether to switch plans) were defined. A two-level variable was created for each measure. Respondent exposure was considered 1) seeing the comparative performance report and 2) reading most or all of the comparative performance report. Usefulness in learning about plan quality and deciding whether to switch plans was very helpful or somewhat helpful versus not very helpful or not at all helpful. Respondent characteristics potentially associated with each of these measures were determined a priori and evaluated using bivariate logistic regression. Then, stepwise logistic regression helped determine the most parsimonious multivariate model describing the relationship between each measure of exposure or usefulness and important sociodemographic characteristics, health utilization experience, plan satisfaction and perceptions of health plan comparative performance reports.

Similarly, respondent perceptions of the trustworthiness of the comparative performance report and confidence in choosing a health plan due to the report were evaluated. Respondents who considered the comparative performance report very trustworthy were compared with all others. Respondents stating they were somewhat or much more confident in their plan choice as a result of reading the comparative performance report were compared with those saying the comparative performance report had no effect or a negative effect on their confidence in their health plan choice.

A description of the analysis plans employed in the site specific evaluations can be found in Section IV, Denver and Section V, St. Louis.

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SUMMARY

The following discussion compares the combined responses of Denver and St. Louis consumers, highlighting consistent themes among the two demographically distinct populations.

This evaluation is based on post-enrollment questionnaires from employees in both markets. The survey combined mailed responses with telephone follow-up and achieved a response rate of 69.6% in Denver and 88% in St. Louis.

The evaluation addresses five questions:

1. How did the Denver and St. Louis populations compare?

Respondents from Denver and St. Louis differed in many respects, including gender, educational level, and percent with family coverage. They differed in their frequency of office visits, and in their perceptions about judging the quality of health plans. Respondents in Denver were more likely to switch plans.

2. How did their reactions to the comparative performance report compare?

Because of the many differences between the groups, the similarity of their responses to report card is striking. Except for “remembering seeing the comparative performance report,” the two groups did not differ. Forty percent read most or all of the report; 82% found the comparative report somewhat or very helpful in learning about plan quality, and 66% found the report somewhat or very helpful in deciding to stay or switch plans. In addition, 95% found the report somewhat or very trustworthy, and 50% were made somewhat or much more confident in their decision. Only 47% of Denver respondents remembered seeing the report compared with 55% of the St. Louis respondents.

3. What personal characteristics were related to each of the responses to comparative performance reports?

We measured four types of responses: remembering seeing the report, intensity of reading the report, helpfulness in learning about plan quality and helpfulness in the decision to stay or switch. Conceptually, the four major responses fall into two categories: exposure or information-seeking (remembering seeing the report and intensity of reading the report) and usefulness (helpfulness in learning about plan quality and helpfulness in the decision to stay or switch).

The two measures related to information seeking were related to general information acquisition styles as well as the salience of the health plan decision. The first measure, remembering seeing the comparative report was related to using Consumer Reports type of information, owning more books about health and health care, and thinking about switching. The second measure, reading most or all of the comparative report was related to being female, thinking that the enrollment decision was extremely important, thinking about switching, and thinking that patient surveys were extremely important.

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Usefulness tended to be related to the respondent's relationship with their health plan and the nature of the specific information that they found valuable. Finding the comparative performance report helpful in learning about plan quality was related to being female, being satisfied with the current health plan, and thinking it was extremely important to know what patients who were surveyed said about how well the plan's physicians listened to them. Finding the comparative performance report helpful in deciding whether to stay or switch plans was inversely related to the number of office visits made by the family unit. Respondents who were satisfied with their plan were more likely to find the report helpful in the decision as were respondents who thought that it was extremely important to know the percentage of plan members who left because they were dissatisfied.

4. What personal characteristics were related to finding the comparative performance report trustworthy or to feeling more or less confident in their decision?

Almost no personal characteristics were significantly related to finding the comparative performance report trustworthy. Only respondents who found that the comparative performance report ratings of plans were the same as their own were more likely to find the comparative performance report somewhat or very trustworthy.

We also asked whether receiving the report made respondents feel more or less confident in their decision. This was the only measure in which educational level played a role. Respondents with some college or vocational training were less likely to feel more confident, while respondents with post graduate training were more likely to feel more confident. Respondents who used information sources like Consumers Report were also more likely to feel more confident.

5. How did respondents who switched plans respond to the comparative performance report compared with those who did not switch?

Only 7.9% of the respondents switched plans. Of the various responses to the comparative performance report, respondents who switched differed from those who did not switch on two responses. Respondents who switched were more likely to feel more confident in their decision. More importantly, respondents who switched were more likely to find the comparative performance report very helpful in learning about differences in plan quality.

Respondents who switched did not differ from those who did not switch on:

- remembering seeing the comparative performance report
- reading most or all of the comparative performance report
- finding the comparative performance report helpful in the decision
- finding the comparative performance report trustworthy

Conclusions

These results suggest that we are finding two target audiences, one with a general interest in this type of information and one facing a specific perceived need for information. The former audience (those with a general sympathy for this sort of information) may also be acting as the "health plan information mavens" referred to as "family and friends" in many lists of possible

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information sources. Further research could explore the role of formal and informal agents of health plan information and their responses to comparative performance information.

The current comparative study does not tell us which parts of the comparative performance reports were found useful by which respondents because the survey questions relating to sections of the comparative performance reports were unique to each market and could not be combined. This information, however, is available in each of the separate reports for Monsanto (St. Louis) and Denver.

The results of this study suggest that the comparative performance report may be more useful in where more switching among health plans is anticipated. These markets may include markets where there are new entrants into the competition or where there are large differences in quality suspected among the plans. Comparative performance reports may also be useful for employers who are expecting more switching among health plans. For example, employers who anticipate significantly increasing premiums for their employees may find comparative performance reports especially useful.

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A. RESEARCH QUESTIONS

We analyzed post-enrollment survey data from Denver and St. Louis to address the following five questions:

1. *How do the Denver and St. Louis populations compare?*
2. *How do their reactions to the comparative performance report compare?*
3. *What personal characteristics are related to each of the responses to comparative performance reports?*

Responses to comparative performance reports were measured by:

- seeing the comparative performance report
 - reading (intensity) of the comparative performance report
 - finding comparative performance report helpful in learning about plan quality
 - finding the comparative performance report helpful in deciding whether to stay or switch plans
4. *What were other responses to the comparative performance report?*
 - finding the comparative performance report trustworthy
 - feeling confident in decision because of the comparative performance report
 5. *How did respondents who switched plans respond to the comparative performance report?*

B. RESULTS

1. *How do the Denver and St. Louis populations compare?*

The studies of comparative performance report effectiveness reported here were conducted in two different populations. To provide some background perspective on these populations (and to allow comparisons of future studies with the current ones), we describe and compare these two groups below.

The employees in Denver and St. Louis were quite different from each other. In the tables that follow, we report the values for Denver and St. Louis separately when the groups differed significantly (at $P \leq .05$). If there was no statistically significant difference between the groups, we report the mean value for the groups combined.

a. Sociodemographics

Although the groups had the same mean age (43 years), there were more women in Denver (47% vs. 30%, $P = .001$). Denver employees had a lower average educational level (13% had post graduate degrees vs. 36% in St. Louis, $P = .001$). Employees in Denver were much less likely to have family coverage (52% vs. 85%, $P = .001$). See Table 1.

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**Table 1
Sociodemographics**

	Denver (n = 670)	St. Louis (n = 784)	Combined
Age, mean (s.d.)			42.7 yrs (9.3)
Gender	Percent		
Male	53	70	
Female	47	30	
Educational level			
High school graduate or less	16	9	
Vocational, technical or some college	42	27	
College graduate	30	28	
Post-graduate or professional degree	13	36	
Coverage type			
Family coverage	52	85	
Individual coverage	48	15	

b. Health and health care

The two groups did not differ on self-reported health status, likelihood of a covered member being treated for a chronic condition, or the frequency with which they thought about their health. Denver employees tended to talk about their health a little less (31% vs. 38% talked about their health often or very often, $P = .017$). Denver employees and their insured families tended to be less heavy users of ambulatory health care (18% had 10 or more visits vs. 30% in St. Louis) and hospital care (18% had one overnight hospitalization vs. 23% in St. Louis). This difference in utilization is probably an artifact of the lower percentage of family coverage in Denver. The groups had similar profiles regarding changes in expected health care use in the next year. See Table 2.

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**Table 2
Health and Health Care Characteristics**

	Denver (n = 670)	St. Louis (n = 784)	Combined
	Percent		
Health Status			
Excellent			29
Very good			46
Good			21
Fair or poor			04
Family member with chronic condition			
Yes			27
No			73
Think about health			
Very often			15
Often			41
Sometimes			32
Rarely or never			12
Talk about health			
Very often	5	8	
Often	25	29	
Sometimes	45	43	
Rarely or never	24	20	
Visits			
None or 1	20	9	
2 to 5	42	36	
6 to 9	19	25	
10 or more	18	30	
Hospitalized overnight, excluding pregnancy			
Yes	18	23	
No	82	77	
Expected Change in Health Care Use			
Less			20
Same			70
More			10

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c. Judging quality

Employees in Denver were less likely to perceive big differences in all aspects of medical care delivery in their area: primary care physicians, specialists, hospitals and health plans. Employees in Denver were also less likely to think that they know a fair amount or a lot more about the health plans available to them than those in St. Louis (48% vs. 68% in St. Louis, $P = .001$). Employees in Denver were also less likely to find it easy to decide on a plan than those in St. Louis (47% vs. 55% in St. Louis, $P = .007$). See Table 3.

**Table 3
Judging Quality**

	Denver (n = 670)	St. Louis (n = 784)	Combined
	Percent		
Difference in quality of care			
Big differences among primary care physicians	39	47	
Big differences among specialists	44	52	
Big differences among hospitals	46	56	
Big differences among health plans	48	58	
Knowledge about health plans			
A lot	8	12	
A fair amount	40	56	
A little	45	29	
Nothing or almost nothing	07	02	
Difficulty judging health plans			
Hard or very hard	43	46	
Neither hard or easy	42	36	
Easy or very easy	19	15	
Difficulty in choosing a health plan			
Hard or very hard	20	17	
Neither hard or easy	33	28	
Easy or very easy	46	55	

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d. Important information in selecting a health plan

We asked respondents in each market to rate how important they felt information about the following issues was in selecting a health plan. The table below shows the percent who rated each issue as extremely important. When there was no significant difference between the two groups, the combined rate is reported. When there were significant differences between the two groups, the rate for each market is reported. The three most important items were the same in each market: ease of seeing specialists, how quickly patients can be seen when they need an appointment, and how well doctors listen and explain things. See Table 4.

**Table 4
Important Information for Selecting Health Plans
Percent Responding “Extremely Important” to the Item**

	Denver (n = 670)	St. Louis (n = 784)	Combined
	Percent		
Ease of seeing specialists			
Extremely important			58
How quickly patients can be seen when they need an appointment			
Extremely important			58
How well doctors listen and explain things			
Extremely important			42
Whether or not a health plan has been accredited			
Extremely important	43	32	
How patients rate the overall quality of health care			
Extremely important			38
Percentage of members who leave the plan because they are dissatisfied			
Extremely important	37	29	
Percentage of children who are immunized			
Extremely important	36	28	
Percentage of members who receive regular screening			
Extremely important	28	22	

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e. Satisfaction

Respondents in Denver and St. Louis were both highly likely to be satisfied with their own physician, while respondents in Denver were less likely to be satisfied with the quality of physicians available and the quality of their health plan. See Table 5.

**Table 5
Satisfaction
Percent Responding “Very Satisfied”**

	Denver (n = 670)	St. Louis (n = 784)	Combined
	Percent		
Satisfaction with my own doctor			
Very satisfied			62
With the quality of doctors available			
Very satisfied	52	58	
With my health plan			
Very satisfied	39	49	
With customer service			
Very satisfied			35

f. Health information sources

The groups had the same distribution of owning books about health care; one-third owned 10 or more books. The Denver group, however, was less likely to use consumer reports-type information. Almost 45% of Denver respondents never or hardly ever used ratings for choosing services compared with 37% of the St. Louis respondents ($P = .001$).

In general, respondents in St. Louis were less likely to report that they used any source in choosing their plan than respondents in Denver. This finding supports their claim that they know more about plans, that they were more satisfied with their current plan, that they perceive there were fewer big differences among plans and that they were less likely to switch. See Table 6.

