Using Online Health Risk Assessments

EAPs can help reduce organizational risks by advocating the use of online screening tools as part of a health management program.

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Online health screenings, the most popular being the health risk assessment (HRA), are a risk management tool used by many employers. The HRA is a screening tool completed by individuals to assess health status, estimate risk level, and provide feedback. Online HRAs refer to those delivered through the Internet or an intranet.

The health risks identified by an HRA, such as tobacco use and hypertension, are associated with productivity loss and increased medical expenditures (Boles, Pelletier, and Lynch 2004; Burton et al. 1999; Ozminkowski, Goetzel, Chang, and Long 2004; Serxner, Gold, and Bultman 2001; Yen, Schultz, Schnuernger, and Edington 2006). Loss of productivity through both “presenteeism” and absenteeism increases with the number of health risks per individual (Boles, Pelletier, and Lynch 2004).

Morbidity, mortality, and medical costs are also associated with the risk factors identified by HRAs (Anderson et al. 2000). In fact, $427.65 per person is spent annually on medical costs attributable to high risks, including stress, tobacco use, weight gain, lack of physical activity, high blood glucose levels, depression, high blood pressure, alcohol use, high cholesterol levels, and poor nutrition (Anderson et al. 2000).

This article provides a brief history of health risk assessments, discusses the principal objectives of HRAs and the advantages and disadvantages of using online HRAs, and assesses the overall effectiveness of HRAs. It also makes a recommendation for employee assistance professionals’ use of HRAs as an organizational risk management tool.

DEVELOPMENT OF HRAS

Schoenbach, Wagner, and Berry (1987) defined the HRA as “a procedure for using epidemiologic and vital statistics data to provide individuals with projections of their personalized mortality risk and with recommendations for reducing that risk, for the purpose of promoting desirable changes in health behavior.” In short, the objectives of an HRA are to (1) assess an individual’s health status and health behaviors, (2) estimate an individual’s risk of morbidity and mortality, and (3) provide informational feedback to the individual based on his or her questionnaire responses.

The first HRA was introduced in 1970 by Robbins and Hall but did not become widely used until 1980, when the Centers for Disease Control (now the Centers for Disease Control and Prevention) released publicly available HRA software. The Carter Center HRA replaced the CDC HRA in 1987 and is the basis for most of today’s HRAs (Anderson and Stauffer 1996).

The HRA originally was developed as a clinical tool for physicians, but today it is more commonly used as a health promotion tool (Strecher and Kreuter 2000). It helps health promotion program specialists plan and evaluate programs, identify potential participants, and raise awareness of health risks (Strecher and Kreuter 2000).

The increased use of HRAs in worksite settings over the past 20 years has facilitated changes in HRA administration. HRAs delivered to employees as part of a worksite health promotion program initially were distributed and completed in worksite meetings, and participants received informational feedback in group or individual sessions (Anderson and STAUFF 1996). New HRA delivery modes, including mail, telephone, and online systems, subsequently were developed to keep pace with workplace requirements and/or technological advances.

The advantages of online HRAs are improved data management, tailored messaging, reduced administrative costs, timely feedback, broader target audiences, and an efficient triage tool. Online HRAs allow longitudinal tracking that, in conjunction with participants’ current responses, can provide a personalized interactive session that alters the questions posed and provides immediate tailored feedback (Kashima 2006; Strecher and Stauffer 1996). New HRA delivery modes, including mail, telephone, and online systems, subsequently were developed to keep pace with workplace requirements and/or technological advances.

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and Kreuter 2000). In fact, HRAs were the first health information tool to provide this type of computer-tailored feedback to the user (Strecher and Kreuter 2000).

In addition to providing immediate feedback to the individual, an HRA also affords rapid aggregate-level feedback to the employer and may include comparisons to market group benchmarks. Another advantage of online screening tools is that individuals may reveal more information because the online format provides a feeling of anonymity, allowing individuals to answer more sensitive items with a greater degree of honesty (Pealer et al. 2001).

