

# HEALTH RISK APPRAISALS AT THE WORKSITE:

Basics for HRA Decision Making





## ANDREW WEBBER: HRA Selection and Use Tool

---

**Over the last two years,** The National Business Coalition on Health (NBCH) and the Centers for Disease Control and Prevention (CDC) have worked with our respective partners to address questions around our roles in the development of scientific and practical knowledge about health risk appraisals or assessments (HRA). First, NBCH engaged two of our member coalitions to conduct a web based survey of employers . We surveyed employers to determine the level of use and understanding of HRAs. The results showed a high prevalence of the use of HRAs by employers, largely targeted to employee education and engagement with their own health behaviors and health promotion programs. We've published the results of that survey and its available online ([www.nbch.org](http://www.nbch.org))."

Second, CDC and NBCH worked together to convene an expert panel to provide information on the current use and understanding of HRAs by various stakeholders. The breadth and depth of the panel allowed for broad representation and discussion of the issues associated with the development, selection, content, implementation, and use of HRAs. The panel summary is included in this report. The gap between the evidence on HRAs and their current use is large, as revealed in the panel discussion. The key message from the panelists appeared to be:

*An HRA is a set of questions that are part of a process with goals to engage and inform the participant and motivate the individual toward healthy behaviors. The process, i.e. how*

*the HRA is delivered and what occurs afterward, is at least equally as important as the content, i.e. the type of questions and biometric measures.*

The HRA Expert Panel report is available online as well.

At the same time, the Task Force on Community Preventive Services completed a systematic review of worksite setting studies. This review was designed to assess the effectiveness of **assessments of health risks with feedback** (AHRF), and without additional interventions when used in worksite settings as a "stand alone" tool.

The culmination of these efforts and the information from the Task Force on Community Preventive Services is the development of guidance information for purchaser selection and use of HRAs. NBCH members have been addressing the larger embodiment of health with their employers through education, support for health fairs and other worksite programs, assessment of health plan benefit design and performance, sharing examples of individual employer programs for health promotion and prevention, and in numerous other projects that address health and health care. We hope that this publication, HRA at the Worksite: Basics for HRA Decision Making, will provide guidance for decision makers in the selection and use of HRAs at the worksite and serve as one more tool in value based purchasing for health care services.



# HEALTH RISK APPRAISALS: Report of an expert panel

---

*Tuesday, October 3, 2006  
Meeting Report*

## INTRODUCTION

The purpose of this guide is to provide information that will help NBCH members and employers, in both public and private sectors, make informed decisions about if, why, when, and how to use Health Risk Appraisals (HRA) for their employee populations.

**This guide consists of three sections:**

- ❖ Section 1: Overview of HRA – This section provides synopses of: the evolution of HRA, the evidence base for HRA use, common components of an HRA tool, limitations to HRA use, ten basic steps for planning a program that includes HRA, and potential HRA sponsors in addition to employers.
- ❖ Section 2: HRA Features Prioritization Checklist – This two-part checklist is designed to save time as you identify the reasons for conducting an HRA at your worksite, and then determine what features an HRA tool must include to meet those objectives.
- ❖ Section 3: HRA Comparison Checklist – This checklist can help identify the HRA tool among those you are considering that best meets your workplace objectives.

## SECTION 1: Overview of HRA

### Just What Does “HRA” Mean?

Over the years, “HRA” has been used as an abbreviation for “health risk assessment” or “health risk appraisal”, terms that are sometimes used interchangeably, however no standard definition exists. It has been suggested that a health risk appraisal is an instrument used to collect information, and health risk assessment refers to an overall process that includes use of the tool and sometimes biometric screening tests to measure individual health risks and habits. Responses to the questions and results of the biometric screening are often used to calculate a health risk score or health risk age. This score or age is reported back to the individual and is often accompanied by counseling or health education to help the individual make lifestyle changes to reduce the identified risks. An expert panel convened on October 6, 2006 and sponsored by NBCH and the Centers for Disease Control and Prevention, emphasized,

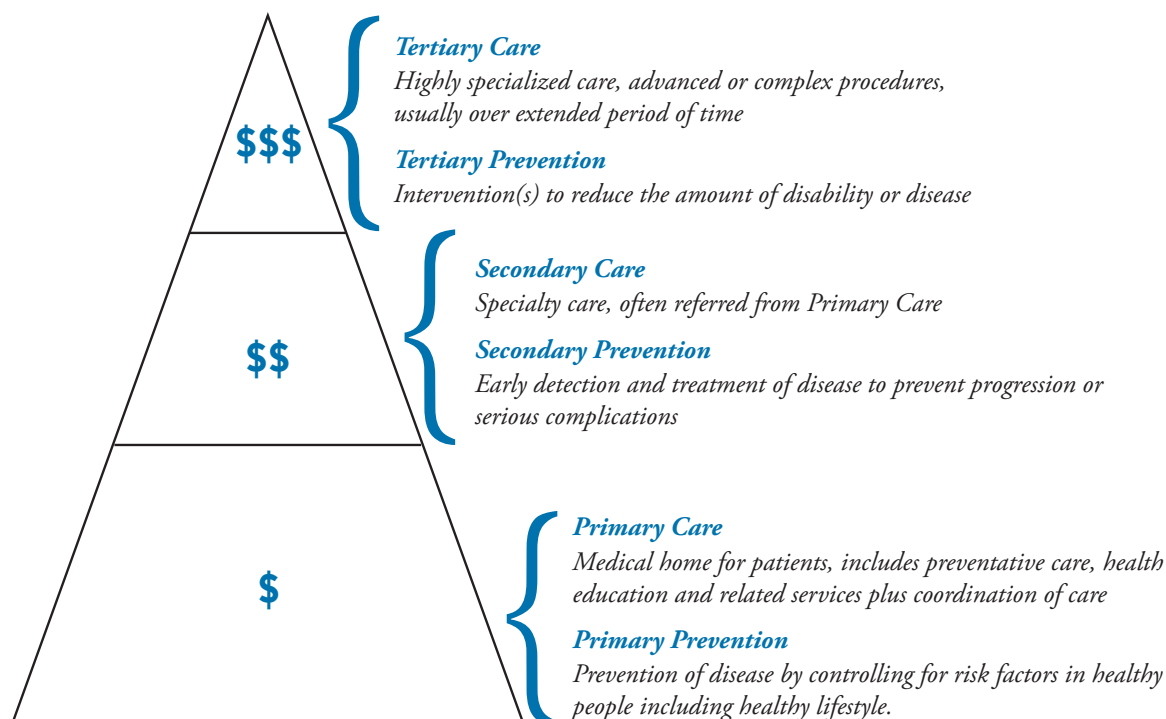
“An HRA is a set of questions that are part of a process with goals to engage and inform the participant and motivate the individual toward healthy behaviors. The

process, i.e. how the HRA is delivered and what occurs afterward, is at least equally important as the content, i.e. the type of questions and biometric measures.”