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**Table 6
Information Sources**

	Denver n = 670	St. Louis n = 784	Combined
	Percent		
Number of books owned about health			
None			16
1 to 3			51
4 to 9			24
10 or more books			08
Use information sources like Consumer Reports			
Always or most of the time	17	25	
Sometimes	38	39	
Never or hardly ever	45	37	
Information from my employer			
Yes	44	38	
Information from family or friends			
Yes	43	35	
Information from my regular doctor			
Yes			36
Information from patients surveyed			
Yes			24
Information from local paper or magazine			
Yes	14	7	
Information from consumer groups			
Yes	9	6	
Information from national paper or magazine			
Yes	9	6	

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Less than one quarter of both groups thought that their selection of a health plan was an extremely important decision, but more respondents in Denver thought it was not a very important decision (18% vs. 12%, $P = .003$). Only half of each market gave any thought to switching health plans. Thirteen percent of employees in Denver switched plans, and only 3% of employees in St. Louis switched plans.

2. How do their reactions to the comparative performance report compare?

Because of the wide difference in the two study groups, it is interesting to observe the similarities in their responses to the comparative performance reports as shown in Table 7.

**Table 7
Reactions to the Comparative Performance Reports**

	Denver (n = 670)	St. Louis (n = 784)	Combined
Remember seeing the comparative performance report	47	55	
Among those who remembered seeing the comparative performance report,	n = 309	n = 425	
Read most or all of the comparative performance report			40
Found comparative performance report very or somewhat trustworthy			95
Made somewhat or much more confident in decision			50
Found plan ratings about the same as own			62
Found comparative performance report very or somewhat helpful in learning about quality differences among plans			82
Found comparative performance report very or somewhat helpful in deciding to stay or switch			66

3. What personal characteristics were related to each of the responses to comparative performance reports?

Responses to comparative performance reports” were measured by:

- remembering seeing the comparative performance report
- reading (intensity) of the comparative performance report
- finding comparative performance report helpful in learning about plan quality
- finding the comparative performance report helpful in deciding whether to stay or switch plans

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a. Remembering seeing the comparative performance report

Remembering seeing the comparative performance report is not solely a function of the system of comparative performance report distribution system, although there were differences by market. In a multivariate analysis, employees in St. Louis were more likely to remember seeing the comparative performance report than employees in Denver, after other differences were controlled (O.R. 1.30, 95% C.I., 1.05, 1.61).

Remembering seeing the comparative performance report was not a random event that depended only on distribution, however. There were other personal characteristics that were also significantly related to remembering seeing the comparative performance report. The preferred type of information sources for general problem solving was related to remembering seeing. Respondents who reported using information sources like Consumer Reports most or all of the time were more likely to remember seeing the comparative performance report (O.R. 1.42, 95% C.I., 1.14, 1.78).

General interest in reading about health was related to remembering seeing. Respondents who owned four or more books on health were more likely to remember seeing the comparative performance report than respondents who owned no books (O.R. 1.68, 95% C.I., 1.21, 2.34), while respondents who owned one to three books were not significantly different from those who owned none.

Finally, being engaged in the health plan decision process was related to remembering seeing. Respondents who thought a little, a fair amount or a lot about switching were more likely to remember seeing the comparative performance report than those who had not thought about switching (O.R. 1.62, 95% C.I., 1.31, 2.00).

b. Reading (intensity) of the comparative performance report

For this analysis, we divided respondents into those who read most or all of the comparative performance report compared with those who read parts of it, just glanced at it, or never really looked at it.

Women were somewhat more likely than men to read most or all of the comparative performance report (OR 1.40, 95% C.I., 1.00, 1.96).

Respondents who thought the enrollment decision was extremely important were more than twice as likely to read most or all of the comparative performance report than those for whom the decision was less than extremely important (OR 2.15, 95% C.I., 1.46, 3.16).

Respondents who thought a little, a fair amount or a lot about switching were more likely to have read most or all of the comparative performance report than those who had not thought about switching (O.R. 1.53, 95% C.I., 1.08, 2.16).

Respondents who thought that patient surveys of health plan quality was extremely or very important to know when selecting a plan were more likely to have read most or all of

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the comparative performance report than those who thought patient surveys of plan quality were somewhat or not important (O.R. 1.44, 95% C.I., 1.02, 2.01).

Consistent with this result, respondents who used information from patient surveys in their choice of plan were almost three times more likely to have read most or all of the comparative performance report than those who did not use this type of information (O.R. 2.83, 95% C.I. 2.01, 3.99).

c. Finding comparative performance report helpful in learning about plan quality

For this analysis, we divided respondents into those who found the comparative performance report somewhat or very helpful in learning about plan quality compared with those who found it not very or not at all helpful.

Women were somewhat more likely than men to find the comparative performance report helpful in learning about plan quality (OR 2.08, 95% C.I., 1.31, 3.38).

Respondents who were somewhat or very satisfied were more likely to find the comparative performance report helpful in learning about plan quality than those who were neutral or dissatisfied (OR 2.15, 95% C.I., 1.30, 3.54).

Respondents who thought that it was extremely important to know what patients who were surveyed said about how well the plan's medical doctors listened to them were more likely to find the comparative performance report helpful in learning about plan quality (OR 1.99, 95% C.I., 1.28, 3.16).

Respondents who used information from patient surveys in their choice of plan were more likely to find the comparative performance report helpful in learning about plan quality (OR 3.59, 95% C.I., 2.13, 6.32).

d. Finding the comparative performance report helpful in deciding whether to stay or switch plans

For this analysis, we divided respondents into those who found the comparative performance report somewhat or very helpful in deciding whether to stay or switch plans compared with those who found it not very or not at all helpful.

The number of visits was inversely related to the likelihood of finding the comparative performance report somewhat or very helpful in the plan decision. Respondents with two to five visits were less likely than respondents with one or no visits to find the comparative performance report helpful (OR 0.44, 95% CI, 0.23, 0.83). Increasing visits were associated with decreased likelihood of finding the comparative performance report helpful (six to nine visits - OR 0.40, 95% CI 0.20, 0.76; ten or more visits - OR 0.33, 95% CI 0.17, 0.63).

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Respondents who were somewhat or very satisfied with their plan were more likely to find the comparative performance report helpful in their plan decision than those who were neutral or dissatisfied (OR 2.36, 95% C.I., 1.51, 3.70).

The degree of difficulty of plan choice also played a role, although not a straightforward one. Respondents who found the choice neither hard nor easy were more likely to find the comparative performance report helpful in their plan decision than those who found the decision easy (OR 1.62, 95% CI 1.08, 2.46). Those who found the decision hard, however, were no more or less likely to find the comparative performance report helpful than those who found the decision easy.

Respondents who thought that it was extremely important to know the percentage of plan members who leave because they were dissatisfied were more likely to find the comparative performance report helpful in their decision (OR 2.04, 95% C.I., 1.39, 3.04).

And again, respondents who used information from patient surveys in their choice of plan were more likely to find the comparative performance report helpful in their decision (OR 2.85, 95% C.I., 1.94,4.23).

4. *What were other responses to the comparative performance report?*

- finding the comparative performance report trustworthy
- feeling confident in decision because of the comparative performance report

We also examined who found the comparative performance report trustworthy. Almost no personal characteristics were related to finding the comparative performance report trustworthy. Only respondents who found the comparative performance report ratings of plans were the same as their own were more likely to find the comparative performance report very or somewhat trustworthy.

We also asked whether receiving the report made respondents feel more or less confident in their decision. This was the only measure in which educational level played a role. Respondents with some college or vocational training were less likely to feel more confident, while respondents with post graduate training were more likely to feel more confident (chi square 15.87, $P = .007$).

Respondents who used information sources like Consumers Report were also more likely to feel more confident (chi square 10.08, $P = .039$).

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5. *How did respondents who switched plans respond to the comparative performance report?*

Only 7.9% of the respondents switched plans. Respondents in Denver were more likely to switch plans than respondents in St. Louis (13.3% vs. 3.3% switched respectively, chi square 48.97, $P = .001$). The most common single reason for switching was to reduce premiums, mentioned by 30% of those who switched. We conducted bivariate analyses comparing those who switched with those who did not switch on each of the four responses to comparative performance reports. For these analyses, we did not condense the response measures into the two categories, as we did for the multivariate analyses.

Of the various responses to the comparative performance report that we assessed, respondents who switched differed from those who did not switch on two responses. Respondents who switched were more likely to feel more confident in their decision (63.5% vs. 48.8%, chi square 4.16, $P = .042$). More importantly, respondents who switched were more likely to find the comparative performance report very helpful in learning about differences in plan quality (28.8% vs. 15.5%, chi square 8.34, $P = .04$). (The relationship of switching with helpfulness in learning about plan quality did not appear in the multivariate analyses because we combined the categories of very and somewhat helpful.)

Respondents who switched did not differ from those who did not switch on other responses:

- remembering seeing the comparative performance report
- reading most or all of the comparative performance report
- finding the comparative performance report helpful in the decision
- finding the comparative performance report trustworthy

C. DISCUSSION AND POLICY IMPLICATIONS

This evaluation compared responses to comparative performance reports in two markets and involved two quite different populations. Because of the many differences between the two groups, the similarity of their responses to comparative performance report is striking.

A positive result from this evaluation is that responses to the comparative performance report were not mediated by educational level. We caution that, while the study sample contained a fairly broad educational distribution, it does not adequately represent those with an eighth grade education or less. The respondents (the majority of whom responded to a written questionnaire) were presumably literate. These respondents reflect a diverse, employed, English-speaking population and the findings may be generalized to that population. This conclusion is important because many comparative performance reports are prepared by employers for their employees.

Our need to revise the dissemination approach in Denver during the first phase of this study reminds us that dissemination remains a key factor in ensuring that people have an opportunity to use the comparative performance report in their enrollment decision. We may need to seek additional ways to engage employers or others as agents to assure that dissemination is complete and timed with the enrollment period.

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We have noted that the personal characteristics associated with “seeking” information are not necessarily the same characteristics as those associated with “finding” the available information helpful. Table 8 presents a summary of the personal characteristics that were, and were not, related to any of the four major responses to the comparative performance report.

**EVALUATION OF REPORT CARDS
COMBINED RESULTS FROM CONSUMERS IN DENVER AND ST. LOUIS**

**Table 8
Personal Characteristics Related to Responses to the Comparative
Performance Reports in Denver and St. Louis**

	Remember seeing comparative performance report	Read most or all of comparative performance report	Help learn about plan quality	Help in decision to stay or switch
Sociodemographics				
age				
gender (female)		X	X	
education				
use consumer ratings type of information	X			
coverage type (single or family)				
Salience of health issues				
think about health				
talk about health				
own health books	X			
Health and health care				
own health status				
family member with chronic problem				
number of visits				X
hospitalization in previous year				
any change in expected use in next year				
Relationship with plan				
satisfaction with plan			X	X
satisfaction with customer service				
satisfaction with quality of physicians available				

**EVALUATION OF REPORT CARDS
COMBINED RESULTS FROM CONSUMERS IN DENVER AND ST. LOUIS**

**Table 8 (cont'd)
Personal Characteristics Related to Responses to the Comparative
Performance Reports in Denver and St. Louis**

	Remember seeing comparative performance report	Read most or all of comparative performance report	Help learn about plan quality	Help in decision to stay or switch
Relationship with plan (cont'd)				
satisfaction with own physician				
hard/easy to judge plan quality				
hard/easy to choose plan				X
importance of plan decision		X		
thought about switching plans	X	X		
switched plans				
importance of knowing accreditation				
importance of knowing children's immunization				
importance of knowing disenrollment for dissatisfaction				X
importance of knowing physicians listen				
importance of knowing that patients are seen quickly				
importance of knowing patient ratings of health plan quality		X	X	
importance of knowing % cancer screening				
importance of knowing how easy see specialist				

**EVALUATION OF REPORT CARDS
COMBINED RESULTS FROM CONSUMERS IN DENVER AND ST. LOUIS**

Table 8 (cont'd)

**Personal Characteristics Related to Responses to the Comparative
Performance Reports in Denver and St. Louis**

	Remember seeing comparative performance report	Read most or all of comparative performance report	Help learn about plan quality	Help in decision to stay or switch
Information sources				
family, friends				
consumer groups				
local paper, magazines				
national paper				
patients surveyed		X	X	X
own regular physician				
employer				
market	X			

The findings of this evaluation suggest that the comparative performance report does not replace one's personal experience with a plan. The more visits a subscriber unit has, the less likely they are to find the comparative performance report helpful in their decision.

People who are drawn to this type of comparative performance report appear to be those who are comfortable using this type of information in their decision-making and those who have a broader interest in reading about health. Women, in particular, read this type of information and find it helpful in learning about plan quality.

We observe that people who are thinking about switching plans are seeking information. Thinking about switching, however, is not related to finding the comparative performance reports helpful for learning about plan quality, nor is it related to finding the comparative performance report helpful in deciding to stay or switch.

Satisfaction with their health plan *is* related to finding the comparative performance report helpful for learning about plan quality or helpful in deciding to stay or switch, but not in the way that we might predict. Respondents who were somewhat or very satisfied with their plan were *more* likely to find the comparative performance report helpful. This finding suggests that respondents were using the comparative performance report to confirm their current decision.

