

Industrial Hygiene Performance Metrics

2nd edition

*Clear and concise measures for tracking operations
and organizational performance.*

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Written by the AIHA® Leadership & Management Committee



HEALTHIER WORKPLACES | A HEALTHIER WORLD

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Chapter 16

Total Worker Health[®] Metrics

Note: The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC).

Introduction

The value assessment of Total Worker Health (TWH) programs and practices is an emerging body of knowledge. Therefore, specific, discrete performance measures like the ones presented for other topics in previous chapters have not yet been developed, tested, and field-calibrated. However, there are several novel tools and approaches currently available to occupational and environmental health and safety (OEHS) professionals. These tool and approaches will allow practitioners to begin to assess the quality of TWH programs, practices, and impact.

The survey metrics described in this chapter are varied—some are qualitative, some are semi-quantitative, and others are quantitative. However, each metric focuses on a broad array of features, including structural, process, and outcome-based areas (further subdivided into organizational and worker well-being areas). Using one aggregated set of metrics to gauge all these features is not the norm at this time.

TWH is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with the promotion of injury- and illness-prevention efforts to advance worker well-being.¹ Furthermore, TWH approaches focus on systemic, organizational-level interventions that are integrated and comprehensive in that they include health protection and disease prevention for work and nonwork issues.²

TWH approaches typically address changes to improve the organizational context for work, the physical environment, and psychosocial factors that impact workers. Worker behavior modifications often supplement efforts to address priority focal areas (organization, physical environment, and psychosocial factors).^{3,4}

The approach for assessing TWH programs follows the traditional hierarchy of controls concept, as applied to TWH programs specifically, which first seeks to eliminate working conditions that threaten worker safety, health, and well-being. If elimination is not possible, the secondary approach is to substitute or replace unsafe, unhealthy working conditions with safer, health-enhancing policies, programs, and practices that improve workplace safety and health culture. Another organizational-level control is redesign of the workplace for worker safety, health, and well-being. If the upstream approaches fall short of accomplishing the goal, implement behavior modifications such as education and encouragement of personal lifestyle changes.⁵

Many of the currently available metrics in this field, which are often formatted as tools or surveys, vary in terms of objectives, target audience, level of detail, and general focus. A total of 10 tools are included in the current metrics assessment of this chapter for reader consideration:

1. Workplace Integrated Safety and Health (WISH) Assessment⁶
2. Healthy Work Participatory Program (HWPP)⁷
3. CDC National Healthy Worksite Program (NHWP) Health and Safety (H&S) Climate Survey⁸
4. NIOSH Worker Well-Being Questionnaire (WellBQ)⁹
5. NIOSH Quality of Worklife (QWL) Survey¹⁰
6. Healthy Work Survey (HWS)¹¹
7. Dimensions of Corporate Integration¹²
8. CDC Worksite Health Scorecard¹³
9. HealthLinks[™] ¹⁴
10. HERO Health and Well-being Best Practices Scorecard in Collaboration with Mercer[®] (HERO Scorecard[®])¹⁵

Types of Metrics and Elements of Emphasis

The tools or survey metrics evaluated include qualitative, semi-quantitative, and quantitative metrics. Both leading/process and lagging/outcome metrics are included. For example, some tools gauge organization of work (a leading metric) and others focus on employee outcomes (a lagging metric).

Description

The types of survey metrics included in this chapter vary, including those which gauge the following:

- How workers are faring.
- Perception of the organization's health and safety program by workers and/or organizational representatives.
- Worker attitudes.
- An organization's strengths, challenges, and suboptimized TWH opportunities, which can be calibrated by an individual with TWH expertise. This individual does not need to be a consultant; organizations can grow their own experts with proper training.
- Relationship between work organizational variables and health and safety impact.
- Identification of work stressors that make workers ill or less productive or cause deficits to the organizational bottom line.
- Relative impact of proven health program strategies.
- Comprehensive approach to assessing, documenting, and discussing worksite health assets.
- Actions to drive change and benchmark TWH processes across company sectors.

Metric Objectives

These tools are generally designed to promote better understanding of worker safety, health, and well-being, target interventions for improvement, and assess impact. For example, the HWS specifically looks at sources of stress at work (work stressors) and health and productivity outcomes.⁷ The CDC NHWP H&S Climate Survey focuses on health-related information and programs to ensure that they address employees' health concerns.⁸ The CDC Worksite Health Scorecard can help assess whether these strategies have been implemented and are effective.¹³

Metrics and Their Specific Target Audiences (Users)