Depending on content of the HRA tool, inclusion of biometrics, and the scope of follow-up education and interventions, HRA can play a role in helping employees do such things as learn about the impact of their lifestyle choices as a first step to engaging in personal responsibility, set goals and prepare a tailored action plan to address health risks and examine their emotional well-being.

HRA can also play a role in helping employees gain access to three types of preventive care recognized by public health and medical professionals as primary prevention (activities to stop the occurrence of disease or injury before starts); secondary prevention (activities to target those at high risk of disease, but who do not have symptoms), and tertiary prevention (services for those who are symptomatic, to reduce the negative consequences of disease). The three types of health care associated with these prevention levels are described in the diagram on the following page:

**Progression of Cost for Levels of Health Care Services and Prevention**



References for Definitions: Gordon, RS Public Health Rep. 1983 March-April;98 (2):107-109 Gordus L. Epidemiology.2

It is common for employers to be concerned with identification of chronic conditions prevalent among their workforce, because of the potential to prevent symptomatic illness or reduce severity of a health condition, with a resulting impact on medical care utilization and worker productivity. In this situation, the focus might be on secondary and tertiary prevention interventions to control short-term health care costs, such as early detection of cancer, asthma control programs or aggressive treatment for diabetes. While this is important, it is prudent not to ignore employees with no or few risk factors. They present an opportunity to help control long-term costs through primary prevention interventions that support maintenance of healthy lifestyles, e.g. access to fitness facilities, healthy food options at work, walkable worksite campuses.

This guide is designed to help inform employer decisions regarding use of HRAs in worksite settings or employer sponsored health and productivity programs. It includes tips and checklists to help select an appropriate HRA tool, provide employees with HRA results, and offer health education and other ways to help employees reduce their health risks. While there are HRA-like screening tools specific to certain conditions, such as cancer or diabetes, “HRA tool” in this document refers to a comprehensive instrument that addresses primary prevention or early detection of risks and lifestyle factors for a range of chronic diseases, conditions and injuries.

#### How has HRA Use in the Workplace Evolved?

Prior to the 1980’s, paper-and-pencil HRA tools were developed to help physicians educate their patients about risks that could shorten their lives, as well as lifestyle factors that could increase prospects for a long, healthy life. In the 1980s, the Centers for Disease Control and Prevention created a publicly available HRA tool, Healthier People, which was later taken over by the Carter Center of Emory University. In the 1980s and 1990s, the worksite became a more common setting for the use of HRA, primarily as an employee awareness tool and sometimes to suffice as a “wellness program” in and of itself. At the same time, computer technology was being used to create and use complex algorithms to determine risk levels and develop tailored feedback protocols. In their 1999 publication, the Society for Prospective Medicine listed 44 health

assessment tools of various kinds, in addition to 14 designed for research purposes. Today there is a greater variety of HRA tools available, the majority of which are proprietary commercial products. Compared to early HRA design and function, today’s tools focus less on predicting life span and more on an individual’s potential for developing chronic disease or experiencing injury. In addition, some HRA tools include productivity measures. Most now provide a computer-based format for easier implementation and data collection and analysis.

The current trend is for employers to use HRA as part of an overall health and productivity program. It is often linked with incentives to encourage employees to voluntarily complete the HRA, participate in health promotion programs, or adopt lifestyles conducive to lowering health risks and controlling medical costs.

The use of HRAs in worksite settings is now widespread, although estimates vary. The 2004 National Worksite Health Promotion Survey, conducted by Watson-Wyatt for Partnership for Prevention with support from the U.S. Department of Health & Human Services, found that HRA use in the worksite varied by size; 11.3% of those with 50-99 employees and 45.8% of worksites with ≥750 employees responded that they had used HRA during the past 12 months. A 2007 study by the St. Louis Area Business Health Coalition reported that HRAs were offered by 40% of large employers, and that HRA utilization rates were highly correlated with incentives or requirements. While Wellness Councils of America (WELCOA) members are likely more progressive than most employers in the area of worksite health promotion, a 2006 WELCOA membership survey showed that 61.6% of respondents reported having offered HRA to employees in the past 12 months and 72.9% had offered health screenings within that timeframe. A 2007 survey of 115 large to mid-sized self-insured companies also showed substantial use of HRA. In this survey, 60% of respondents used HRA and 33% provided on-site health screening or biometric testing.

#### Is there an Evidence Base for Use of HRA?

The term “evidence based” in this document refers to:

*“The development, implementation, and evaluation of effective programs and policies in public [population\*] health*



*through application of principles of scientific reasoning, including systematic uses of data and information systems, and appropriate use of behavioral science theory and program planning models.” [\*clarification added by NBCH]*

When possible, worksite health and productivity programs should be designed based on an evidence-base. However, sometimes there are an insufficient number of quality studies on worksite health promotion interventions to determine the evidence. This does not mean that the intervention is not effective, only that it is not known if the intervention is or is not effective.

## Awareness and Behavior Change

The Task Force on Community Preventive Services (Task Force) makes recommendations for policy and practice in the Guide to Community Preventive Services (“the Community Guide”) based on scientific, systematic literature reviews conducted by interdisciplinary teams, led by scientists at the Centers for Disease Control and

### Observation on HRA Effectiveness

“When applying the most rigorous scientific criteria, the reliability, validity and effectiveness of HRAs are minimally acceptable. This is not surprising since many health risk factors have not yet been determined, e.g., genetic factors and unknown factors related to future events. These unknowns contribute to a large variance in various outcome measures, such as mortality, morbidity, and healthcare utilization and costs...However, if the HRA is to be used as an educational and awareness tool, then the issues of reliability, validity and effectiveness become less important.”<sup>5</sup> (D.W. Edington, L. Yen, A. Braunstein)

Prevention ([www.thecommunityguide.org](http://www.thecommunityguide.org)). This Task Force recently directed reviews of the scientific literature on the worksite use of HRA, more specifically defining the process as “the assessment of health risks with feedback (AHRF)”. Reviews were conducted looking at AHRF as a stand-alone intervention (“AHRF”), and also in combination with health education (“AHRF Plus”). The included studies typically evaluated worksite health

promotion programs that used HRA with biometric screening. These reviews looked at AHRF as an intervention implemented to improve health outcomes, risk status, and worker productivity and not the quality or features of various HRA tools.