These results suggest that we are finding two target audiences, one with a general interest in this type of information and one facing a specific perceived need for information. The former audience (those with a general sympathy for this sort of information) may also be acting as the "health plan information mavens" referred to as "family and friends" in many lists of possible

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information sources. Further research could explore the role of formal and informal agents of health plan information and their responses to comparative performance information. Although we are finding the right audiences, we are not necessarily giving them all the information that they would find valuable.

The current comparative study does not tell us which parts of the comparative performance reports were found useful by which respondents because the survey questions relating to sections of the comparative performance reports were unique to each market and could not be combined. This information, however, is available in each of the separate reports for Monsanto (St. Louis) and Denver.

The results of this study suggest that the comparative performance report may be more useful in markets, or for employers, where more switching among health plans is anticipated. These markets may include markets where there are new entrants into the competition. Employers who anticipate significantly increasing premiums for their employees may find comparative performance reports especially useful.

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS

SUMMARY

The Denver evaluation is based on pre-enrollment and post-enrollment questionnaires from employees in Denver whose open enrollment occurred in autumn 1997. The survey combined mailed responses with telephone follow-up and achieved a response rate of 69.6% (n = 670).

The evaluation addresses two main questions:

1. What changes in how people evaluate the quality of care occurred from pre-enrollment to post-enrollment?

Were the changes from pre-enrollment to post-enrollment different for any of four groups?

- 1a. People who switched health plans compared with those who did not switch?
- 1b. People who thought a fair amount or a lot about switching health plans compared with those who thought a little or not at all about switching?
- 1c. People who remembered seeing the report card compared with those who did not remember seeing the report card?
- 1d. People who read most or all of the report card compared with people who read parts, just glanced through it or never really looked at it? (This comparison is restricted to people who remembered seeing the report card.)

We saw changes in evaluating the quality of care from pre-enrollment to post-enrollment in the respondents' assessment of how big the differences in quality were for four components of the health care system: primary care physicians, specialists, hospitals, and HMOs. For all four components, respondents reported bigger differences on the post-enrollment questionnaire than they had on the pre-enrollment questionnaire. At post-enrollment respondents were also likely to report three quality measures (of the eight tested) as more important at post-enrollment than they had at pre-enrollment: accreditation, the percentage of enrollees leaving because they were dissatisfied, and the percentage of children who were immunized.

There were no significant changes from pre-enrollment to post-enrollment for people who switched plans, undoubtedly because the number of people who switched plans was so small. People who thought a lot or a fair amount about changing health plans were likely to report four quality measures (of the eight tested) more important at post-enrollment than they had at pre-enrollment: accreditation, the percentage of enrollees leaving the HMO because they were dissatisfied, the percentage of children who were immunized, and what surveyed patients say about how well the HMO's physicians listen.

People who remembered seeing the report card were likely to report three quality measures (of the eight tested) more important at post-enrollment than they had at pre-enrollment: accreditation, the percentage of enrollees leaving the HMO because they were dissatisfied, and what surveyed patients say about how well the HMO's physicians listen.

People who read most or all of the report card did not have responses that differed in any striking way from people who read parts, just glanced through it, or never really looked at it.

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
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2. *How did respondents who remembered seeing the report card evaluate the report card and its components?*

Were there differences in the report card evaluation for any of three groups?

- 2a. People who switched compared with those who did not switch?
- 2b. People who thought a fair amount or a lot about switching compared with those who thought a little or not at all about switching?
- 2c. People who read most or all of the report card compared with people who just glanced through it or never really looked at it?

We asked respondents who remembered seeing the report card to evaluate it generally. Respondents were likely to find it helpful for learning about differences in plan quality (16% said very helpful, 65% said somewhat helpful) and also helpful as a tool for deciding whether to stay or switch plans (14% said very helpful, 53% said somewhat helpful). Almost half of the respondents reported that the report card made them feel more confident in their decision, and they found the report card trustworthy (24% said very trustworthy, 71% said somewhat trustworthy).

The report cards introduced information that was at variance with some people's opinions. While almost half said that the report card ratings of HMOs were about the same as their own, over one-quarter said the ratings were somewhat different from their own. Only a few said that they were very different, and almost one-quarter of respondents had no opinion.

We also asked respondents who remembered seeing the report card to assess four components of the report card: performance goals, summary consumer satisfaction comparisons, detailed bar graphs about satisfaction, and the worksheet. Each of these four components was evaluated for understandability, usefulness, and whether the respondent would like to continue receiving this information.

The ratings for each section were quite similar. Over one-third found the sections very easy to understand. Very few found them somewhat or very difficult to understand. The likelihood of each section's usefulness varied a little more than the understandability varied. The summary consumer satisfaction comparisons were most commonly used, followed by detailed bar graphs about satisfaction, and performance goals. The worksheet was least frequently used, but over one-fifth reported using it.

All of the components appeared popular; more than two-thirds requested the worksheet and three-quarters or more desired the performance goals, summary consumer satisfaction comparisons, and detailed bar graphs about satisfaction.

Because of the small number of people who switched health plans and the even smaller number of those who remembered seeing the report card, we could detect no difference in their evaluation of the report card.

Information in the report card apparently surprised those respondents who thought about switching. They were more likely to find the report card not very trustworthy than those who

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
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thought a little or not at all about switching. They were more likely to find the report card ratings of HMOs somewhat different from their own ratings, and they were more likely to find the ratings of HMOs somewhat or very different from other ratings that they had seen.

On the other hand, people who thought a fair amount or a lot about switching were more likely to use the comparison of HMO performance rates in their health plan decision compared with those who thought a little or not at all about switching. They were also more likely to use the detailed bar graphs about satisfaction in their health plan decision.

People who read most or all of the report card differed greatly in their evaluation of the report card from people who read parts of it, just glanced through it, or never really looked at it. They were much more positive in their general assessment of the report card and in their assessment of each the component parts.

Conclusions and Recommendations

Based on this evaluation we have two conclusions and two recommendations:

- Report cards may broaden people's definitions of what constitutes quality. In this study, both HMO accreditation and rates of HMO disenrollment because of dissatisfaction became more important.
- Report cards can introduce new information to people who are thinking about switching health plans. Evidence from this study indicates that the report card introduced information that was at variance with people's previous information, and yet they used that information in their health plan decision.
- People who develop report cards need to pay close attention to the distribution mechanism. Piloting of any distribution mechanism is strongly recommended.
- Methods for impressing people with the meaning of report card information should be sought and tested. Such methods may include advance publicity campaigns, and use of formal and informal information brokers.

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

A. DENVER ANALYSIS PLAN

Both the pre-enrollment and post-enrollment questionnaires contained a lengthy series of items that measured respondents' attitudes toward various aspects of the quality of health care. Responses to these items were usually ordinal, for example, from "not very important" to "extremely important." For each ordinal measure, we calculated a change score from pre-enrollment to post enrollment. We compared the change from pre-enrollment to post-enrollment using the Wilcoxin signed-rank test.

We analyzed four groups of interest: (1) people who switched compared with those who did not switch, (2) people who thought a fair amount or a lot about switching compared with those who thought a little or not at all about switching, (3) people who remembered seeing the report card compared with those who did not remember seeing the report card, and (4) people who read most or all of the report card compared with people who read parts, just glanced through it, or never really looked at it. (This last comparison is restricted to people who remembered seeing the report card.) We compared each of these subgroups on their difference scores using the Student's *t* test.

On the post-enrollment survey only, we asked respondents to evaluate the report card that had been mailed to them. We asked a set of general questions about their reactions to the report card. We also asked them to evaluate four components of the report card: performance goals, summary consumer satisfaction comparisons, detailed bar graphs about satisfaction, and the worksheet. Each of these four components was evaluated for understandability, usefulness, and whether the respondent would like to continue receiving this information.

For the post-enrollment analysis, we report the frequency of responses given by all respondents who remembered seeing the report card. Second, using the chi-square test of association, we compare three groups of interest on all the report card evaluation measures. The three subgroups were (1) people who switched compared with those who did not switch, (2) people who thought a fair amount or a lot about switching compared with those who thought a little or not at all about switching, and (3) people who read most or all of the report card compared with people who read parts, just glanced through it, or never really looked at it.

B. RESULTS

1. What changes in evaluating the quality of care occurred from pre-enrollment to post-enrollment?

On both the pre-enrollment questionnaire and the post-enrollment questionnaire, we asked respondents an extensive series of questions related to the quality of care. We were interested in seeing whether receiving the report card would influence any of their opinions about quality of care.

The first set of four questions asked them how big a difference they thought there was in the quality of care among family physicians, among specialists, among hospitals, and among HMOs in their area. There were significant changes from pre-enrollment to post-enrollment for all four health care entities, although the change was smallest for HMOs. In all cases, respondents

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
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tended to see bigger differences in quality at post-enrollment compared with their evaluations at pre-enrollment. See Table 1.

Table 1

**Perceived Differences in the Quality of Health Care
Pre-enrollment, Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Pre-enrollment n = 670	Post-enrollment n = 670
1.	Based on what you've heard, read, or experienced yourself, how much <u>difference</u> , if any, do you think there is in the <u>quality of care</u> among each of the following:		
1a.	<u>Family doctors</u> , general practitioners, and other primary care doctors in your area. Big differences Small differences No differences Don't know Missing	33.6% 47.0 16.4 2.7 0.2	38.7% 47.9 12.2 1.2 --
1b.	Doctors in your area who are <u>specialists</u> , such as orthopedists, allergists, and those who treat heart problems. Big differences Small differences No differences Don't know Missing	38.4% 40.0 15.4 5.9 0.3	43.3% 43.0 11.0 2.8 --
1c.	<u>Hospitals</u> in your area. Big differences Small differences No differences Don't know Missing	43.3% 37.6 15.7 3.4 --	45.3% 42.4 10.2 2.1 --
1d.	<u>HMOs and health insurance companies</u> that offer coverage in your area. Big differences Small differences No differences Don't know Missing	45.3% 40.6 10.4 3.6 0.1	47.7% 44.5 6.7 1.1 --

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
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At post-enrollment, 48% of respondents thought there were big differences in HMOs, 45% thought there were big differences in hospitals, 43% thought there were big differences in specialists, and 39% thought there were big differences in primary care physicians.

We asked respondents how much they thought that they knew about the HMOs offered through the CHIP and how these HMOs compared with each other. There was no change from pre-enrollment to post-enrollment. At post-enrollment, only 8% thought that they knew a lot; 45% thought that they knew a fair amount. There still appears ample room for improvement on this measure. See Table 2.

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Table 2

**Evaluating HMOs
Pre-enrollment, Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Pre-enrollment n = 670	Post-enrollment n = 670
2.	Overall, <u>how much do you think you know about the HMOs</u> offered to you through the CHIP and how these HMOs compare with each other? A lot A fair amount A little Nothing at all Don't know Missing	8.9% 38.4 44.4 8.0 0.1 0.2	7.6% 45.1 41.6 5.7 -- --
3.	How hard or easy is it for you to <u>judge the quality of the HMOs</u> available to you through the CHIP? Very hard Hard Neither hard nor easy Easy Very easy Don't know Missing	10.3% 33.6 39.2 13.4 2.4 0.9 0.1	8.8% 34.4 41.8 12.1 2.7 0.2 --
4.	Which of the HMOs available to you through the CHIP do you think <u>has the highest quality overall</u> , whether you happen to be enrolled in it or not? FHP Frontier Community Health Plans HMO Colorado Kaiser Permanente HMOs don't differ/can't say any one is best (pre only) HMOs don't differ (post only) Can't say which HMO is best (post only) Don't know Missing	28.1% 3.1 17.8 18.2 28.9 -- -- 3.7 0.2	21.5% 2.0 12.8 19.6 -- 1.7 41.6 0.9 --

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS

Respondents assessed how hard or easy it was for them to judge the quality of HMOs available to them. There was no change from pre-enrollment to post-enrollment. At post-enrollment, 9% thought it was very hard to judge the quality of available HMOs, and 34% thought it was hard (Table 2). The degree of difficulty of the decision suggests an unmet information need, but it may be perceived as a need only by those who regard the decision as important.

The questionnaire had a section devoted to defining who is responsible for the quality of care. Three aspects of quality were assessed: keeping HMO members healthy, assuring the quality of care by doctors, and coordinating care and services. For each of these three aspects, we asked respondents to evaluate the degree of responsibility of physicians, HMOs, and individuals. There was no change from pre-enrollment to post-enrollment for any of the nine measures.

Respondents felt overwhelmingly that individuals had the most responsibility for keeping themselves healthy (at post-enrollment 94% said individuals had a lot of responsibility, vs. 51% who said physicians had a lot of responsibility, and 45% who said HMOs had a lot of responsibility). See Table 3.