Kashima (2006) found that although there were some challenges in transitioning from a paper HRA to an online assessment, the transition has been successful. The online HRA reduces administrative costs compared to workplace-administered paper formats and allows family members and dependents to participate as well (Kashima 2006).

Data collected from online HRAs facilitate efficient identification and triage of high-risk individuals into groups to be invited to follow-up health education interventions. The online system used for HRA administration may also be used to generate e-mail invitations for participation in follow-up health education interventions. The online system used for HRA administration may also be used to generate e-mail invitations for participation in follow-up health education interventions, which can increase participation in these interventions and encourage ongoing use of online resources such as employer- and other health-related Websites (Kashima 2006).

Some of the key challenges of using online HRAs are related to computer access, password coordination, implementation processes, and security concerns (Kashima 2006). Online HRAs may not be ideal if certain employee groups do not have online access at the workplace. Employees with online access may be frustrated by additional passwords and coordinating a “single sign-on” interface between the HRA and the employer’s Website (Kashima 2006).

The process of implementing online HRAs requires that employers provide electronic eligibility files to the HRA administrators. Depending on an employer’s human resources information system (HRIS), it may take significant work to compile the proper information (Kashima 2006). The use of certain types of unique identifiers (such as Social Security numbers) on eligibility files may raise concerns among employees about the specific type of identifier used and the lack of anonymity of their health information (Kashima 2006). Additionally, employees may be concerned about the security of their health care information when stored in an electronic format (Kashima 2006).

Coordination between information technology and human resources staff can mitigate if not overcome these barriers. Furthermore, the Health Insurance Portability and Accountability Act (HIPAA) addresses the concerns about anonymity and security. Under HIPAA, individual-level personal health information can be distributed to employers only if it is de-identified, thus preserving anonymity (U.S. Department of Health and Human Services 2003a). Secondly, HIPAA prescribes specific electronic storage procedures that provide security for electronically stored health information (U.S. Department of Health and Human Services 2003b).

**OBJECTIVES OF HRAs**

The HRA aims to assess, estimate, and inform. The prevalence of HRA use among employers and rates of employee participation in HRAs are measures of the ability of online assessment tools to meet the first goal. A 1992 survey of large worksites (those with 750 or more employees) indicated an increase in employer use of HRAs, from just over 65 percent in 1985 to greater than 90 percent in 1992 (Office of Disease Prevention and Health Promotion 1992).

Employee participation in HRAs varies depending on the mode of delivery and the incentive to participate. Approximately 15-25 percent of eligible employees participate in the HRA if it is mailed to their home, 30-60 percent participate if the employer allows employees to receive a biometric screening and complete the HRA on company time, and 21-76 percent participate in the first year if the HRA is provided online (Baker, Weafer, and Edmunson 2004; Kashima 2006; Serxner, Anderson, and Gold 2004). If the employer provides a token or financial incentive, it can boost participation to 30-95 percent of eligible employees (Serxner, Anderson, and Gold 2004).

The second objective is to provide an estimate of the mortality and morbidity risk of each HRA participant. Although the first generation of HRAs (in the 1970s and early 1980s) cast doubt on the accuracy of their risk estimates, the newer generation of HRAs has demonstrated more favorable capabilities (Strecher and Kreuter 2000). There is consensus that contemporary HRAs are sufficiently accurate in distinguishing high from low risk, though debate exists as to the ability of HRAs to predict all types of risk with precision (Anderson and Stauffer 1996; Strecher and Kreuter 2000).

The final objective is to provide feedback to HRA participants. The majority of HRAs are based solely on epidemiologic data, and care should be taken in assuming that simply providing risk information to employees will lead them to implement behavior change (Strecher and Kreuter 2000). Indeed, the focus is on increasing awareness of risk by providing feedback to participants on susceptibility to and severity of health risks as well as, on a limited basis, the benefits of health behavior change (Anderson and Stauffer 1996; Strecher and Kreuter 2000).