These rigorous reviews support AHRF’s effectiveness in making participants aware of their health risk factors and motivating them to take action to change them. Based on their reviews, the Task Force made the following recommendations about the scientific evidence base for AHRF and AHRF Plus influencing participants’ adoption of healthier behaviors:

- ❖ When AHRF is used as a sole intervention without health education:
  - The Task Force found insufficient evidence to determine the effectiveness of AHRF when implemented alone. Evidence was considered insufficient because of inconsistent effects and concerns about lack of controlled studies. The lack of a conclusion may also be due in part to the variance in HRA attributes (e.g., questions, implementation process, utilization, etc.)
- ❖ When AHRF is used with health education, with or without additional intervention components (“AHRF Plus”):
  - There is strong evidence to support the effectiveness of AHRF plus health education in impacting tobacco use, alcohol use, seat belt non-use, dietary fat intake, blood pressure, cholesterol, worker absenteeism and healthcare services use.
  - There is insufficient evidence to draw conclusions about the use of AHRF plus health education and changes in body composition, fruit and vegetable intake and fitness.
  - Additional benefits include increasing awareness of health status among employees; increasing detection of certain diseases or risk for disease (requires biometric screening), possibly at an earlier or pre-symptomatic stage; referral to a medical professional for employees at high risk for morbidity or mortality; and creation of need-specific worksite health promotion programs based on aggregated results of the assessments.

## Return on Investment (ROI) and Productivity

Many studies have documented that HRA risk factor scores are significantly associated with medical claims costs. Other studies have reported on the cost effectiveness of individual worksite health management programs that include HRA as a key component. Examples include Citibank Health Management Program with an ROI of \$4.70 in benefits for every \$1.00 in costs, Proctor & Gamble's Health Check with a third-year ROI of \$1.49 to \$1.00, and Johnson & Johnson's reduction in medical claims of \$244.66 per year per employee over four years of their LIVE FOR LIFE program.

The Task Force found strong evidence that AHRF with health education favorably impacted absenteeism, which was the productivity measure used in the studies reviewed. However, the Task Force was unable to draw any conclusion about the economic impact of AHRF such as ROI, due to vast differences in the design and data reported from the available studies.

In addition to being examined in relation to indicators of productivity and health care service use, assessment questionnaires are being developed for purposes such as evaluating the impact of health problems on work performance, e.g. Stanford Presenteeism Scale, Work Productivity Short Inventory. HRA tools can also be professionally designed to include such questions. For example, a subset of questions ("SPS-6") from the Stanford Presenteeism Scale asks respondents to rate the level to which they agree or disagree with a series of statements like, "At work, I was able to focus on achieving my goals despite my (health problem)".

## Program Planning and Evaluation

To our knowledge, a scientific review has not been published that examines the use of HRA as a source of data to inform program planning and evaluation. However, some HRA tools are capable of providing aggregate (group) data without identifying individuals and this information can be useful to health promotion program planners. Data might be summarized in ways that facilitate targeted program planning, such as by geographic location, organizational divisions or worker characteristics, if these subgroups are large enough to prevent inferring an employee's identity.

While not mandatory for program planning, several organizations have recommended using HRA data for this purpose. The National Business Group on Health (NBGH) cites HRA as one of several data sources that can inform health promotion decision making, and includes HRA among 15 recommendations for integrating employee health services to impact individual disease burden and employer costs. In addition, organizations such as the Wellness Councils of America (WELCOA) and NBGH include HRA use among their recommendations for planning and evaluating employee health and wellness services. WELCOA identifies the use of HRA as a component of the proactive health and productivity management style of worksite wellness. This model includes a structured set of interventions and incentives to engage a high percentage of employees in identifying and improving their health risks, and uses HRA results to guide intervention design.

It is important to note that when using HRAs for evaluation purposes, it is best to have comparable aggregate data over several years. This requires a commitment to provide HRA, using tools that produce comparable data, beyond a one-time offering.

### HRA in Action: NASA

Large companies, health plan providers and health and productivity consultants have used HRA to establish a set of metrics to plan and evaluate employee health and productivity programs. Among these is the National Aeronautics and Space Administration (NASA). NASA asked the Institute of Medicine (IOM) to assess its occupational health programs and recommend future employee health program options that focus on areas such as chronic disease prevention and psychological well-being. One of several overarching strategies that IOM recommended is to integrate all NASA workforce health programs, including use of agency-wide HRA to build a foundational database that guides program design, implementation and evaluation.



#### HRA in Action: Monongalia Health System

The Monongalia Health System (MHS) in West Virginia has approximately 1400 employees as the parent company of Monongalia General Hospital and its affiliates. In 1992, MHS implemented Vital Signs, an employee wellness program that used employee health data for program design. In 2002, after much planning on the part of administrators, Human Resources and wellness staff, MHS began requiring employees and spouses seeking company-provided health benefits to complete an HRA and attend self-care training that included education about rising health care costs and health care decision-making skills. In addition to helping employees identify their health risks, the HRA provided more complete data for health promotion program planning. MHS coupled aggregate HRA results with other information such as medical claims, to identify five key health behaviors, which programs were designed to address: nutrition, fitness, weight management, heart care and smoking cessation. Two years after implementing their new HRA-based strategy, at a time when many employers had 12-13% health care cost increases, MHS experienced level health care costs.

#### Other Potential Benefits

HRA may benefit the employer by:

- ❖ Helping the employer build a culture of health.
- ❖ Establishing a gateway to targeted prevention and intervention programs that engage employees in health education and self-care.
- ❖ Encouraging employees to obtain age-appropriate, evidence-based health screenings.
- ❖ Serving as the core of a systematic approach to organizing preventive health information.
- ❖ Providing the ability to aggregate data by organizational division and risk prevalence to inform wellness program planning, benefits design, monitoring of trends and evaluation, as mentioned above.

HRA may benefit participants by:

- ❖ Serving as a relatively non-threatening, anonymous entry point to health and lifestyle services they might need.
- ❖ Creating or reinforcing awareness of personal risk factors for chronic disease and injury, a necessary first step to lowering risks.