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Table 3

**Degree of Responsibility for Keeping Members Healthy
Pre-enrollment, Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Pre-enrollment n = 670	Post-enrollment n = 670
5.	How much responsibility do you think <u>doctors</u> have for keeping HMO members healthy? A lot of responsibility Some responsibility A little responsibility No responsibility Don't know Missing	51.0% 36.1 9.6 2.6 0.7 --	51.1% 38.1 8.7 2.0 0.2 --
6.	How much responsibility do you think <u>HMOs</u> have for keeping their members healthy? A lot of responsibility Some responsibility A little responsibility No responsibility Don't know Missing	47.9% 34.3 12.9 4.2 0.7 --	44.8% 38.8 12.6 3.6 0.2 --
7.	How much responsibility do you think <u>individuals</u> have for keeping themselves healthy? A lot of responsibility Some responsibility A little responsibility No responsibility Don't know Missing	92.7% 6.4 0.5 0.1 0.3 --	94.3% 5.4 0.3 -- -- --

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Respondents felt that both physicians and HMOs had a lot of responsibility for assuring the quality of physicians' care. At post-enrollment, 83% said physicians had a lot of responsibility, and 81% said HMOs had a lot of responsibility, compared with 43% who said individuals had a lot of responsibility. See Table 4.

Table 4

**Degree of Responsibility for Assuring the Quality of Care by Physicians
Pre-enrollment, Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Pre-enrollment n = 670	Post-enrollment n = 670
8.	How much responsibility do you think <u>doctors</u> have for assuring the <u>quality of care by doctors</u> ? A lot of responsibility Some responsibility A little responsibility No responsibility Don't know Missing	79.9% 15.9 3.0 0.8 0.3 --	83.0% 14.8 2.0 0.3 -- --
9.	How much responsibility do you think <u>HMOs</u> have for assuring the quality of care by doctors in their network? A lot of responsibility Some responsibility A little responsibility No responsibility Don't know Missing	80.1% 15.4 3.0 0.9 0.5 --	81.0% 16.6 2.1 0.3 -- --
10.	How much responsibility do you think <u>individuals like yourself</u> have for assuring the quality of care by doctors? A lot of responsibility Some responsibility A little responsibility No responsibility Don't know Missing	45.6% 37.1 11.5 5.2 0.6 --	42.9% 38.6 15.5 3.0 -- --

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

At post-enrollment, respondents were more likely to feel that HMOs had a lot of responsibility in coordinating care and services (70%) than physicians (55%) or individuals (47%). See Table 5.

Table 5

**Degree of Responsibility for Coordinating Care and Services
Pre-enrollment, Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Pre-enrollment n = 670	Post-enrollment n = 670
11.	How much responsibility do you think <u>doctors</u> have for coordinating care and services?		
	A lot of responsibility	53.4%	55.0%
	Some responsibility	36.3	37.7
	A little responsibility	8.2	6.5
	No responsibility	1.3	0.8
	Don't know	0.8	--
	Missing	--	--
12.	How much responsibility do you think <u>HMOs</u> have for coordinating care and services?		
	A lot of responsibility	69.1%	69.6%
	Some responsibility	24.3	24.2
	A little responsibility	4.7	5.6
	No responsibility	1.2	0.6
	Don't know	0.6	--
	Missing	--	--
13.	How much responsibility do you think <u>individuals like yourself</u> have for coordinating their own care and services?		
	A lot of responsibility	49.2%	47.1%
	Some responsibility	35.6	38.6
	A little responsibility	12.6	11.3
	No responsibility	2.2	3.0
	Don't know	0.4	--
	Missing	--	--

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS

At pre-enrollment and again at post-enrollment, we asked respondents how important it was for them to know certain measures of quality when they were selecting their HMO. The measures were:

- the percentage of members who receive regular screening
- how quickly patients can be seen when they need an appointment
- how patients who are surveyed rate the quality of the care they get through their HMO
- whether the HMO has been accredited
- what patients who are surveyed say about how well the HMO's doctors listen
- the percentage of members who decide to leave because they are dissatisfied
- how easy it is to see specialists
- the percentage of children who received all their immunizations

All the measures were reported in the report card that they received except the percentage of members who decide to leave because they are dissatisfied and the percentage of children who received all their immunizations.

Respondents rated three of the measures significantly more important at post-enrollment than at pre-enrollment. See Table 6.

- whether the HMO has been accredited
- the percentage of members who decide to leave because they are dissatisfied
- the percentage of children who received all their immunizations

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

**Table 6
Importance of Knowing Selected Measures of Quality
Pre-enrollment, Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Pre-enrollment n = 670	Post-enrollment n = 670
	When selecting an HMO, <u>how important</u> is it for you to now:		
15. / 14a.	The percentage of HMO members who <u>receive regular screening</u> for things like high blood pressure and breast cancer. Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	24.9% 32.8 28.3 13.5 0.5 -- --	27.6% 31.3 28.5 12.7 -- --
16. / 14b.	<u>How quickly patients can get in to be seen</u> by a doctor when they need an appointment. Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	56.1% 35.3 7.2 1.0 0.3 --	56.9% 37.8 4.7 0.5 0.2 --
17. / 14c.	How patients who are surveyed rate <u>the overall quality</u> of health care they get through their HMO. Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	38.5% 39.3 20.2 1.7 0.4 --	37.1 42.3 16.8 3.6 0.2 --
18. / 14d.	Whether or not an HMO <u>has been accredited</u> by an independent organization that reviews HMOs to see if they meet certain standards. Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	31.5% 39.1 25.0 4.1 0.3 --	43.2 36.2 17.0 3.3 0.3 --

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Table 6 (cont'd)

**Importance of Knowing Selected Measures of Quality
Pre-enrollment, Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Pre-enrollment n = 670	Post-enrollment n = 670
	When selecting an HMO, <u>how important</u> is it for you to know:		
19. / 14e.	What patients who are surveyed say about <u>how well the HMO's doctors listen</u> and explain things to them. Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	42.1% 37.2 18.2 2.2 0.3 --	43.2 42.3 11.4 3.0 0.2 --
20. / 14f.	The percentage of HMO <u>members who decide to leave the HMO</u> each year because they are dissatisfied. Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	31.5% 38.0 25.2 5.0 0.3 --	36.7 36.5 22.7 3.6 0.5 --
21. / 14g.	How easy it is for HMO members <u>to see specialists</u> , such as orthopedists, allergists, and doctors who treat heart problems. Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	60.2% 32.1 6.6 0.6 0.4 0.1	60.2 34.6 4.7 0.3 0.2 --
22. / 14h.	The percentage of children in the HMO who have received <u>all their recommended immunizations</u> . Extremely important Very important Somewhat important A lot of responsibility Not very important Don't know Missing	31.8% 28.4 22.0 16.9 0.9 --	35.7 30.5 22.5 10.9 0.5 --

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

At post-enrollment, the percent of respondents rating each measure as extremely important (in order of decreasing frequency) was

- 60% how easy it is to see specialists
- 57% how quickly patients can be seen when they need an appointment
- 43% whether the HMO has been accredited
- 43% what patients who are surveyed say about how well the HMO's doctors listen
- 37% the percentage of members who decide to leave because they are dissatisfied
- 37% how patients who are surveyed rate the quality of the care through their HMO
- 36% the percentage of children who received all their immunizations
- 28% the percentage of members who receive regular screening

1a. Were there any differences in the change scores between people who switched health plans and people who did not switch health plans?

Only 74 people (11%) switched health plans during open enrollment. Of the 23 items measuring quality, there was a significant difference in only one item--personal responsibility for keeping themselves healthy. People who switched health plans decreased their rating of the degree to which individuals are responsible for keeping themselves healthy compared with the rating of people who did not switch ($P = .04$). Because of the large number of items that were tested, this finding may well be due to chance.

1b. Were there any differences in the change scores between people who thought a fair amount or a lot about switching health plans compared with those who thought only a little or not at all about switching plans?

Almost one-quarter of the respondents (23%) thought a fair amount or a lot about switching. These people who thought about switching differed from those who did not on 5 of the 23 items. In one isolated finding, their rating on the differences in quality among hospitals increased less than the rating of those who thought less about switching ($P = .03$). The other four significant findings all related to measures that were important to know when selecting an HMO. The change score was higher for people who thought about switching than for people who thought less about switching for the following items: whether the HMO has been accredited, what patients who are surveyed say about how well the HMO's doctors listen, the percentage of members who decide to leave because they are dissatisfied, and the percentage of children who received all their immunizations.

1c. Were there any differences in the change scores between people who remembered seeing the report card compared with those who did not remember seeing the report card?

Less than half of the respondents (47%) remembered seeing the report card. Those who remembered seeing it differed from those who did not remember on three measures, all of them related to characteristics that were important to know when selecting an HMO. The change score for people who remembered seeing the report card was higher than the change score for people who did not remember for the following items: whether the HMO has been accredited, what patients who are surveyed say about how well the HMO's doctors listen, and the percentage of members who decide to leave because they are dissatisfied.

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS

1d. Were there any differences in the change scores between people who read most or all of the report card compared with people who just glanced through it or never really looked at it? (This comparison is restricted to people who remembered seeing the report card.)

Of those who remembered seeing the report card, 41% read most or all of it. Those who read most or all of it tended to differ from those who read less on two measures. The change score for people who read most or all increased on the item “how much do you think you know about the HMOs offered to you,” while the change score for people who read less intensely decreased from pre-enrollment to post-enrollment ($P = .06$). The change score for people who read most or all increased on the item “how much responsibility do individuals have for coordinating their own care and services,” while the change score for people who read less decreased ($P = .05$).

2. How did respondents who remembered seeing the report card evaluate it and its component parts?

We asked respondents who remembered seeing the report card to assess its usefulness. As a tool for learning about differences in quality among HMOs, 16% found it very helpful, and another 65% found it somewhat helpful. Less than one-fifth (19%) found it not very or not at all helpful in learning about quality. Similarly, as a tool for deciding whether to stay or switch health plans, 14% found it very helpful, 53% found it somewhat helpful, and 32% found it not very or not at all helpful. See Table 7.

Almost half of the respondents (48%) reported that the report card made them more confident in their decision, while 48% reported no effect on confidence.

Almost one-quarter (24%) found the information very trustworthy, and 71% found it somewhat trustworthy. Five percent found it not very or not at all trustworthy.

The report cards introduced information that was at variance with some people’s opinions. While almost half (47%) said that the report card ratings of HMOs were about the same as their own, over one-quarter (27%) said the ratings were somewhat different from their own. Only 3% said that they were very different, and 22% had no opinion.

When asked how these ratings compared with other ratings they may have seen, 30% said they were about the same, 15% said they were somewhat different, and 2% said they were very different. One-half of the respondents had no opinion.

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Table 7

**General Responses to the Report Card
by Those Who Remembered Seeing It
Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Post-enrollment n = 308
27.	How much of the "Choosing Quality Health Care" report, if any, did you read? Read most or all of it Read parts of it Just glanced through it Never really looked at it	40.6% 32.1 25.0 2.3
28.	In your opinion, how <u>trustworthy</u> was the information in the "Choosing Quality Health Care" report? Very trustworthy Somewhat trustworthy Not very trustworthy Not at all trustworthy Missing	23.8% 70.8 4.0 1.0 0.3
29.	How do the ratings of the HMOs in this report compare with <u>your own opinion</u> of the quality of these HMOs? About the same Somewhat different Very different Don't know/No opinion	47.0% 27.3 3.3 22.4
30.	How do ratings of HMOs in this report compare with <u>other ratings</u> of health care quality you may have seen? About the same Somewhat different Very different Haven't seen any other rating Don't know/No opinion Missing	30.5% 15.4 2.3 26.6 24.9 0.3

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Table 7 (cont'd)

**General Responses to the Report Card
by Those Who Remembered Seeing It
Post-enrollment: Denver, 1997**

Question No.	Questionnaire Item	Post-enrollment n = 308
31.	When it comes to <u>learning</u> about differences in quality among the HMOs, how helpful was this report to you? Very helpful Somewhat helpful Not very helpful Not at all helpful Missing	15.9% 64.8 15.3 3.7 0.3
32.	When it came to deciding <u>whether to stay</u> with the same HMO <u>or switch</u> to a different HMO, how helpful was the “Choosing Quality Health Care” report to you? Very helpful Somewhat helpful Not very helpful Not at all helpful Missing	13.6% 53.3 18.5 13.9 0.7
33.	Did this report make you feel more or less <u>confident in your decision</u> to switch HMOs or stay with your HMO? Much more confident Somewhat more confident Report had not effect on my confidence Somewhat less confident Much less confident Missing	10.6% 37.6 48.2 1.7 1.3 0.7

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS

We evaluated four components of the report card: performance goals, summary consumer satisfaction comparisons, detailed bar graphs about satisfaction, and the worksheet. To help respondents remember the sections, we used icons to replicate the section that appeared in the report card. Each of these four components was evaluated for understandability, usefulness, and whether the respondent would like to continue receiving this information. See Table 8.