Behavioral science indicates that other components of behavioral theory, such as barriers, self-efficacy, and skills, should be addressed to adequately target health behavior change (Strecher and Kreuter 2000). HRAs that collect information on these additional behavioral components can use computer technologies to provide individually tailored educational materials to employees (Kreuter and Strecher 1999).

**UTILITY AND EFFECTIVENESS OF HRAS**

There is little evidence that HRA feedback is effective at changing individual behavior, though research shows that 54 percent of those receiving tailored HRA feedback changed at least one risk
behavior compared to 45 percent of those receiving traditional HRA feedback (Anderson and Staufacker 1996; Kreuter and Strecher, 1999; Soler et al. 2007; Strecher and Kreuter 2000). Health risk assessments are often used as a component of a comprehensive health management program (CHMP) that addresses health management across the health care continuum. CHMPs target individuals who are without disease or are at risk for disease as well as those who have chronic, catastrophic, and acute conditions, utilizing programs such as targeted behavior modification, nurse advice lines, health and self-care information, healthy lifestyle campaigns, and disease and case management (Sxner, Noeldner, and Gold 2006).

In a CHMP, the HRA is primarily a data collection tool used to stratify individuals into risk categories for follow-up health education interventions (Serxner et al. 2006). The follow-up health education interventions are a critical component of behavior change programs and differ from the informational feedback provided with the HRA because they allow participants to interact with health educators to learn how to better manage their health.

Several literature reviews indicate that CHMPs are better than single-component programs, such as an HRA-only program, from both a clinical and a cost-effectiveness perspective (Chapman and Pelletier 2004). CHMPs that include HRAs have successfully produced behavior change and reduced risk levels associated with physical activity, tobacco use, alcohol use, seatbelt use, dietary behaviors, blood pressure, and cholesterol (Anderson and Staufacker 1996; Goetzet al. 2002; Soler et al. 2007).

Employers hope to achieve a financial return on investment in CHMPs as a result of behavior change and decreased risk levels. This financial return results primarily from reduced employee medical costs and increased productivity. The need to include HRAs in CHMPs is substantiated by the fact that higher medical cost savings are associated with individuals participating in both the HRA and follow-up health education interventions than in only the HRA (Serxner, Gold, Grossmeier, and Anderson 2003).

Literature reviews indicate that health promotion can produce a 1:1.5 to 1:3 return in terms of medical costs and disease management programs can produce a 1:1.2 to 1:1.8 return (Serxner, Baker, and Gold 2006).

HRAs also affect workplace productivity. One study found significant differences in the number of short-term disability absences between HRA participants and non-participants in a CHMP (Sxner, Gold, Anderson, and Williams 2001). Literature reviews indicate that CHMPs can produce a 1:5.8 return in terms of costs associated with absenteeism (Chapman and Pelletier 2004).

SUMMARY AND RECOMMENDATIONS

Online screening tools such as health risk assessments can play a key role in organizational risk management by identifying health risks and, when used as part of a comprehensive health management program, reducing medical- and productivity-related costs. HRAs have evolved over time and are now utilized as a critical component in CHMPs to drive awareness of health risks and program participation.

Although most research to date has focused on paper-based HRAs, preliminary research and case studies indicate better outcomes for online HRAs versus paper-based HRAs. It should be noted that, when implementing online HRAs, information technology staff should be consulted to address technology issues not discussed in this article.

Although the HRA primarily measures health-related risks, questions could be added that identify risks best suited to EAP interventions. For example, a question pertaining to financial stress could be added to the assessment, and invitations to participate in financial planning and money management workshops could be distributed to those who report high levels of financial stress.

Employee assistance professionals can also use HRAs as a means of coordinating service delivery with health benefits professionals. In particular, the HRA can facilitate discussions between the various parties on how best to construct a CHMP that includes a health risk assessment.

References