- ❖ Empowering the individual with information about “do-able” actions he or she can take to impact current and future quality of life.
- ❖ Monitoring progress toward health-related goal accomplishments (if HRA is offered periodically).
- ❖ Setting goals for lifestyle changes or obtaining preventive health services.
- ❖ Linking participants with other health-related services sponsored by the employer, such as disease management or employee assistance programs (EAP).

#### What are Common HRA Tool Components?

The components of HRA tools can vary greatly, depending on the HRA vendor and instrument. What is basic and desirable really depends on the purchaser, but a non-exhaustive list appears below for general guidance. A key planning team role is to determine the need for certain types of questions and services based on budget, program goals and employee population demographics (age, gender, cultural background, access to computers, occupation, etc.).

**Delivery Mode** – Various options for employees to complete an HRA questionnaire include paper-and-pencil, via computer at home or work, using kiosks at work, obtaining information by personal or phone interviews, or using an automated touch tone phone system.

**Questionnaire Content/Topics** – There is a broad range of possible health risks, health conditions, lifestyle behaviors and other factors for many different diseases or health conditions that an HRA tool may or may not include. Here is a sample of categories to consider; the list is not exhaustive and the topics may not be mutually exclusive:

Topics	Example
<i>Chronic diseases</i>	Asthma, Cancer, Diabetes, Heart Disease
<i>Infectious diseases</i>	Influenza, Sexually Transmitted Disease
<i>Health conditions</i>	Disability, Pregnancy
<i>Injury/safety</i>	Seat Belt Use, Driver Use of Alcohol/Drugs, Gun in Home, Violence Exposure
<i>Lifestyle</i>	Physical Activity, Dietary Intake, Tobacco Use, Sleeps Habits, Sunscreen Use, Self Care Ability, Home Safety Practices, Travel
<i>Occupation</i>	Heavy Lifting, Computer Use/Ergonomics, Chemical Exposure
<i>Medical history</i>	Immunization History, Family Medical History
<i>Emotional health</i>	Stress, Depression, Anxiety, Social Support, Post-Traumatic Stress, Emotional Abuse
<i>Prevention</i>	Use of Recommended Health Screenings and Preventive Practices
<i>Health literacy, self-care</i>	Knowledge of Resources and Appropriate Use
<i>Readiness to change</i>	Measure “Stages-of-Change”

**Biometrics Screening Options** – Ideally, the HRA instrument should be designed to allow for inclusion of a variety of biometric indicators such as blood pressure, body composition, cholesterol panel, blood sugar, bone density, cardiovascular fitness, flexibility, strength, glaucoma, etc. Biometric measurements obtained through on-site measurement, not by self-report, helps ensure that the information is timely and obtained using consistent methods that provide accurate employee health risk data.<sup>8</sup> However, it is also desirable for the HRA tool to allow for variations in employers’ financial and logistical ability to provide health screenings.

**Questionnaire Format** – The languages the tool is available in, personalization, cultural sensitivity and reading level should be appropriate for your employee population. Also, be sure that the HRA tool includes understandable “how-to” instructions, is easy to complete and doesn’t require an excessive amount of employee time.

**Science Base** – It is important that the HRA tool is based on sound, current scientific data and protocols so that it provides accurate risk estimates, screening test results and lifestyle advice. For example, are norms used for screening tests based on respected authorities such as the evidence-based Guide to Clinical Preventive Services (see Resources), American Cancer Society or other specialized professional organizations? How often is the HRA instrument updated? The vendor should be able to answer such questions and share documentation for the HRA’s science base.

**Technical Specifications** – These include items such as IT system requirements, how data entry, back up and storage are handled, and:

<i>Capacity to Customize</i>	Inquire about the vendor's ability to modify their standard processes and reports for your employee population as needed, e.g. Can you add your company logo to the HRA tool and materials? Do you have a need to add questions to the HRA tool to assess employee interest in a new health program or a service that you are considering, or find out why employees do or do not use an existing service? Is it possible to specify that group data are reported by particular geographic or organizational designations?
<i>Confidentiality</i>	It is critical to employee participation, not to mention legal compliance, that the privacy of individual employees is protected.
<i>Data Security</i>	Before any information is collected via an HRA tool, there should be well-defined procedures in place to protect electronic data from unauthorized access, loss, alteration or misuse as it is being stored, transmitted and used.
<i>Data Integration</i>	This refers to the ability to compare past, present and future HRA results and/or to connect HRA data (in a way that protects employee privacy) with other internal employee health related data, such as Employee Assistance, disease management or disability/workers' compensation.
<i>Medical Home Linkage</i>	The HRA process may be used to help promote continuity of health care by connecting employees with a primary health care provider as a gateway to the spectrum of care they need. The HRA results could become part of a corresponding "medical home" – a centralized record of preventive and curative care provided over time, which can be accessed by the employee's health care providers.

**Reports** – Timely, accurate, understandable, user-friendly reports foster translation of raw data into beneficial actions. High quality reports clearly show employees what health risk changes they should focus on and how. Likewise, useful group reports enable employers to develop and manage properly targeted population health programs.

<i>Participants' HRA Results</i>	<p>The format of the HRA results report provided for participants and how this information is communicated should be engaging, personalized, clear and appropriate for your employees, e.g. proper reading level and language, culturally sensitive, referral to services specific to an individual's health risks.</p> <p>Also look for reports that include information that will be helpful to your employees. For example, they may or may not include items such as health education tips, health-age scores, referrals to services specific to the individual's health risks, or additional risk-specific health education materials.</p>
<i>Aggregate HRA Results Reports</i>	The content and format of anonymous group reports should be useful for your program planning and evaluation purposes, e.g. information clearly presented, useful data segmentation, data-driven recommendations, compatible electronic data, ability to compare to past and future HRA results.

**Type and Scope of Vendor Service** – Some vendors provide a full scope of services in the HRA process for employers willing to incur additional cost, e.g. promotion, implementation, biometrics measurement/health screening, professional health staff, presenting results to employees, reports, health education/materials and interventions to address health risks. Consulting services may also be available to help employers collect and analyze data to plan and implement comprehensive health and productivity programs.