The ratings for each section were quite similar. Over one-third found the sections very easy to understand (in descending order: detailed bar graphs about satisfaction 44%, summary consumer satisfaction comparisons 38%, performance goals 35%, worksheet 34%). Less than 5% found them somewhat or very difficult.

The summary consumer satisfaction comparisons were most commonly used (36%), followed by detailed bar graphs about satisfaction (32%) and performance goals (29%). The worksheet was least frequently used, but over one-fifth (21%) reported using it.

All of the components appeared popular; 80% wanted to continue to receive the performance goals, 77% wanted the summary consumer satisfaction comparisons, 76% wanted the detailed bar graphs about satisfaction, and 64% wanted the worksheet.

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Table 8

**Responses to Specific Report Card Components
by Those Who Remembered Seeing It
Post-enrollment: Denver, 1997**

Responses	Q 34 - 36 Performance Goals n = 308	Q 37 - 39 Consumer Satisfaction Comparisons n = 308	Q 40 - 42 Detailed Bar Graphs of Consumer Satisfaction n = 308	Q 43 - 45 Worksheet n = 308
Ease of Understanding				
Very easy	34.8%	37.8%	44.4%	34.5%
Somewhat easy	27.5	29.6	23.7	22.4
Neither easy nor difficult	20.5	16.8	16.8	17.4
Somewhat difficult	4.0	2.3	3.6	3.3
Very difficult	1.3	0.7	0.3	1.0
Don't know/No opinion	11.9	12.5	10.9	21.1
Missing	--	0.3	0.3	0.3
Use in Health Plan Decision				
Yes	29.3%	36.2%	32.2%	20.7%
No	59.5	52.6	56.6	70.4
Don't remember	11.2	10.9	10.9	8.6
Missing	--	0.3	0.3	0.3
Continued Receipt of This Information				
Yes	79.6%	77.0%	75.7%	64.1%
No	9.2	9.5	10.2	18.4
Don't know/No opinion	10.9	13.2	13.8	17.1
Missing	0.3	0.3	0.3	0.3

2a. Were there differences in the report card evaluation for people who switched compared with those who did not switch?

Because of the small number of people who switched health plans and the even smaller number of those who remembered seeing the report card, we could detect no difference in the evaluation of the report card between those who switched and those who did not switch health plans.

EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS

2b. *Were there differences in the report card evaluation for people who thought a fair amount or a lot about switching health plans compared with those who thought a little or not at all about switching?*

Just over one-quarter of the respondents (26%) thought a lot or a fair amount about switching.

Information in the report card apparently surprised those respondents who thought about switching. They were more likely to find the report card not very trustworthy than those who thought a little or not at all about switching (10% of those who thought about switching vs. 2% of those who thought a little or not at all about switching, $P = .01$). Those who thought about switching were more likely to find the report card ratings of HMOs somewhat different from their own ratings (48% vs. 31%, $P = .02$), and they were more likely to find the ratings of HMOs somewhat or very different from other ratings that they had seen (37% vs. 19%, $P = .02$). Although the absolute numbers were small, those who thought about switching were also more likely to report that the report card made them less confident in their decision to stay or switch health plans (6% vs. 2%, $P = .01$).

People who thought a fair amount or a lot about switching were more likely to use the comparison of HMO performance rates in their health plan decision compared with those who thought a little or not at all about switching (46% vs. 29%, $P = .01$). They were also more likely to use the detailed bar graphs about satisfaction in their health plan decision (51% vs. 31%, $P = .003$).

2c. *Were there differences in the report card evaluation for people who read most or all of the report card compared with people who read parts of it, just glanced through it, or never really looked at it?*

People who read most or all of the report card differed greatly in their evaluation of the report card from people who read parts of it, just glanced through it, or never really looked at it.

Overall, 41% of those who remembered seeing the report card read most or all of it.

Those who read most or all were much more positive in their general assessment of the report card and in their assessment of the component parts than people who read parts, just glanced at it, or never really looked at it.

Respondents who read most or all of it were more likely to find the report card very trustworthy (33% vs. 18%, $P = .002$). They were also more likely to find it very helpful in learning about health plan quality (27% vs. 8%, $P = .001$), and very helpful in deciding whether to stay or switch health plans (25% vs. 6%, $P = .001$). They were more likely to say that the report card made them much more confident in their decision (18% vs. 6%, $P = .001$).

For each of the four sections of the report card that was evaluated separately, respondents who read most or all of the report card were more likely to find it very easy to understand and more likely to use it in their health plan decision. The specific proportions are displayed in Table 9.

**EVALUATION OF REPORT CARDS: DENVER (THE CHIP)
COMPARISON OF PRE-ENROLLMENT AND POST-ENROLLMENT FINDINGS**

Table 9

**Evaluation of Report Card Components:
Comparing Responses of Those Who Read Most or All of the Report Card
with Those Who Read Parts, Glanced Through, or Never Really Looked at It**

Post-enrollment: Denver, 1997

	Read Most or All	Read Parts, Glanced
Performance Goals – Understandable % very easy	49	32 **
Performance Goals – Used in Decision % yes	47	23 ***
Summary Consumer Satisfaction Comparisons – Understandable % very easy	55	34 *
Summary Consumer Satisfaction Comparisons – Used in Decision % yes	58	28 ***
Detailed Consumer Satisfaction Bar Graphs—Understandable % very easy	60	42 *
Detailed Consumer Satisfaction Bar Graphs – Used in Decision % yes	54	24 ***
Work Sheet – Understandable % very easy	55	35 *
Work Sheet – Used in Decision % yes	35	14 ***

- * $P < .05$
- ** $P < .01$
- *** $P < .001$

C. DISCUSSION AND POLICY IMPLICATIONS

This study is the first evaluation that we know of that looks at the effect of report cards for employees in a business coalition that includes small, medium, and large businesses. Previous evaluations have been restricted to single large employers who can have more control over distribution. The report card distribution problems that we uncovered in the process of conducting this study undoubtedly are not unique. The initial distribution plan relied on many players: brokers who provided report cards to employers and employers who gave them to employees. Not surprisingly, this initial distribution system did not work well. The more people involved in the chain of distribution, the more likely it is that there will be break-downs. Brokers may not be motivated, and small businesses probably do not employ benefit managers for whom distribution of report cards is a priority.

People who develop report cards need to pay close attention to the distribution mechanism. Piloting of any distribution mechanism is strongly recommended.

This study uses a pre-test, post-test design. It is difficult to detect effects when only half of the targeted population remembered seeing the report card. The design, however, is a fair test of the effects that one could expect to see on a population basis. In this study, we saw changes in the respondents' assessment of how big the differences in quality were for four components of the health care system: primary care physicians, specialists, hospitals, and HMOs. For all four components, respondents reported bigger differences on the post-enrollment questionnaire than they had on the pre-enrollment questionnaire. At post-enrollment respondents were also more likely to report three quality measures (of eight tested) as more important than they had at pre-enrollment: accreditation, percentage of enrollees leaving because they were dissatisfied, and percentage of children who were immunized.

When effects, such as those above, are detected with a pre-test, post-test design, it can be difficult to attribute any observed changes to the intervention. Other parts of the environment were changing simultaneously and may have been responsible for the shift. We can test the likelihood that the report card caused the effect by examining the subset of respondents who remembered seeing the report card. At post-enrollment this group was not more likely to report bigger differences in quality for primary care physicians, specialists, hospitals, and HMOs than those who did not remember seeing the report card. We may conclude that the report card is probably not responsible for this change in attitude. For the quality measures of accreditation and disenrollment, however, the story is different. People who saw the report card were more likely to cite these measures as important at post-enrollment. We may infer that the report card had some role in this change, although without a randomized control group who did not see the report card, we cannot be certain.

D. CONCLUSIONS

- **Report cards may broaden people’s definitions of what constitutes quality. In this study, both HMO accreditation and rates of HMO disenrollment because of dissatisfaction became more important.**

We did not see any effect of the report card on people who switched health plans. This lack of effect is not surprising because the number who switched was simply too small.

When we turn to the post-enrollment evaluation of the report card, we have some surprising results for the group of people who thought a fair amount or a lot about switching. On one hand, they found the information inconsistent with what they believed, and this was disconcerting. On the other hand they were more likely to use the performance information and the detailed bar graphs of summary consumer satisfaction in their choice of health plan. The report card is not being used solely to confirm employees’ previously held beliefs.

- **Report cards can introduce new information to people who are thinking about switching health plans. Evidence from this study indicates that the report card introduced information that was at variance with people’s previous information, and yet they used that information in their health plan decision.**

People who read most or all of the report card viewed it much more positively than those who had read parts of it, just glanced at it, or never really looked at it. Part of this enthusiastic response may be due to “like attracts like.” People gravitate toward information that reinforces their own views or is displayed in a fashion that is appealing to them. The important finding is that the report card was read in depth by so many of the people who remembered seeing it.

The weak link in the chain of potential report card influence may be getting the report card to people in a manner that impresses them. This may take the use of information brokers, intermediaries, or greater publicity campaigns so that people know what to expect and when to expect it.

- **Methods for impressing people with the meaning of report card information should be sought and tested. Such methods may include publicity campaigns, and use of formal and informal information brokers.**

Report cards alone cannot make choosing a health plan more salient to people. Increasing the importance of plan choice will come through changing the product design, increasing employees’ payment for annual premiums, or both. Choice may also become more relevant when people select among care systems with non-overlapping providers rather than health plans with broadly overlapping networks. As the structure of care delivery evolves, report cards are evolving to meet the information needs of consumers. The evidence from this evaluation suggests that report cards can play a useful role.

SUMMARY

St. Louis respondents were predominantly middle aged, male, and highly educated, reflective of the Monsanto employee population. Over three-quarters of the respondents reported excellent or very good health. Almost 85% were selecting a plan for more than just themselves. Generally, they seemed quite confident about their knowledge of medical plans. Almost half were very satisfied with their current plan. Only 3% switched plans from 1996 to 1997, although 25% thought a lot or a fair amount about switching.

The evaluation addresses five questions:

1. What were the characteristics of people who used the comparative performance report?

Although demographic, health and health care use characteristics were not related to using the report, the saliency of health was related to its use. People who very often thought about their health were more likely to use the report than people who rarely or never thought about their health. Similarly, people who talked often with family and friends about health were more likely to use the report than those who sometimes or never talked about health. People who owned more books about health were more likely to use the report.

Some characteristics of the health plan decision were also related to using the report. Respondents selecting coverage for two or more people were more likely to use the report than those choosing for themselves or themselves plus one other. People for whom the decision was extremely important were more likely to use the report than those for whom the decision was not very important. There was no difference in report use depending on physician attachment. There was no difference depending on level of satisfaction with the health plan. There was no difference related to how hard or easy it was to evaluate the quality of health plans. But people who said that they knew a lot about health plans were more likely to use the report than people who said that they knew little or nothing.

People's general pattern for seeking information about purchases was also related to using the report. People who used comparative ratings of products and services most of the time or always were more likely to use the report card than those who rarely or never used these ratings.

2. Overall, how did people who used the comparative performance report evaluate its components?

Generally, respondents rated the components of the comparative performance report somewhat higher for understandability than for usefulness. For the overall sample, there were minimal differences in the ratings of understandability or usefulness across the three sections: overview, consumer satisfaction, and preventive care.

3. *How were the components evaluated by those who responded positively to the report?*

We developed six measures of responding positively to the report including: 1) using the report, 2) reading most or all of it, 3) finding the report very trustworthy, 4) finding the report very helpful in learning about plan quality, 5) finding the report very helpful in deciding whether to switch plans, and 6) feeling more confident because of the report. More people were made more confident in their decision (n = 207) than found the performance report very helpful in deciding to stay or switch (n = 57). Nonetheless, whichever measure of “responding positively” was used, people who rated the report positively rated the understandability of the sections higher than the usefulness. Those people who rated the comparative performance report as very helpful in learning about plan quality or in deciding whether to stay or switch gave the highest ratings to each section’s understandability and usefulness. Those who responded positively to the comparative performance report rated the consumer satisfaction section as more understandable and more useful than either of the other sections. The preventive care section was next most understandable and useful, and the overview access section was somewhat less understandable and useful.

4. *How did people who switched plans or thought a lot about switching respond to the report?*

Analyzing the response to the comparative performance report by people who switched was significantly constrained by small numbers. Of the 26 people who switched, eight (31%) did not remember seeing the comparative performance report. We compared the remaining 18 people who switched with 405 people who did not switch plans and who remembered seeing the comparative performance report. People who switched plans were more likely to find the comparative performance report very helpful in learning about differences in plan quality than those who did not switch. People who switched plans also tended to feel more confident in their decision based on the report.

More people thought about switching than actually switched. More than half of the sample thought about switching at least a little. People who did not think at all about switching were less likely to report using the information in the comparative performance report in choosing their plan. They were half as likely to read most or all of it as people who thought a lot about switching.