- NIOSH WellBQ: Researchers, employers, workers, practitioners, and policymakers; understand the well-being of workers and target interventions to improve worker well-being, among other applications.⁹
- WISH: Employers (e.g., health and safety representatives, either in human resources or in safety, at the middle management level), researchers.⁶
- HWPP: Employers (e.g., program facilitators, team members).⁷
- HealthLinks™: Employers (e.g., OEHS professionals) in small- to medium-sized private and public organizations, including government agencies.¹⁴
- NIOSH QWL Survey: Employers, practitioners, policymakers, researchers.¹⁰
- HWS: Individuals, employers, unions and worker advocates.¹¹
- CDC NHWP H&S Climate Survey: Employers.⁸
- HERO Health and Well-Being Best Practices Scorecard®: Employers in companies of all sizes and industries.¹⁵
- Dimensions of Corporate Integration: Employers, employee-employer partnerships.¹²
- CDC Worksite Health Scorecard: Employers, human resource managers, health benefit managers, health education staff, occupational nurses, medical directors and wellness directors.¹³

Benefits/Value of Specific Tools

- The WISH, NIOSH WellBQ, QWL Survey, HWS, CDC Worksite Health Scorecard, and HealthLinks™ tools all capture important metrics outside of workplace policies and safety culture, including metrics of individual health and quality of life outside of work.^{6,9–11,13,14}
- The HealthLinks™, HWS, and HERO Scorecard® tools allow for a follow-up consultation with experienced TWH professionals after completion.^{11,14,15}
- The WISH and CDC NHWP H&S Climate Survey tools provide a relatively short survey approach that can be completed quickly,^{6,8} whereas the HWS, QWL Survey, CDC Worksite Health Scorecard, NIOSH WellBQ, Dimensions of Corporate Integration, and HERO Scorecard®^{9–13,15} tools provide a very detailed, lengthy approach to the assessment process.
- The WISH, HWPP, NIOSH WellBQ, QWL Survey, Dimensions of Corporate Integration, and HERO Scorecard® tools provide a broader, more integrated approach to TWH assessments.^{6,7,9,10,12,15}
- Some tools, including the WISH, HWPP, HealthLinks™, QWL Survey, Dimensions of Corporate Integration, and CDC Worksite Health Scorecard, have a more specific focus on health and safety processes and related metrics in the workplace.^{6,7,10,12–14}
- The NIOSH QWL Survey provides a holistic array of work organization variables as well as a broad range of health, safety, and performance outcomes.¹⁰
- The HWPP provides significant detail with substantial underlying support and documentation. These include training videos of intervention sessions to help train facilitators and guidance documents on topics such as gauging organizational readiness, fostering management support, and identifying safety and health priorities.⁷
- The Dimensions of Corporate Integration tool helps users to identify organizational priority areas of interest and potential effectiveness.¹²
- The NIOSH WellBQ provides an assessment of overall worker well-being, covering five domains.⁹

Weaknesses/Limitations

- A number of the tools lack differentiation in the scoring system or use a highly qualitative scoring system (including WISH, CDC NHWP H&S Climate Survey, HERO Scorecard®, and NIOSH WellBQ).^{6,8,9,15} The initial use of the NIOSH WellBQ provides a baseline for comparison with future uses of this tool.⁹
- Some tools have a specific or narrow focus and may not be sufficiently broad to assess overall program performance, including WISH, Dimensions of Corporate Integration, and the CDC Worksite Health Scorecard.^{6,12,13}
- The programs in the HWPP, Dimensions of Corporate Integration, and HealthLinks™ tools are very involved and will require a substantial time commitment for practitioners to learn and be able to implement them fully.⁷
- Some of the tools lack organization and structure with respect to TWH program implementation (e.g., the CDC NHWP H&S Climate Survey and HERO Scorecard®) but do address other areas of TWH interest.^{8,15}

Data Sources (Respondents)

Some tools rely on workers or employees to assess their own health, safety, and well-being. These tools include:

- The NIOSH WellBQ: Worker self-assessment.⁹
- The NIOSH QWL: Worker self-assessment.¹⁰
- The HWS: Worker self-assessment.¹¹

Others use information provided by employers, including OEHS professionals. These tools include:

- WISH: Validated survey tool.⁶
- HealthLinks™: Assessment of organizational support, including leadership, organizational champions, dedicated resources, benefits; health and safety team, etc.¹⁴

- CDC Worksite Health Scorecard: Assessment of evidence-based health promotion strategies implemented at a worksite.¹³
- HERO Scorecard®: Online assessment (recommended annually).¹⁵
- Dimensions of Corporate Integration: Scorecard to assess corporate safety, corporate well-being, and integration.¹²
- CDC NHWP H&S Climate Survey (employees and supervisors): Employee survey.⁸

There is also a tool that uses information and assessments from both employers and employees:

- HWPP (Team approach): Significant data are required to use this tool-based approach that relies on an organizational readiness assessment and an all-employee survey, along with an Intervention Design and Analysis Scorecard (IDEAS) tool to identify and implement TWH interventions.⁷