## What Are Considerations and Limitations to Using HRA?

### Ethical Aspects

The Society for Prospective Medicine has published General Ethics Guidelines to facilitate the appropriate use of HRA and enhance its benefits for organizations and individuals, while minimizing potential HRA misuse.<sup>5</sup> The guidelines address seven critical areas related to the HRA process: program planning; HRA instrument selection; participant orientation; HRA implementation; protecting confidentiality/data security; report interpretation; access to resources to help participants modify identified risk factors. A summary of the ethics guidelines is available at [http://www.cdc.gov/nccdphp/dnpa/hwi/program\\_design/ethical\\_guidelines.htm](http://www.cdc.gov/nccdphp/dnpa/hwi/program_design/ethical_guidelines.htm)

### Legal Considerations

Thoughtful consideration should be given to the Health Insurance Portability and Accountability Act (HIPAA) and Americans with Disabilities Act (ADA) throughout the HRA process. While these regulations certainly do not preclude HRA, sponsors should consider consulting an attorney who is well-versed in their complexities to assure that the HRA process, including related incentive programs, comply with these laws. For example, ADA requires reasonable accommodation for those with disabilities, and HIPAA contains provisions that impact employer-sponsored wellness programs, such as privacy rules and criteria for modifying employee health premiums as a reward or penalty.

### Applicability to Your Employee Population

When looking at HRA instruments, there are some general considerations to be aware of that might apply to your employee population:

- ❖ The appropriateness of an HRA tool for your population is influenced by the comparative population databases and analysis it uses to estimate risk levels.
- ❖ Many HRAs are designed for people who do not already have chronic illnesses, such as heart disease, diabetes or cancer.
- ❖ In many cases, the studies on which HRA risk data are based were of middle-class, white, middle-

aged populations. Standard HRAs might not be appropriate for the very young or elderly, non-white populations or those in low socioeconomic categories.

- ❖ Some HRA tools are not available in an assortment of languages, reading levels or versions appropriate for people with certain disabilities.
- ❖ HRAs use information that is self-reported, which is not always accurate.

## What are Basic Planning Steps to Implement a Program that Includes HRA?

### Step 1 - Assemble planning team

Selecting, planning and implementing HRA could be an appropriate role for your wellness committee. Otherwise, consider assembling an inter-departmental team that includes expertise and representation from management, purchasing, communications, health promotion, occupational health, human resources, labor union and employees-at-large, and which has access to legal counsel. Team composition will vary by the type and size of the employer, but identify and include all stakeholders. This team will select or be the staff to carry out all the following aspects of the HRA process.

### Step 2 - Draft your organization's objectives for implementing HRA

Stated objectives can serve to: 1) clarify the HRA purpose for all stakeholders; 2) help assure that the HRA tool selected includes features that meet organizational and participant needs; and 3) serve as a basis for process evaluation.

Depending on the HRA sponsor and target population, objectives might address:

- ❖ Participant objectives:
  - awareness and education about overall health risks
  - desire for measurement of certain biometrics such as blood pressure, cholesterol, body composition, fitness level or mental health screening, e.g. depression, anxiety, post-traumatic stress, bipolar disorder
  - improve encounters/visits to medical care providers for preventive care services and advice

- engagement in health promotion programs offerings
  - engagement in services to lower risk factors or manage chronic diseases, e.g. case management, disease management, EAP counseling
- ❖ Employer objectives:
- determine wants and/or needs of target population for planning of programs, services and/or benefits design
  - establish benchmarks for long-term evaluation
  - integrate various aspects of employee health, such as wellness, occupational health and safety, disability, workers compensation, disease management, case management

### Step 3 - Ensure confidentiality

Privacy protection should be built in to all stages of the HRA process, including location for completion of the HRA by participants, data collection and analysis, aggregate and individual reports, provision of feedback to participants, and health education and counseling interventions.

### Step 4 – Decide who HRA participants should be

One factor to consider when deciding who is eligible to participate in the HRA is the influence of the family unit on health behavior. Some employers may choose to include spouses, domestic partners or dependents as well as employees.

### Step 5 - Develop strategies to encourage HRA participation

In the early years of HRA use, worksites often relied on employee awareness campaigns alone to encourage voluntary HRA participation. Over the years it has become more common for employers to add financial and/or non-financial employee incentives to increase HRA participation rates, and such strategies may be a good investment.

While we are unaware of scientific reviews that define which type of incentives work to specifically promote HRA completion, individual studies are starting to look at this. For example, a study that determined that HRAs

can provide useful data even if response rates are low, also found that a \$20 incentive can result in higher response rates among a sub-sample of people who did not respond to an initial HRA promotional mailing. The response rate was 51.8% for the sub-sample contacted by phone without the incentive and 67.7% for the sub-sample contacted by phone and offered \$20 to complete the HRA. In addition, case examples and detailed guidance on the advantages and disadvantages of various incentive program designs are available from organizations such as WELCOA and NBGH. 26 27

Most likely, incentive effectiveness varies by situation and desired outcome. Therefore, the first step in creating an incentive program is to decide what measurable result you are looking for over what period of time. Next, agree on the type of incentives that are appropriate for your workforce and are most likely to result in the desired outcomes, e.g. Governmental agencies might need to determine incentive options that comply with appropriations laws, while private sector employers might have more flexibility as to the type of incentives they can offer. Other key considerations for incentive design include regulations like HIPAA and ADA, internal organizational policies, budgetary issues, and the nature of the target population.

Incentives to utilize wellness programs in general are not a new concept, but using incentive to specifically encourage HRA participation is a more recent occurrence. In a 2006 survey that NBCH conducted with the Virginia Business Coalition on Health, over half of respondents reported that they had used HRAs in the past 5 years and 76.6% of those said that they had provided incentives to encourage employee participation. Yet in a study led by the St. Louis Area Business Health Coalition, 41% of 39 large and mostly self-insured companies responded that they offered HRA, but only 5 used requirements or incentives to boost participation.

It is common for employers to use combinations of various types of incentives to encourage employees to take part in a wellness event, participate in health promotion activities or modify health-related behaviors. Health and productivity management program utilization incentives fall into some general categories, many of which might be considered to promote HRA participation:



❖ Non-financial

- Examples:
  - ▶ “Freebies” such as tee-shirts, water bottles or gym bags
  - ▶ Raffles or lotteries for substantial prizes like a trip or TV
  - ▶ Individual recognition via certificates, company newsletter articles, bulletin board postings, etc.
  - ▶ Award friendly competitions among teams of employees from different organizational divisions or geographical locations

❖ Financial

- Examples:
  - ▶ Paid time off
  - ▶ Cash award, e.g. via payroll
  - ▶ Gift cards
  - ▶ Fee reimbursement for fitness center membership
  - ▶ Offering free HRA and/or health screening tests
  - ▶ Free or rebated fitness facility or wellness classes, for consistent attendance
  - ▶ Consumer-Driven Health Plan bonus
  - ▶ Medical Savings Account wellness bonus
  - ▶ Convenience of payroll deduction to pay for wellness services
  - ▶ A wellness program option under the Section 125 cafeteria/flex plan

❖ Management Objectives

- Include wellness program participation, such as the percent of employees completing an HRA, in managers’ job performance plans for employee groups they supervise

Incentives in Action: HealthyArkansas

The National Governors Association reports that in 2005, then Arkansas Governor Huckabee created financial incentives for state employees to lead healthy lifestyles as part of the HealthyArkansas program. Incentives included a \$20 per month insurance premium discount for employees who participated in a voluntary HRA.

