

# findings brief

## key findings

- Voluntary HRA participants are more likely to be women, enrolled in consumer-driven health plans, and have fewer chronic conditions.
- Employees who participate in HRAs experience increased utilization and spending on health services (office visits and prescription drugs) relative to those not offered an HRA through their health plan.
- Though HRAs have been shown to increase use of medical services, they are unlikely the sole solution to engaging consumers in their health.

## Health Risk Appraisals: How Sharp Is This Tool in Shaping Employee Behavior?

### Overview

The majority of Americans receive health benefits through employer-based coverage. As the cost of health care continues to rise, premiums for employer-based coverage are also increasing; in 2008, premiums, on average, rose by 5 percent.<sup>1</sup> As a result, employers are exploring interventions to control premiums while simultaneously improving quality. Recent efforts include changing benefit design, shifting costs to employees, and introducing behavioral interventions to encourage employees to make changes to and take responsibility for their own health. The movement toward involving consumers more fully in their health care is slowly gaining traction.

A tool targeted directly at the consumer is the health risk appraisal (HRA), also referred to as a health risk assessment.<sup>2</sup> HRAs are increasingly used by employers and payers to assess the health status of individual enrollees and encourage enrollees to take a more active role in their health care.<sup>3</sup> Typically, an HRA is a set of questions designed to

capture self-reported information about an individual's health status and risk factors. Employers will commonly use this information to provide targeted feedback to an employee and encourage the individual to participate in a wellness, prevention, or disease management program.

While employers are using HRAs as a strategy to change employee behavior, increase engagement, and potentially slow the growth of premiums, there is little empirical evidence that HRAs can improve quality and control spending.<sup>5</sup> The role of HRAs as a health promotion tool has been extensively studied; however to date, few studies consider how HRAs impact utilization and costs of health services. Studies that do analyze changes in utilization are limited since they often rely on self-reported measures or suffer from selection bias.<sup>4</sup>

In a new HCFO-funded study, Meredith B. Rosenthal, Ph.D., and Haiden Huskamp, Ph.D., at Harvard University, examined whether enrollees in employer-sponsored



Robert Wood Johnson Foundation

Changes in Health Care Financing and Organization is a national program of the Robert Wood Johnson Foundation administered by AcademyHealth.

health insurance who voluntarily participate in health risk appraisals differed in regard to demographic characteristics and utilization of health services from those who chose not to participate and those not offered an HRA. The study also examined whether enrollees who took an HRA changed their health care utilization behavior in the subsequent months. The sample population in their analyses included adult employees who have employer-sponsored insurance from firms contracting with CIGNA health plans. Rosenthal states, “the goal of this study was to explore the potential of health risk appraisals to engage consumers in health improvement.”

### Background

Health risk appraisals are tools used to document health status, help beneficiaries identify risky behaviors, and encourage them to utilize certain resources to improve their health status. The content of an HRA can vary depending on the objectives of the administering firm or health plan. Some HRA interventions are disease-specific, which can be beneficial for employees of a firm with a high prevalence of a certain condition, such as diabetes. However, most firms choose HRAs with more general health questions, typically using questionnaires or surveys that ask about:

- Current health status
- Demographic characteristics (e.g., age, sex)
- Family health history
- Lifestyle and behavior (e.g., smoking, exercise)
- Personal health history
- Physiological data (e.g., weight, blood pressure)

Results of the HRA are returned to the participant and may also trigger invitations to participate in prevention, disease management, or educational programs to help the individual improve health status or reduce risky behavior. In addition to selecting appropriate content for the instrument, it is equally important for the firm to promote and evaluate the HRAs effectively. For this reason, most

HRAs are now offered electronically, making them easier to implement and analyze.<sup>6</sup>

There has been an increase in the adoption and use of HRAs by employers and health plans during the last several decades. Currently, 10 percent of firms that provide health benefits to employees also offer HRAs.<sup>7</sup> A recent survey found that larger firms are more likely than small firms to offer HRAs; 49 percent of firms with 200 or more employees provide an HRA compared to 9 percent of firms with less than 200 employees.<sup>8</sup>

HRAs are generally viewed by employers and health plans as an entry point to inform employee health behavior and promote consumer activation. The information from HRAs can help employers link individuals to wellness programs that can improve health status. Healthier employees, it is assumed, will drive down the cost of premiums. As a result, while most HRAs are voluntary, employers are increasingly looking at ways to increase participation through financial incentives or by making it a requirement to obtain health benefits.<sup>9</sup>

### Methodology

Rosenthal and colleagues used administra-

tive claims and HRA response data from CIGNA HealthCare to conduct two separate analyses involving those who completed HRAs (completers) and a comparison group who did not (abstainers). First, the researchers examined individual characteristics of employees who voluntarily completed an HRA compared to abstainers at the same firm. The researchers examined HRA responses and summarized the self-reported health status and behavior. Topic areas addressed in the HRA included:

- Overall health
- Level of exercise
- Status of blood pressure
- Status of cholesterol
- Asthma diagnosis
- Diabetes diagnosis
- Regular primary care physician

Next, in order to examine the effect of HRAs on health behavior, the researchers measured four outcome measures: 1) receipt of recommended care, 2) participation in appropriate disease management programs, 3) use of services, and 4) costs. The researchers selected outcome measures based on the frequency with which they were applicable to the population (e.g., the