5. *How did people whose plan was not covered in the report respond to the report?*

As predicted, employees who were enrolled in the Monsanto Plan responded significantly less positively to the comparative performance report on all measures than members whose plan had been covered in the report. A significant minority of Monsanto Plan members, however, did use the report. Almost 40% of Monsanto Plan members reported using information in the report in their enrollment decision compared with 58% of members in other plans. Over 40% of Monsanto Plan members remembered seeing the comparative performance report. One-quarter of those seeing the report read most or all of it. Only 15% of Monsanto Plan members found the report very trustworthy compared with 27% of members of other plans. Less than 3% found the report very helpful in learning about plan quality, and 4% found it very helpful in deciding whether to stay or switch plans. Over one-third reported being much more or somewhat more confident in their decision to stay or switch.

Conclusion

The goal for producing the Monsanto comparative performance report was to get employees accustomed to this type of information. In this regard, the project was successful. Over half of the respondents reported using the comparative performance report in their enrollment decision. Almost all the respondents who remembered seeing the comparative performance report trusted it to some degree. The respondents also found the comparative performance report readily understandable.

The comparison of this survey's results with previous survey results done in Minnesota suggests that responses to comparative performance reports may be sensitive to both market and audience differences.

Because of the relative novelty of producing and disseminating a comparative performance report, it will be important to focus on methods of ensuring complete dissemination. We also need to create more effective ways to increase the salience of the information. In markets with broadly overlapping networks, salience may be increased by changing the unit of analysis from health plans to provider groups or care systems. Salience may also be increased by providing information more directly relevant to health needs, for example, measures of the quality of diabetes care for people with diabetes. In addition, readers may need more explanation about why the measures may be relevant to them.

We are just beginning to understand what types of people are drawn to comparative health plan information. In this survey, we found that people for whom selecting a health plan was extremely important were twice as likely to use the comparative performance report. Only 21% of those surveyed, however, thought that this was an extremely important decision. We do not have a clear picture about why the decision is important to some people and not to others. Earlier hypotheses suggesting its value to those with chronic illness have not been strongly supported in this study. Personal characteristics that relate more to decision-making characteristics -- rather than medical use characteristics -- are significant. Because of our nascent understanding of comparative performance reports and their role in health plan decision making, it is imperative that we continue these systematic evaluations. We can build on what has been learned and use previously developed models of decision-making and the diffusion of innovations to help guide further research.

A. ST. LOUIS ANALYSIS PLAN

The St. Louis analysis is correlational, reflecting the study design. We used chi square analysis for bivariate analyses of categorical measures and analysis of variance (ANOVA) for bivariate analyses of continuous measures.

We constructed two scales -- understandability and usefulness -- based on the evaluations of three components of the comparative performance report. Responses were recoded so that higher numerical values represented higher, or better, evaluations. Responses for either understandability or usefulness were summed across the three components, creating a scale that had a minimum (low) value of 1 and a maximum (high) value of 12.

B. RESULTS

What did the Monsanto respondents look like? Table 1 shows the characteristics of the sample. The sample, which reflects the Monsanto employee population, was predominantly middle aged (mean age 43 years), male (68%), and highly educated. More than one-third (36%) have had postgraduate training. Over three-quarters of the sample (77%) reported excellent or very good health. Almost 85% were selecting a plan for more than just themselves. Over one-third (37%) would never or almost never use an information source like Consumer Reports. Generally, they seemed quite confident about their knowledge of medical plans; 68% felt that they knew a lot or a fair amount. Almost half (48%) were very satisfied with their current plan. Only 3% switched plans from 1996 to 1997, although 25% thought a lot or a fair amount about switching.

Table 1
Characteristics of the Sample: Monsanto, 1996

Item	Monsanto (n = 784)
Age, yrs (mean)	43 years
	<i>Percent</i>
Gender, % male	68
% female	32
Education	
High school graduate or less	9
Some college, vocational tech	27
College graduate	28
Post-graduate	36
Health status	
Excellent	30
Very good	47
Good	19
Fair or poor	4
What is your 1997 plan coverage?	
Self only	15
Self plus one	22
Self plus two or more	63
In general, how often do you go to an information source like Consumer Reports for ratings of products or services before making a major purchase?	
Always	5
Most of the time	20
Sometimes	39
Hardly ever	24
Never	13

Table 1 (cont'd)
Characteristics of the Sample: Monsanto, 1996 (cont'd)

Item	Monsanto (n = 784)
	Percent
Overall, how much do you think you know about the medical plans offered to you and how these plans compare with each other?	
A lot	12
A fair amount	56
A little	29
Nothing at all	2
How satisfied have you been with your 1996 medical plan?	
Very satisfied	48
Somewhat satisfied	33
Neither satisfied nor dissatisfied	11
Somewhat dissatisfied	7
Very dissatisfied	1
Switched (% yes)	3
During this past open enrollment period, how much did you think about switching to another medical plan?	
A lot	10
A fair amount	15
A little	28
Not at all	48

The Monsanto respondents differed in interesting ways from respondents to a recent national survey conducted by the Kaiser Family Foundation and the Agency for Health Care Policy and Research (Robinson and Brodie, 1997). More than half of Monsanto employees (53%) reported using the comparative performance information in making their decision. The next most popular sources were friends and family (38%) and their physician (38%). This result seems to contrast with findings from the Kaiser survey (although the response options to the questions in each survey differed). Respondents in the Kaiser survey put more emphasis on interpersonal communication channels; 59% of respondents reported that their regular physician would have a lot of influence, and 57% said that family and friends would have a lot of influence. There was no question in the Kaiser survey about comparative performance reports, but 45% said that “patients who were surveyed about their satisfaction with the quality of care” would have a lot of influence.

Monsanto respondents were more likely than respondents to the Kaiser survey to say that there were differences in quality at all levels of health care delivery: between generalists, specialists, hospitals, and medical plans. For example, 94% of Monsanto employees thought there were differences (either big or small) among health plans, whereas 72% of the national sample thought that there were differences among health plans in their area.

Monsanto employees were also more likely to report using an information source like Consumer Reports. Over 63% of Monsanto employees said that they “sometimes,” “most of the time,” or “always” used this type of source compared with 45% of the national sample. The comparison of these two groups is shown in Appendix G, Table 3.

1. What were the characteristics of people who used the comparative performance report?

We asked all respondents whether they had used information from the comparative performance report when choosing their 1997 health plan. Overall, more than half (53.3%) reported using the comparative performance report. Figure 1 shows some of the differentiating characteristics of people more likely to say that they used the report.

Demographic characteristics: There was no difference between male and female respondents on whether they reported using the comparative performance report, nor was there a difference by educational level. Middle-aged respondents were more likely to use the report than either older or younger respondents.

Health characteristics: An individual’s health status was not associated with using the report. People receiving treatment for chronic problems were not more likely to use the report than those without chronic problems.

Saliency of health: People who very often thought about their health were more likely to use the report than people who rarely or never thought about their health. Similarly, people who talked often with family and friends about health were more likely to use the report than those who sometimes or never talk about health. People who owned more books about health were more likely to use the report than those who owned fewer or no books.

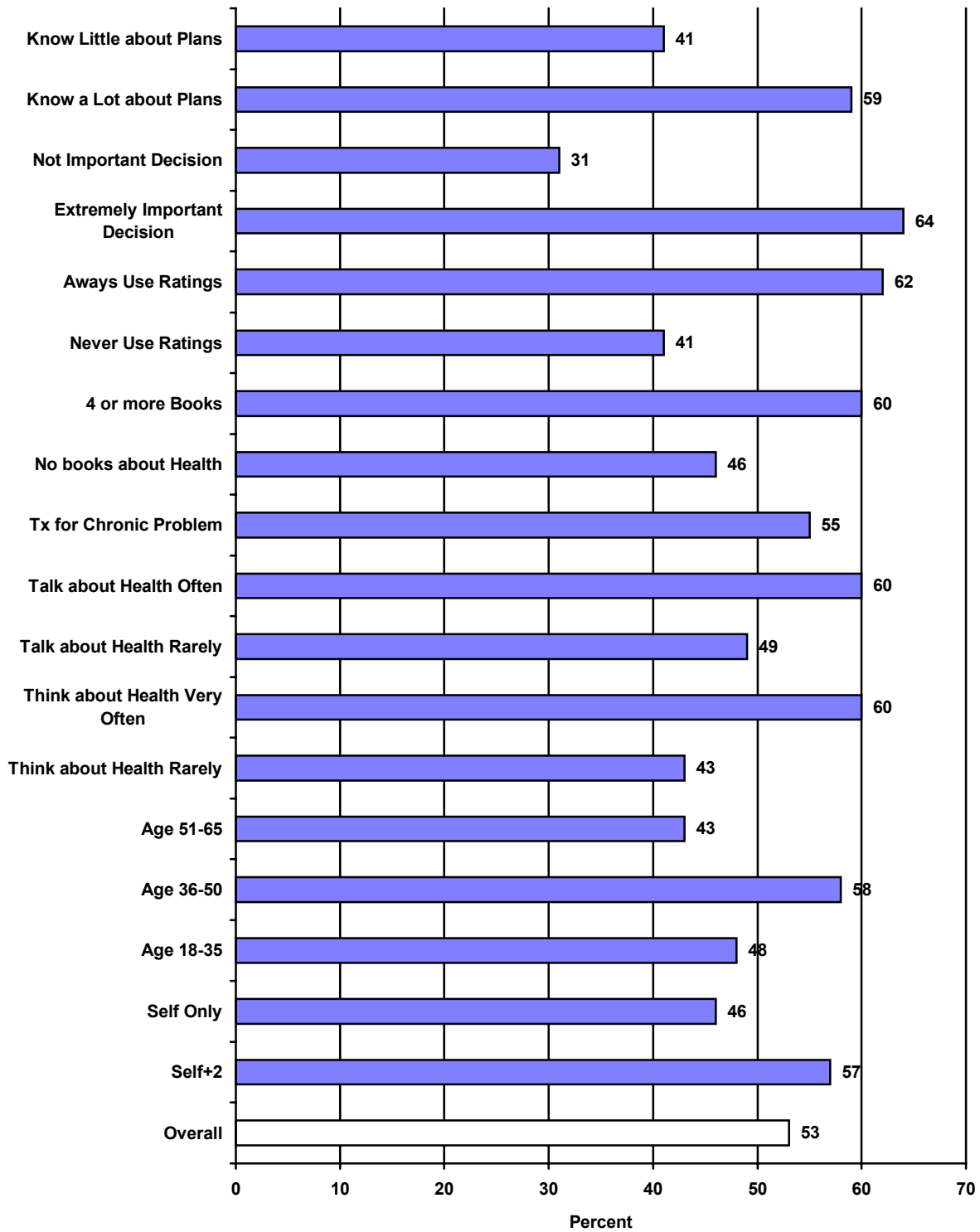
Health care use: The relationship of report use to number of visits was inconsistent. There was no difference among people who had been hospitalized in the past year compared with those who had not. There was no relationship between expecting to use more (or less) health care in the next year and use of the report.

Characteristics of the health plan decision: Respondents selecting coverage for two or more people were more likely to use the report than those choosing for themselves or themselves plus one other. People for whom the decision was extremely important were more likely to use the report than those for whom the decision was not very important. There was no difference depending on physician attachment. There was no difference depending on level of satisfaction with the health plan. There was no difference related to how hard or easy it was to evaluate the quality of health plans. But people who said that they knew a lot about health plans were more likely to use the report than people who said that they knew little or nothing.

Information-seeking behavior: People who used comparative ratings of products and services most of the time or always were more likely to use the comparative performance report than those who rarely or never used such ratings.

Figure 1

Characteristics of People Who Used the Comparative Performance Report



2. Overall, how did people who used the comparative performance report evaluate its components?

As described in the Methods section (Section II, C.), we created a summary scale for both understandability and usefulness. Generally, respondents rated the components higher for understandability than for usefulness. The mean score for understandability was 9.15 on a scale from 1 to 12, where 1 is the lowest possible score and 12 is the highest. Actual scores for understandability ranged from 1 to 12; one quarter of the sample (25.7%) gave these report components the highest rating of 12, the modal rating for this scale.

The mean score for usefulness was 8.06. Actual scores for usefulness ranged from 1 to 12. The modal rating on this scale was 9.

As shown in Table 2, each of the three sections was rated roughly equivalently whether for understandability or usefulness.