Incentives in Action:

King County Healthy Incentives<sup>SM</sup>

Healthy Incentives<sup>SM</sup>, a benefits program implemented in 2006 to encourage county employees and covered spouses/domestic partners to “take ownership of their health”, is part of the King County Health Reform Initiative in the State of Washington. The program provides employees with lower medical plan out-of-pocket costs, based on participation in a wellness assessment/HRA and enrollment in an action plan determined by their health risks. Co-payments, coinsurance and annual deductibles vary, depending on program participation categories of Bronze, Silver and Gold. For example, those who complete the wellness assessment/HRA and enroll in an individual, risk-based action plan are in the Gold category. The Gold category has the lowest out-of-pocket costs: \$100 annual deductible for an individual and \$300 for a family. The Silver category, for those who complete the HRA but choose not to enroll in an individual action plan, has annual deductibles of \$300 for an individual and \$900 for a family. The Bronze category consists of employees who decide not to complete the wellness assessment/HRA and therefore do not receive an individual action plan. Bronze annual deductibles are \$900 for an individual and \$1500 for a family.

❖ Health Plan Linked:

- Examples:
  - ▶ Premium rebate or reduction in medical insurance premium, co-pay or deductible
  - ▶ Require HRA to begin or continue employees’ health plan coverage
  - ▶ Access to special health risk management programs

Step 6 - Select your HRA tool

HRA tools are not “one size fits all”. While recommendations from other employers are useful in terms of product and service quality, the HRA tool used by another employer may or may not be the best choice



for your needs and employee population. In addition, pricing models differ by desired tool features, HRA-related services and vendor.

The HRA Features Prioritization Checklist will help you determine your objectives for doing HRA and identify key features that you need and/or want in an HRA tool. Guidance from the Society for Prospective Medicine, WELCOA and the American College of Sports Medicine (ACSM) was used to develop the features checklist.<sup>5</sup>

### Step 7 - Promote

General marketing and communication principles apply to HRA promotion, such as defining the target population(s) and creating messages appropriate for them. Also, consider these tips:

- ❖ Recruit a “champion”, a person with leadership qualities who is respected by the target audience, to help promote the HRA.
- ❖ Include assurance of confidentiality in the message.
- ❖ Use the communication method shown to be the most effective in your setting, but also use multiple communication modalities, e.g. mail, phone, internet, posters, events, announcements at routine meetings.

### Step 8 - Implement

Carry out participant completion of the HRA tool in whatever format(s) your team selected, e.g. paper & pencil, on-line/internet, desk-top/intranet, phone, personal interview. Assure participant privacy during the completion process and provide accommodations for people with disabilities as needed.

### Step 9 - Provide HRA Participant Results and Follow-up

- ❖ Formats for Providing HRA Results - Early in the HRA tool selection process, consider how employees should receive their HRA results. Some HRAs provide immediate on-line, printable results. Others provide reports in envelopes designed to protect confidentiality, which can be sent to employees at home, work, or handed out in group or individual

sessions. Sometimes there is an option to send a copy of the report to the employee’s primary health care provider.

- ❖ Opportunities should be provided to help employees interpret their HRA results, identify steps they can take to reduce health risk factors, explain relevant incentive programs, and identify how to access services to help them address their particular health risks. HRA interpretation options include group sessions or one-on-one meetings (in person or by phone) with a health professional or wellness coach, or a self-guided Web-based educational process.
- ❖ Follow-up - Educational materials and service referrals ancillary to the HRA should be customized to the employee’s identified risks. Some HRAs can stratify employees into risk categories that qualify them for different types of intervention programs that are targeted to individual needs. Follow-up approaches might include comprehensive services that involve a scope of team members. HRA risk stratification also makes it feasible to use a health coaching approach, in which the employee establishes a relationship and agreement with a personal health coach to guide them in identification and achievement of specific health goals.

### Step 10 - Evaluate the HRA Process

From the beginning, the planning team should determine what information to track to evaluate accomplishment of their objectives and efficacy of the overall HRA process. Data collected can serve as benchmarks and be used to make improvements for future HRA offerings. The planning team might also consider doing an employee satisfaction survey to learn why employees did or did not complete the HRA and what participants liked or disliked about the process.

### Who Might Sponsor HRA besides Employers?

This guide focuses on use of HRA at the worksite, but it is interesting to note that HRA tools called “health hazard appraisals” were first developed for physicians to educate their patients about the impact of health risks on premature death.<sup>2</sup> NBCH hopes to develop additional guides for use of HRA in populations other than workers, sponsored by groups such as:

- ❖ Health Plans/Managed Care Organizations
- ❖ Primary Care Providers/Clinics
- ❖ Health Coalitions
- ❖ Schools and Universities
- ❖ Hospitals
- ❖ Communities
- ❖ Faith-based organizations
- ❖ Civic organizations

## SECTIONS 2 and 3:

### Checklists to Assist your HRA Planning Team

The following checklists, based on guidance from the Society for Prospective Medicine and WELCOA, are designed to save time when selecting an HRA tool. Three simple steps walk your team through:

- 1) defining objectives for implementing an HRA at your worksite
- 2) deciding which HRA features and services are most important to meet those objectives
- 3) and finally, comparing the HRA tools under consideration to help identify which one best meets your needs.

The St. Louis Area Business Health Coalition has offered to share their Request for Proposal (RFP) for an HRA tool and services. Once your planning team has completed steps 1-3 above, you may find this RFP example to be helpful in taking the HRA selection process to the next step. The RFP includes goals and scope-of-work, forms for collecting information about vendors' products and services, and multiple pricing tables. Contact information to request a copy of the RFP is listed in this guide under Resources.

## SECTION 2: Features Prioritization Checklist

---

### Step A: State HRA Objectives

Select or add objectives to define what your planning team wants to accomplish by implementing an HRA.