Chart 1

Outcome Measures		
Outcome	Description	Collection Method
Receipt of recommended care	(1) Cervical cancer screening (2) Hemoglobin A1c testing for diabetes (3) Cholesterol testing for enrollees with diabetes (4) Cholesterol testing for enrollees with coronary artery disease	Patient “gap” analysis: maps claims data to identify whether individuals received necessary care
Participation in disease management program	(1) Asthma (2) Diabetes (3) Coronary artery disease or congestive heart failure	Electronic data on CIGNA’s disease management programs
Utilization	Number of monthly office visits, prescriptions filled, and ED visits	Measured through CIGNA claims data before and after HRA completion
Costs	Monthly spending for office visits, prescription drugs, and ED visits	Measured through CIGNA claims data before and after HRA completion

percentage of HRA completers who had diabetes) and the types of questions asked in the HRA (see Chart 1).

## Results

### Characteristics of HRA Completers

The researchers found that voluntary HRA participants were more likely to be women, enrolled in a CDHP or preferred-provider organization (PPO), and have fewer health conditions compared to employees who chose not to complete an HRA. Those completing an HRA also spent less money on health care and were less likely to have received recommended preventive or chronic care in the year prior to completing the HRA.

### Effect on Health Behavior

In the months following HRA completion, the researchers found differences in the utilization and spending of health services between employees who completed the HRA and employees whose employer did not offer an HRA. Those who completed HRAs had a slight increase in both monthly utilization and cost for office visits and prescription drugs relative to employees who were not offered an HRA. There was no significant difference in emergency department (ED) utilization and costs between the two groups.

In addition, there was a significant increase in the number of HRA completers who received cervical cancer screening. However, this was the only observed change in receipt of recommended care. All other measures of this outcome showed no difference between completers and employees not offered an HRA. Researchers also found no significant increase in participation by HRA completers in CIGNA's disease management programs.

## Discussion and Policy Implications

HRAs can impact cost and quality of health care. The results suggest that completion of an HRA increases utilization and spending

on certain health services, such as cervical cancer screening. Increased cost associated with receiving recommended preventive and chronic care may be associated with better value resulting from an improvement in quality.

The results also suggest that there is self-selection present among those who voluntarily complete an HRA; women, healthier individuals, and individuals enrolled in a CDHP or PPO were more likely to voluntarily complete an HRA. Completers were also less likely to have received recommended care in the previous year.

The results suggest that HRAs may serve as a catalyst to activate consumers in their health care, but they might not go far enough. Increased knowledge of health status and risky behaviors appears to encourage consumers to receive certain types of recommended preventive care. However, HRAs were shown to have little or no effect on motivating employees to become involved in disease management and wellness programs. Employers must consider whether to supplement HRAs with other incentives to ensure adequate consumer engagement in their health status.

## Conclusion

While HRAs can increase utilization of health services following completion and improve communication between enrollees and providers, other approaches may be necessary to provide a lasting impact on the health behavior of enrollees, maintain consumer engagement, and even encourage participation in wellness, promotion, and disease management programs. Huskamp explains that, “as employers and others look to consumer decision support tools as a way of adding value to their health benefits and improving the health and productivity of their workers, tools such as HRAs should be studied more extensively

to ensure their value for employers who provide health coverage.”

## For More Information

For more information, contact Meredith B. Rosenthal, Ph.D., at [mrosent@hsph.harvard.edu](mailto:mrosent@hsph.harvard.edu) or Haiden H. Huskamp, Ph.D., at [huskamp@hcp.med.harvard.edu](mailto:huskamp@hcp.med.harvard.edu)

## About the Author

Jessica Bachler was an intern at AcademyHealth with the Changes in Healthcare Financing and Organization (HCFO) Initiative. For more information, contact [hcfo@academyhealth.org](mailto:hcfo@academyhealth.org).

## Endnotes

- 1 The Kaiser Family Foundation and Health Research & Educational Trust. “Employer Health Benefits 2008 Annual Survey.” Wellness Programs and Employer Opinions, Section 12, 2008.
- 2 Note that the terms ‘health risk appraisal’ and ‘health risk assessment’ are sometimes considered two separate concepts; appraisals are the instrument while assessment refers to the overall process of collecting and evaluating health status information. Here they are used interchangeably (National Business Coalition for Health Care).
- 3 Huskamp, H.A. and M.B. Rosenthal, “Health Risk Appraisals: How Much Do They Influence Employees’ Health Behavior?” *Health Affairs*, Vol. 28, No. 5, September/October 2009.
- 4 Ibid.
- 5 Rubenstein, L., et al. “Health Risk Appraisals and Medicare.” Evidence Report prepared for the U.S. Department of Health and Human Services, Health Care Financing Administration, 7500 Security Blvd., Baltimore MD. 21244-1850, Contract No. 500-98-0281.
- 6 National Business Coalition on Health. “Health Risk Appraisals At the Worksite: Basics for HRA Decision Making.”
- 7 The Kaiser Family Foundation and Health Research & Educational Trust. “Employer Health Benefits 2008 Annual Survey.” Wellness Programs and Employer Opinions, Section 12, 2008.
- 8 Ibid.
- 9 Knight, V.A. “Treading Carefully with Wellness Programs.” *Wall Street Journal*, 28 July 28, 2009.