Table 2
Understandability and Usefulness of Comparative Performance
Report Components: Monsanto, 1996

Understandability	Percent	Usefulness	Percent
<i>Overview/Access to Care</i>		<i>Overview/Access to Care</i>	
Not very or not at all understandable	5	Not very or not at all useful	11
Don't know, no opinion	21	Don't know, no opinion	19
Somewhat understandable	36	Somewhat useful	52
Very understandable	38	Very useful	18
<i>Consumer Satisfaction</i>		<i>Consumer Satisfaction</i>	
Not very or not at all understandable	3	Not very or not at all useful	13
Don't know, no opinion	19	Don't know, no opinion	17
Somewhat understandable	34	Somewhat useful	49
Very understandable	45	Very useful	20
<i>Preventive Care</i>		<i>Preventive Care</i>	
Not very or not at all understandable	4	Not very or not at all useful	13
Don't know, no opinion	19	Don't know, no opinion	17
Somewhat understandable	32	Somewhat useful	48
Very understandable	46	Very useful	21

3. How were the components evaluated by those who responded positively to the report?

There are a number of ways to define a positive response to the comparative performance report. For the purpose of this analysis, we used the following six definitions:

1. People who reported that they used the “Choosing Quality Health Care” report in their enrollment packet in choosing their 1997 medical plan
2. People who read most or all of the “Choosing Quality Health Care” report
3. People who found the “Choosing Quality Health Care” report very trustworthy
4. People who found the report very helpful in learning about differences in quality among medical plans
5. People who found the report very helpful in deciding whether to stay or switch medical plans
6. People who felt more confident in their choice because of the report

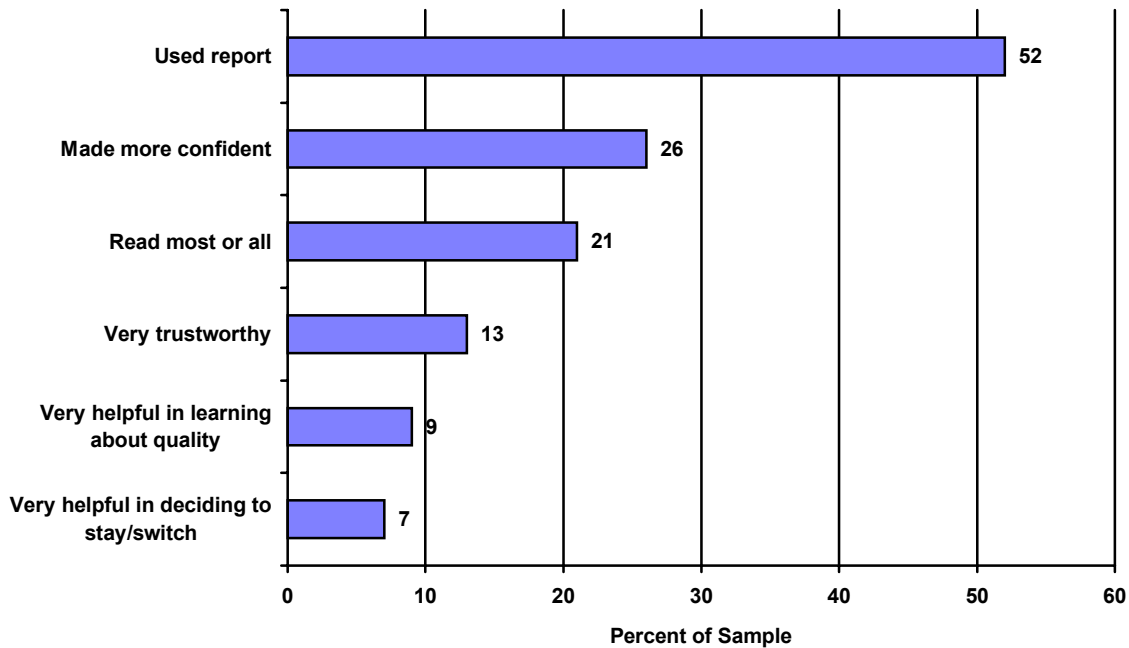
Three components of the comparative report were evaluated and depicted with icons on the questionnaire: overview and access to care, consumer satisfaction, and preventive care rates.

Two aspects -- understandability and usefulness -- were evaluated for each of these three components of the report.

As shown in Figure 2, different numbers of respondents met each of the criteria for “responding positively” to the comparative performance reports. More people were made more confident in their decision (n = 207) than found the performance report very helpful in deciding to stay or switch (n = 57).

Figure 2

Measures of Responding Positively to the Report: Monsanto, 1996



Nonetheless, whichever measure of “responding positively” was used, people rated the understandability of the sections higher than the usefulness (Table 3). Those people who rated the comparative performance report as very helpful in learning about plan quality or in deciding whether to stay or switch gave the highest ratings to each section’s understandability and usefulness. Over 50% of people who rated the comparative performance report as very helpful in learning about plan quality found each of the sections very useful.

In general, people who responded positively to the comparative performance report rated the consumer satisfaction section as more understandable and more useful than either of the other sections. The consumer satisfaction section was usually rated 10% more understandable than the overview/access section. The preventive care section was next most understandable and useful, and the overview access section was somewhat less understandable and useful.

Table 3

Understandability and Usefulness of Report Sections by Different Measures of “Responding Positively to Comparative Performance Report”: Monsanto, 1996

Measure	Report Section					
	Overview/Access		Consumer Satisfaction		Preventive Care	
	Very understand-able	Very useful	Very understand-able	Very useful	Very understand-able	Very useful
	Percent					
Used report in enrollment packet (n = 405)	42	20	50	24	50	24
Read most or all (n = 167)	51	32	59	34	56	30
Found report very trustworthy (n = 99)	60	35	70	38	64	33
Very helpful in learning about plan quality (n = 68)	65	51	75	60	71	50
Very helpful in deciding to stay or switch (n = 57)	65	47	72	60	68	49
Made more confident in decision (n = 207)	47	28	59	35	57	33

4. How did people who switched plans or thought a lot about switching respond to the report?

Only 26 individuals in the sample (3.3%) switched plans from 1996 to 1997. The predominant reason for switching was “to get or keep a doctor I prefer to see.” The reasons for switching are outlined in Table 4.

People who switched predominately came from the Monsanto Plan (17/26). Most of those who switched plans, switched into the United Choice plan (16/26).

Table 4
Reasons for Switching: Monsanto, 1996

1996 Plan	1996 Coverage	1997 Plan	1997 Coverage	Reason
Monsanto	self + 2	United Choice	self + 2	Reduce out of pocket health care costs
Monsanto	self + 2	United Choice	self + 2	Get or keep doctor prefer to see
GHP Access	self + 2	United Choice	self + 2	(no comment provided)
Monsanto	self only	GHP Access	self only	Get or keep doctor prefer to see
Gencare	self only	United Choice	self only	To get better quality of medical plan and easier access to doctor's office
Monsanto	self + 2	United Choice	self + 2	Get or keep doctor prefer to see
Gencare	self + 2	United Choice	self + 2	Get or keep doctor prefer to see
GHP Access	self + 2	United Choice	self + 2	Better access nights or weekends
Monsanto	self + 1	United Choice	self only	Changing family/marital status. Spouse was living in another state, therefore needed out of plan doctors.
Monsanto	self + 2	United Choice	self + 2	Pediatric doctors available
Monsanto	self only	United Choice	self only	Reduce premiums
Monsanto	self + 2	United Choice	self + 2	To have a broader choice of doctors
Monsanto	self + 2	United Choice	self + 2	To have a broader choice of doctors
Monsanto	self + 2	United Choice	self + 2	Wanted to make sure I had maximum coverage for a pre-existing condition.
Monsanto	self + 2	United Select	self + 2	To have a broader choice of doctors
Monsanto	self only	United Choice	self only	To get back to a doctor I want to see!
Gencare	self + 1	GHP Access	self + 1	Monsanto made me because of where I live.
PHP	self only	GHP Access	self only	Get or keep doctor prefer to see
Monsanto	self only	United Select	self only	(no comment provided)
Gencare	self + 2	GHP Access	self + 2	Prescription price
PHP	self + 2	United Select	self + 2	To reduce premiums
Monsanto	self only	United Choice	self + 2	Get or keep doctor prefer to see
PHP	self + 1	GHP Access	self + 1	Poor coverage

Table 4
Reasons for Switching: Monsanto, 1996 (cont'd)

1996 Plan	1996 Coverage	1997 Plan	1997 Coverage	Reason
Monsanto	self + 1	United Select	self + 1	Just for maternity and prenatal plans
Monsanto	self only	United Choice	self only	Get or keep doctor prefer to see
Monsanto	self + 2	GHP Access	self + 2	Get or keep doctor prefer to see

The analysis of response to the comparative performance report by people who switched is significantly constrained by small numbers. Of the 26 people who switched, eight (31%) did not remember seeing the comparative performance report. We compared the remaining 18 people who switched with 405 people who did not switch plans and who remembered seeing the comparative performance report. Therefore, it is not surprising that there are few significant differences between people who switched and those who did not.

Of the six measures of responding positively to the comparative performance report, people who switched plans were more likely to find the comparative performance report very helpful in learning about differences in plan quality than those who did not switch (35% vs. 15%, chi square 6.76, $p = .03$). People who switched plans also tended to feel more confident in their decision based on the report (76% vs. 49%, chi square 4.9, $p = .09$).

We used the summary scales described in the Methods section (Section II, C.) to analyze the understandability and usefulness of the three comparative performance report components. People who switched found the comparative performance report more understandable than those who did not switch (10.8 vs. 9.1 on a scale of 1 to 12, $p = .0001$) and more useful (9.3 vs. 8.0 on a scale of 1 to 12, $p = .0008$). In particular, people who switched found the consumer satisfaction section very understandable (71% vs. 44%, chi square 9.89, $p = .02$) and the preventive care goals section very understandable (88% vs. 44%, chi square 16.47, $p = .001$).

There was no difference between people who switched and people who did not switch for:

- using information in the comparative performance report
- reading most or all of the comparative performance report
- finding the comparative performance report trustworthy
- finding the comparative performance report helpful in deciding whether to stay or switch

More people thought about switching than actually switched. More than half of the sample thought about switching. Almost 10% thought “a lot” about switching, 15% thought “a fair amount,” and 28% thought “a little” about it; 47% did not think about switching at all.

People who did not think at all about switching were less likely to report using the information in the comparative performance report in choosing their plan (39% vs. 70%, chi square 61.56, $p =$

.001). They were half as likely to read most or all of it as people who thought a lot about switching (30% vs. 63%, chi square 28.09, $p = .001$).

There were no differences between people who thought about switching and people who did not think about switching on any of the other measures of responding to comparative performance reports.

1. Finding the comparative performance report trustworthy
2. Finding the comparative performance report helpful in learning about differences in plan quality
3. Finding the comparative performance report helpful in deciding whether to stay or switch
4. Finding the comparative performance report made them more confident in their decision
5. Understandability of the comparative performance report
6. Usefulness of the comparative performance report

5. *How did people whose plan was not covered in the report respond to the report?*

The Monsanto Plan was not reviewed in the comparative performance report that was made available during open enrollment. We hypothesized that the comparative performance report would be of less value to people who were enrolled in the Monsanto Plan. We defined people who were enrolled in the Monsanto Plan as people who were enrolled in the Monsanto plan for both 1996 and 1997. There were 198 respondents (25% of the entire sample) who were enrolled in the Monsanto Plan for both years.

As predicted, Monsanto Plan members responded significantly less positively to the comparative performance report on all measures than members whose plan had been covered in the report (Table 5). A large minority of Monsanto Plan members, however, did use the report. Almost 40% of Monsanto Plan members reported using information in the report in their enrollment decision compared with 58% of members in other plans (chi square 20.93, $p = .001$). Over 40% of Monsanto Plan members remembered seeing the comparative performance report (41% vs. 59%, chi square 19.94, $p = .001$). One-quarter of those seeing the report read most or all of it (27% vs. 42%, chi square 6.87, $p = .032$). Only 15% of Monsanto Plan members found the report very trustworthy compared with 27% of members of other plans (chi square 10.23, $p = .006$). Less than 3% found the report very helpful in learning about plan quality (3% vs. 20%, chi square 18.72, $p = .001$), and 4% found it very helpful in deciding whether to stay or switch plans (4% vs. 16%, chi square 11.67, $p = .003$). Over one-third reported being much more or somewhat more confident in their decision to stay or switch (34% vs. 54%, chi square 10.09, $p = .006$).

Monsanto Plan members were less likely to find the components of the comparative performance report understandable (8.37 vs. 9.35 on a scale of 1 to 12, $p = .002$) and useful (7.18 vs. 8.28 on a scale of 1 to 12, $p = .0003$).

Table 5
Understandability and Usefulness of Report Sections
by Monsanto Plan Members Compared with Others: Monsanto, 1996

	Report Section					
	Overview/Access		Consumer Satisfaction		Preventive Care	
Plan Membership	Very understandable	Very useful	Very understandable	Very useful	Very understandable	Very useful
	Percent					
Monsanto Plan members (n = 78)	24	9	30	10	31	16
Members of other plans (n = 326)	42	20	48	23	49	23

C. DISCUSSION AND POLICY IMPLICATIONS

The goal for producing the Monsanto comparative performance report was to get employees accustomed to this type of information. In this regard, the project was successful. Over half of respondents (53%) reported using the comparative performance report in their decision, more than those who used their own physician (38%) or family and friends (38%). This result corresponds with the findings of a recent California Public Employees Retirement System (CalPERS) study that indicated 66% of members found their comparative performance report very or somewhat important in selecting their health plan (CalPERS, 1995).