*Our organization would like the HRA process to (check those that apply):*

- ☐ Educate employees about personal health risks and lifestyle factors, including: \_\_\_\_\_ .
- ☐ Offer employees the following biometric screenings: \_\_\_\_\_ .
- ☐ Inform employees about services available to help reduce health risks/treat disease.
- ☐ Be appropriate for all employees in our diverse population.
- ☐ Determine readiness of employees to participate in risk reduction programs.
- ☐ Include measures for ongoing evaluation, such as productivity.
- ☐ Provide aggregate data to guide wellness/health management program design.
- ☐ Establish benchmarks for long-term evaluation.
- ☐ Provide data that can be integrated with other types of employee health data.
- ☐ Demonstrate a return on investment.
- ☐ Other: \_\_\_\_\_ .
- ☐ Other: \_\_\_\_\_ .

### Step B: Prioritize Desired HRA Features 5, 33, 34, 35

Select and rank the HRA features that are required to meet your above objectives.

Examples specific to the above sample objectives: 1) Provide aggregate reports without identifiers in a format useful for program planning. 2) Available in Spanish. 3) Include individual and/or group feedback sessions conducted by a health promotion professional. 4) Measure “stages-of-change”, i.e. a continuum of 5 theoretical stages an individual might be in related to adopting/maintaining healthy behaviors. Identifying employees’ stages-of-change may help to design more effective education and intervention programs, because each stage implies different informational and intervention needs.<sup>25</sup>

HRA Tool/Services Feature	What We Want (specific to the feature)	Rank
<i>Delivery Mode:</i>		
HRA administration methods: paper & pencil, computer (home, office, kiosk), in-person interview, phone (interviewer, automated)		
<i>Content/Topics Covered:</i>		
Physical diseases		
Mental/emotional health		
Health behaviors: health screening practices, nutrition, physical activity, tobacco, alcohol, etc.		
Safety: home, occupational		
Health status perception		
Stages of Change measures		
Productivity measures		
Lifestyle goal setting		
Social support		
Health literacy, self-care		
Medical/family history		
Employee's physician		
Employee can request health info via HRA		
Can add customized questions		
Other:		
<i>Biometric Screening:</i>		
Self-report		
Professional measurement (By whom? Where?)		
<i>Questionnaire Format</i>		
Language		
Cultural sensitivity		
Personalized		
Reading level		
Time takes to complete HRA		
Easy to complete		
How to complete instructions		
Other:		
<i>Science Base</i>		
Last database, protocol update		
Documented evidence-base for protocols, screening norms		
Appropriate database for our employee population		
Other:		

HRA Tool/Services Feature	What We Want (specific to the feature)	Rank
<i>Technical Specifications</i>		
Customize logo, report format/content, etc.		
IT systems requirements		
Data entry, backup, storage, ownership		
Protection of confidentiality		
Data security		
Data Integration		
Connect processing to compare previous, future HRAs		
Medical home linkage		
Number of at-risk category interventions		
Other:		
<i>Individual Reports</i>		
Personalized, engaging		
Appropriate language, reading level		
Results distribution methods		
Version for employee's physician		
Other:		
<i>Aggregate Reports</i>		
Segment by location, division, employee characteristics		
Health and productivity program strategy recommendations		
Other:		
<i>Vendor Services: Type/Scope</i>		
Staff requirements		
Toll-free participant assistance		
Personalized follow-up educational materials sent to employees		
Provide health education programs		
Provide data processing		
Provide employee orientation, counseling and/or feedback sessions		
Provide scientific or business assistance		
Cost per component/service		
Other:		

# SECTION 3: HRA Comparison Checklist

## Step C: Compare Vendor HRA Products

Insert your desired features (from Step B) below, from most to least important. Use the resulting checklist to compare the HRA tools/services that you are considering and determine which best meets your needs.

*Note: Consider asking vendors to provide contact information for their current HRA clients, so you can determine their satisfaction with the tool/services you are considering, and confirm information on vendor Web sites and promotional materials.*

Desired Feature		Product 1 (name): Cost:			Product 2 (name): Cost:			Product 3 (name): Cost:		
		Yes	No	Notes	Yes	No	Notes	Yes	No	Notes
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
16										
17										
18										
19										
20										



# RESOURCES, REFERENCES & ACKNOWLEDGEMENTS

---

## Resources

Centers for Disease Control and Prevention:  
[www.cdc.gov/hwi](http://www.cdc.gov/hwi)

Employee Benefit Research Institute:  
[www.ebri.org](http://www.ebri.org)

Guide to Clinical Preventive Services:  
[www.ahrq.gov/clinic/cps3dix.htm](http://www.ahrq.gov/clinic/cps3dix.htm)

Guide to Community Preventive Services:  
[www.thecommunityguide.org](http://www.thecommunityguide.org)

National Business Group on Health:  
[www.businessgrouphealth.org](http://www.businessgrouphealth.org)

Partnership for Prevention:  
[www.prevent.org](http://www.prevent.org)

St. Louis Area Business Health Coalition (to request  
RFP documents for pricing models and evaluating HRA  
and biometric screening services):  
[www.stlbhc.org](http://www.stlbhc.org) or 314-721-7800.

U.S. Department of Health & Human Services  
(re HIPAA and ADA)  
[aspe.hhs.gov/health/blueprint/appendixf.shtml](http://aspe.hhs.gov/health/blueprint/appendixf.shtml)

Wellness Councils of America:  
[www.welcoa.org](http://www.welcoa.org)

## References

- <sup>1</sup> Anderson, D and Stauffer, M. The impact of worksite-based health risk appraisal on health related outcomes: a review of the literature. *Am J Health Promot* 1996; 10(6), 499-508.
- <sup>2</sup> Health Risk Appraisals: Report of an Expert Panel. National Business Coalition on Health (2006). [www.nbch.org](http://www.nbch.org)
- <sup>3</sup> Fundamentals of employee benefit programs part three: health benefits. Employee Benefits Research Institute, 2005. [www.ebri.org](http://www.ebri.org)
- <sup>4</sup> Gordis L. *Epidemiology*. 2nd Ed. Philadelphia, PA: WB Saunders Company; 2000.
- <sup>5</sup> Hyner GC, Peterson KW, Travis JW, Dewey JE, Foerster JJ, Framer EM, Eds. *SPM Handbook of Health Assessment Tools*. Pittsburgh, PA: The Society of Prospective Medicine and The Institute for Health and Productivity Management. 1999 (out of print).
- <sup>6</sup> Linnan L, Bowling M, Childress J, Lindsay G, Blakey C, Pronk S, Wicker S, Royall P. Results of the 2004 National Worksite Health Promotion Survey. *AJPH*. In Press.
- <sup>7</sup> Hunnicutt, D. Implications and discussions from WELCOA's membership survey. *WELCOA's Absolute Advantage Magazine* 2006. 5(9), 20-23.
- <sup>8</sup> SHPS health practices study: what every self-insured employer should know. 2007, 1-25. [www.shps.com](http://www.shps.com)
- <sup>9</sup> Brownson, R, et. al., Eds. *Evidence-based public health*. New York: Oxford University Press, 2003.
- <sup>10</sup> Soler RE, Hopkins D, Razi S, Leeks K, Griffith M. The assessment of health risks with feedback (AHRF) in combination with other interventions. Presented to the Task Force on Community Preventive Services, Atlanta, GA. February 14, 2007.
- <sup>11</sup> Yen, L., et. al. Association between wellness score from a health risk appraisal and prospective medical claims costs. *J Occup Environ Med* 2003; 45 (10), 1049-1057.
- <sup>12</sup> Edington, DW, et. al. The financial impact of changes in personal health practices. *J Occup Environ Med* 1997; 39(11), 1037-1046.
- <sup>13</sup> Goetzel, R. et. al.. The relationship between behavioral health risks and health care expenditures: an analysis of the multi-employer HERO health risk and cost database. *J Occup Environ Med* 1998; 40 (10), 843-857.
- <sup>14</sup> Ozminkowski, RJ, et.al. A return on investment evaluation of the Citibank N.A. Health Management Program. *AJPH* 2000; 44(1), 31-43.

- <sup>15</sup> Goetzel, RZ, et. al. Health care costs of worksite health promotion participants and non-participants. *Journal of Occupational and Environmental Medicine* 1998; 40(4), 341-346.
- <sup>16</sup> Ozminkowski, R, et. al. Long-term impact of Johnson & Johnson's health & wellness program on health care utilization and expenditures. *J Occup Environ Med* 2002; 44(1), 21-29
- <sup>17</sup> Goetzel, R, et. al. Development and reliability analysis of the work productivity shore inventory (WPSI) instrument measuring employee health and productivity. *J Occup Environ Med* 2003; 45(7), 743-762.
- <sup>18</sup> W. Lynch, J. Riedel eds. *Measuring employee productivity: a guide to self-assessment tools* 2001. Institute for Health and Productivity Management, 1-92.
- <sup>19</sup> Koopman, C, et. al. Stanford Presenteeism Scale: Health Status and Employee Productivity. *J Occup Environ Med* 2002; 44, 14-20.
- <sup>20</sup> Greenbaum, E. Ten recommendations for promoting prevention. Washington, D.C.: National Business Group on Health; March 2006. [www.businessgrouphealth.org/prevention/index.cfm](http://www.businessgrouphealth.org/prevention/index.cfm)
- <sup>21</sup> Greenbaum E. Center for Prevention and Health Services. Steps to integrating employee health services. Washington, DC: National Business Group on Health; May 2007. [www.businessgrouphealth.org/prevention/index.cfm](http://www.businessgrouphealth.org/prevention/index.cfm)
- <sup>22</sup> Chapman, L. Planning wellness: getting off to a good start - part I. WELCOA's Absolute Advantage Magazine 2006; 5(4), 1- 88.
- <sup>23</sup> IOM Committee to Assess Worksite Preventive Health Needs for NASA Employees. *Integrating Employee Health: a Model Program for NASA* 2005. ©National Academy of Sciences. <http://www.nap.edu/catalog/11290.html>
- <sup>24</sup> WELCOA Case Study: Monongalia Health System. Wellness Councils of America 2004, 1-6. [www.welcoa.org](http://www.welcoa.org)
- <sup>25</sup> U.S. Department of Health and Human Services/National Institutes of Health. *Theory at a glance: a guide for health promotion practice*. Second Edition 2005, NIH Publication No. 05-3896, 1-52.
- <sup>26</sup> Earles, A. HIPAA's impact on employer-sponsored wellness programs: privacy rules. NBGH Issue Brief 2003, 1-15.
- <sup>27</sup> Earles, A. Financial incentives for healthy lifestyles: impact of HIPAA nondiscrimination rules. NBGH Issue Brief 2004; 2 (1), 1-11.
- <sup>28</sup> Wang, P, et. al. Effects of efforts to increase response rates on a workplace chronic condition screening survey. *Medical Care* 2002; 40(9), 752-760.
- <sup>29</sup> Chapman, L. Designing wellness incentives (part 2). WELCOA's Absolute Advantage Magazine 2005; 4 (8), 1-62.
- <sup>30</sup> NGA Center for Best Practices. Issue brief: state employee wellness initiatives. May 18, 2005, 1-12.
- <sup>31</sup> American Public Health Association. U.S. workplaces playing greater role in employee health. *The Nation's Health* September 2007.
- <sup>32</sup> Focus on employees. <http://www.metrokc.gov/employees/HealthyIncentives/default.aspx>
- <sup>33</sup> Chapman, L. Planning wellness: getting off to a good start – part II. WELCOA's Absolute Advantage Magazine 2006; 5(6), 1-84.
- <sup>34</sup> Cox, C ed. ACSM's worksite health promotion manual: a guide to building and sustaining healthy worksites. Human Kinetics 2003, 1-250.
- <sup>35</sup> Chapman, L. Choosing the right HRA. WELCOA's Absolute Advantage Magazine 2005; 4(6).
- <sup>36</sup> Chapman L. Lesch N. Pappas Baun M. The art of health promotion: the role of health and wellness coaching in worksite health promotion. *Am Journ Health Promot* 2007; 21(6), 1-10.

### Acknowledgements

Development of this publication was funded in part through a Cooperative Agreement with the Centers for Disease Control and Prevention. The National Business Coalition on Health would like to thank the following individuals for their contributions to this publication:

- ❖ Suzanne Mercure, Executive Director, National Business Coalition on Health
- ❖ Robin Soler, Behavioral Scientist, Centers for Disease Control and Prevention
- ❖ Andrew Lanza, Senior Consultant, McKing Consulting/Centers for Disease Control and Prevention
- ❖ Deborah R. Bauer, Community Guide Partnerships and Dissemination Coordinator, McKing Consulting/Centers for Disease Control and Prevention
- ❖ Eric S. Armbrrecht, Director of Health Improvement, St. Louis Area Business Health Coalition
- ❖ Nico P. Pronk, Vice President, Health & Disease Management; Executive Director, Health Behavior Group; Senior Research Investigator, HealthPartners Research Foundation