Almost all the Monsanto respondents trusted the comparative performance report to some degree; only 5% found it not very or not at all trustworthy. The respondents also found the comparative performance report easily understandable. The mean score for understandability was 9.15 on a scale from 1 to 12 with 12 being the highest score possible, and the most frequent, or modal, score was 12.

It is not surprising that more people found the report understandable than found it useful; not every reader was in a position to consider switching plans. The comparative performance report was more useful to people who considered switching. The analysis of people who switched, however, must be viewed with extreme caution because the number of people who switched plans was very small.

The fact that some Monsanto plan members read the report and found it useful even though their plan was not covered suggests that there is a curiosity factor for this information that extends beyond the specific content.

D. COMPARISON OF MONSANTO AND MINNESOTA RESULTS

To date, there are only a few comparable survey results available that would help us to put the Monsanto experience with comparative performance reports in a broader context. State of Minnesota employees had received comparative performance reports of their health plan choices during open enrollment in 1991, 1993, and 1995. Unlike the Monsanto comparative performance report, the State of Minnesota report contained survey-based satisfaction information only. In the Minnesota report, there was no objective performance information. An evaluative survey was conducted with Minnesota employees in 1996. That survey contained some of the same or similar items as the Monsanto survey.

The Minnesota sample differed from the Monsanto sample (Table 6). It was predominantly women (52%) with a lower average educational level. The Minnesota sample was more than twice as likely to own 10 or more health care books (8% vs. 20%). The samples were similar in health status, thinking about their health and talking about their health. They were roughly equivalent in health care utilization (visits and hospitalization) and in anticipated future health care needs.

By design, half of the Minnesota sample had individual coverage, in contrast with Monsanto in which only 15% had individual coverage. Employees in Minnesota were six times as likely to switch plans (3.3% vs. 19.6%) as Monsanto employees. Minnesota employees appeared less bonded to their physicians; two-thirds would stay with their current plan if their physician left the plan compared with one-half of the Monsanto sample.

Minnesota employees were more likely to remember seeing the comparative performance report (74% vs. 55%), perhaps because they had seen such a report in two previous open enrollments, and they were more likely to have read most or all of it (49% vs. 39%). Minnesota employees, however, were less likely to find the comparative performance report helpful in deciding whether to stay or leave their current plan.

Note that all the items listed on the following pages are not identical. When the Minnesota item differed in wording, the difference is indicated in parentheses.

Table 6
Comparison of Items: Monsanto Employees 1996 and
Minnesota State Employees 1995

Item	Monsanto (n = 784)	Minnesota (n = 2232)
Demographics		
Age, yrs (mean, s.d.)	42.7 (± 8.1)	43.1(± 9.34)
	Percent	
Gender, % female	32.3	51.6
Education:		
high school graduate or less	9.3	22.0
some college, vo tech	27.4	24.2
college graduate	27.6	30.6
post-graduate	35.7	22.9
Health status:		
excellent	30.5	27.1
very good	46.6	44.8
good	19.3	21.8
fair or poor	3.6	6.2
Coverage type		
single	14.8	50.0
more than one	84.9	50.0
Switched, % yes	3.3	19.6
How often do you generally think about your health?		
never	0.5	1.2
rarely	11.6	9.2
sometimes	31.8	34.4
often	39.5	36.9
very often	16.4	18.3
don't know	0.1	.0

Table 6
Comparison of Items: Monsanto Employees 1996 and
Minnesota State Employees 1995 (cont'd)

Item	Monsanto (n = 784)	Minnesota (n = 2232)
	Percent	
How often do you talk with your family and friends about your health or the health of your family?		
never	1.6	2.7
rarely	18.2	18.7
sometimes	42.8	41.5
often	29.2	28.4
very often	8.3	8.3
don't know	.0	.0
In the past 12 months, about how many visits did you and any of your household members who are covered by your medical plan make to the doctor's office or clinic, urgent care, or the emergency room?		
none	3.1	5.0
1 visit	5.6	8.0
2 to 5 visits	35.7	33.5
6 to 9 visits	25.3	18.4
10 to 14 visits	17.2	14.7
15 or more visits	13.1	20.2
During the past 12 months, have you or any of your household members who are covered by your medical plan had same-day surgery or been hospitalized overnight anytime for reasons other than pregnancy or childbirth?		
yes	23.1	18.1
no	76.9	81.7

Table 6
Comparison of Items: Monsanto Employees 1996 and
Minnesota State Employees 1995 (cont'd)

Item	Monsanto (n = 784)	Minnesota (n = 2232)
	Percent	
Compared to [1996], how much health care do you and members of your household who are covered by your medical plan expect to use in [1997]?		
much more	2.1	2.5
somewhat more	8.5	9.3
about the same	69.8	68.7
somewhat less	14.9	14.1
much less	4.8	4.8
How many books about health, healthy living, or taking care of yourself do you own?		
None	14.9	17.8
1 to 3 books	51.8	33.2
4 to 9 books	24.7	28.0
10 books or more	8.5	20.3
don't know	0.1	0.1
Overall, how much do you think you know about the medical plans offered to you and how these plans compare with each other?		
a lot (a great deal)	12.4	6.1
a fair amount	55.9	42.8
a little	29.4	32.8
nothing at all (almost nothing)	2.2	17.8
How hard or easy is it for you to judge the quality of the medical plans available to you? (Monsanto asked after enrollment, Minnesota asked before enrollment)		
very hard	6.8	13.8
hard	38.7	45.8
neither hard nor easy (volunteered option in Minnesota)	35.7	.0
easy	16.8	33.5
very easy	2.0	5.6

Table 6
Comparison of Items: Monsanto Employees 1996 and
Minnesota State Employees 1995 (cont'd)

Item	Monsanto (n = 784)	Minnesota (n = 2232)
	Percent	
Which of the medical plans available to you do you think has the highest quality overall, whether you happen to be enrolled in it or not?		
[specific plans were listed]		
plans don't differ/can't say any one is best	22.0	7.9
don't know - volunteered	1.6	13.8
How satisfied have you been with your [1996] plan?		
very satisfied	48.5	47.6
somewhat satisfied (satisfied)	32.6	45.4
neither satisfied nor dissatisfied (volunteered option in Minnesota)	10.8	.0
somewhat dissatisfied (dissatisfied)	6.9	4.8
very dissatisfied	1.2	1.2
How satisfied have you been with the quality of customer service you received from your 1996 medical plan (including how well the plan explained things and how well Member Services handled any questions or problems you had)?		
very satisfied	34.9	32.7
somewhat satisfied (satisfied)	32.2	56.8
neither satisfied nor dissatisfied (volunteered option in Minnesota)	12.8	.0
somewhat dissatisfied (dissatisfied)	12.1	5.8
very dissatisfied	3.9	0.1
don't know/no experience	4.0	3.4

Table 6
Comparison of Items: Monsanto Employees 1996 and
Minnesota State Employees 1995 (cont'd)

Item	Monsanto (n = 784)	Minnesota (n = 2232)
	Percent	
How satisfied have you been with the quality of the doctors who were available to you and your family through your [1996] medical plan?		
very satisfied	58.1	53.2
somewhat satisfied (satisfied)	26.7	41.7
neither satisfied nor dissatisfied (volunteered option in Minnesota)	7.2	.0
somewhat dissatisfied (dissatisfied)	5.9	3.2
very dissatisfied	1.2	0.1
don't know/no experience	1.0	0.1
What would you do if any of the doctors that you and your family see were to leave your medical plan?		
try to change medical plans to stay with this doctor	50.9	32.2
stay with current medical plan and find another doctor	48.9	66.2
don't know	0.3	1.5
Thinking about the medical plans that were available to you in the last enrollment period, how hard or easy was it for you to make a decision on a medical plan?		
very hard	3.2	4.1
hard	13.7	12.2
neither hard or easy	28.3	21.4
easy	32.0	34.8
very easy	22.8	27.1
Does your medical plan choice for [1997] mean changing doctors that you had been seeing?		
yes	3.8	25.0
no	93.4	72.8
don't know	2.8	2.2

Table 6
Comparison of Items: Monsanto Employees 1996 and
Minnesota State Employees 1995 (cont'd)

Item	Monsanto (n = 784)	Minnesota (n = 2232)
	Percent	
Does your medical plan choice for [1997] mean that you will now be able to change to new doctors that you would rather see because these doctors will now be part of your [1997] medical plan?		
yes	8.0	22.8
no	70.8	72.0
don't know	21.2	5.2
For some people selecting a medical plan during this last open enrollment was a quite important decision, and for others it was not. How important was the decision to stay with the same medical plan or to switch plans to you?		
extremely important	21.0	23.2
very important	35.9	36.5
somewhat important	30.6	25.9
not very important	12.4	8.5
(not at all important)	--	5.1
Do you remember seeing this report?		
yes	54.6	73.8
no	45.2	23.9
don't know	0.3	2.3
How much of the ...report, if any, did you read?	n = 424	n = 1352
read most or all of it	39.4	48.7
read parts of it	34.9	26.8
just glanced through it	22.2	21.4
never really looked at it	3.5	2.7

Table 6
Comparison of Items: Monsanto Employees 1996 and
Minnesota State Employees 1995 (cont'd)

Item	Monsanto (n = 784)	Minnesota (n = 2232)
	Percent	
When it came to deciding whether to stay with the same medical plan or switch to a different medical plan, how helpful was the...report to you?		
(extremely helpful)	--	4.0
very helpful	16.6	13.1
somewhat helpful	66.3	45.7
not very helpful	12.2	21.6
not at all helpful	4.4	15.1
don't know	0.5	0.5

It is not possible to know whether differences in the responses are due to differences in the populations, differences in the content of the report card, or differences in the markets of Minneapolis/St. Paul and St. Louis.

E. RECOMMENDATIONS

Neither the Monsanto nor the Minnesota evaluations of comparative performance reports demonstrated a major impact on the switching behaviors of the recipients. There are many plausible explanations for this lack of effect. One reasonable explanation is that the plan choices in the two markets of St. Louis and the Twin Cities are dominated by plans of roughly equivalent, and acceptable, quality. In particular, plans available to Monsanto employees have largely overlapping provider networks, making differences in quality unlikely. To test fully whether comparative performance reports can influence switching behavior, these reports need to be used in markets in which the plans differ markedly in quality. In markets with broadly overlapping networks, salience may be increased by changing the unit of analysis from health plans to provider groups or care systems.

We need to create other effective ways to increase the salience of the information. As seen in the comparison with Minnesota, repeated exposure may be one way to increase people's recollection of seeing the comparative information. This approach, however, takes time because exposure only happens once a year during open enrollment. It may be possible to speed up this process by sending additional signals from employers to employees at the time of open enrollment about the importance and potential usefulness of the information. Readers may need more text that explains why measures may be relevant to them. Salience may also be increased by providing information more directly relevant to health needs, for example, measures of the quality of diabetes care for people with diabetes.

Another issue regarding comparative performance report effectiveness focuses not on the acceptability of the report itself, but on the likelihood of the report being seen. Because of the

relative novelty of producing and disseminating a report card, it will be important to focus on methods for ensuring complete dissemination. Although dissemination of the Monsanto report appears adequate, there are several examples of other efforts in which the failure to assure full dissemination has precluded the ability of this information to serve its intended purpose.

We are just beginning to understand what types of people are drawn to comparative health plan information. Earlier hypotheses suggesting its value to those with chronic illness have not been strongly supported with the currently available performance reports. Personal characteristics that relate more to decision-making -- rather than medical use characteristics -- are important. For example, the tendency to use comparative information tools for purchasing decisions, seems more tied to using comparative health plan information. People for whom health topics are salient, as expressed by the extent that they read or talk about health, also are more likely to use comparative performance information.

Because of our nascent understanding of comparative performance reports and their role in health plan decision-making, it is imperative that we continue these systematic evaluations, especially in markets in which plans differ in quality. One method for detecting these markets is to identify markets in which plans differ in their HEDIS data, member satisfaction results and accreditation status. NCQA's Quality Compass™ is a resource for that information. We can build on what has been learned and use previously developed models of decision-making and the diffusion of innovations to guide further research.

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APPENDIX A

**DENVER AND ST. LOUIS
REPORT CARDS**

APPENDIX B

PRE-NOTIFICATION LETTERS

APPENDIX C

**COVER LETTERS TO
MAILED QUESTIONNAIRE**

APPENDIX D
MAILED QUESTIONNAIRE

APPENDIX E

TABLE 1: ITEM SOURCES

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