Interpreting Data

Unique Qualities of Each Tool

- NIOSH WellBQ includes nonwork circumstances, as well as quality of working life and physical and mental health, in its assessment of worker well-being.⁹
- HWPP assists a team of employees in uncovering root causes of poor health and injuries.¹⁶
- HealthLinks™ offers evidence-based Healthy Workplace Certification™ and advice to help organizations and their team members achieve TWH outcomes.¹⁴
- The NIOSH QWL questionnaire has been included as a module in a periodic U.S. national survey that measures a very broad, holistic array of work organization variables as well as a range of health, safety, and performance outcomes.¹⁷ The goals of the NIOSH QWL questionnaire are to measure changes in work life and work experience, to set benchmarks for future research, to evaluate job and organizational characteristics and worker health and safety, and to guide preventive efforts.¹⁰
- HWS, from the nonprofit Center for Social Epidemiology, is based on the NIOSH Quality of Worklife questionnaire. It helps organizations take action to assess work stressors that could make workers ill or less productive or undercut an organization's bottom line. Each respondent can receive an individual report, and organizations can receive an aggregate report.¹¹
- The CDC NHWP H&S Climate Survey is an employee-level assessment developed by the CDC as part of its National Healthy Worksite Program. This survey is designed to help organizations gauge employee satisfaction and evaluate the influence of home stressors on work, work stressors on home, and extent of coworker community and support.^{8,18}
- The CDC Worksite Health Scorecard, which is supported with a guide, glossary, etc., is another tool used in the CDC Worksite Health Promotion program.¹³
- The goal of the HERO Scorecard®, which was developed in collaboration with Mercer, is to assist organizations in improving workplace health and well-being. Additional performance measures, including workforce productivity and financial impacts, are also linked to higher numbers on the HERO Scorecard®. An organization's results can be compared to national and international best practices. The HERO Scorecard® Preferred Provider Program allows licensed organizations to provide services to their clients.¹⁵

Conclusions

Some of the assessment tools cover similar topics, although they may use different terminology. This reflects the evidence base for the relevance and importance of each topic's relationship to worker well-being. Topics frequently assessed are organizational leadership (at all levels); worker participation; health and safety programming, processes, and practices; and program impact on health and well-being.

- Organizational leadership (at all levels of the organization, from the CEO to the shop superintendent to each employee) is measured in all of the tools.⁶⁻¹⁵ These elements could include the worker safety and health

being provided in written organizational plans and objectives,^{6,12-15} role model behaviors by senior leaders to reaffirm the organization's commitment to worker well-being,^{14,15} accountability for worker safety and health,^{6,12,14,15} and the availability of adequate resources.^{6,9-15}

- Worker participation in decision-making or well-being policies was addressed in all of the tools.⁶⁻¹⁵ The WISH defines worker participation as a program in which “stakeholders at every level of an organization, including organized labor or other worker organizations if present, help plan and carry out efforts to protect and promote worker safety and health.”¹⁹ There is variance in how the questions were asked and what type of participation was measured. This is a key topic to ensuring the success of worker safety, health, and well-being policies and programs and is one of the essential elements of TWH approaches.²⁰
- Safety and health programming and practices are addressed through the assessment of issues such as commitment from leadership and management,^{6-12,14} provision of safety training,^{6,9,11-14} and procedures for reporting concerns about safety and unsafe working conditions.^{6,9,12,13,15} All of the worker survey tools asked about workers' perception of overall safety in the workplace.⁷⁻¹¹ Many tools also explore safety committees and worker participation in safety and health.^{6,8-10,12-15}
- Questions about health status and well-being (and opportunities to address risk factors) are included in many of the tools.⁶⁻¹² The questions range from inquiring about health behaviors and health risks such as tobacco use^{7-9,13-15} and sleep^{7,9-11,13} to asking about stress and mental health.⁷⁻¹⁵ The assessment tools also explore wellness programs offered at workplaces. This may include employee assistance programs,^{7,14,15} financial well-being education,^{14,15} or physical activity options.^{7,8,13-15} The HWPP noted the importance of a participatory approach to identifying health concerns and workplace health factors.⁷

In addition to these important themes, there is variability in the other types of topics that are measured.

Organization of work is an important leading metric and can include organizational issues, such as flexibility in work schedules and locations, or opportunities to provide input into the job design and protocols.²¹ These are covered in more depth by the QWL Survey, HWS, NIOSH WellBQ, NHWP H&S, and HWPP.^{7,9-11} Other job-related topics, such as pay and benefits,⁶⁻¹⁵ job satisfaction and engagement,^{6-10,12,14,15} and perceptions of fairness in promotions and career development,^{9-11,15} were addressed in a few of the tools. Issues such as commute length⁸ and provision of childcare¹⁵ were also considered.

Summary

Although there is some consistency in the types of metrics applied by the tools evaluated in this chapter, it is important for involved parties to identify the organizational components they want to measure. This includes organizational leadership, worker participation, health and safety programming and practices, health impact, psychosocial risk factors, or all of these metrics collectively. OEHS professionals, along with operations personnel, should jointly evaluate the organization's priorities to determine the tool or tools that will best capture the issues of interest, importance, and possible interventions needed.²²

Given the complexity of the workplace and work issues impacting the workforce, multilayered and multidimensional approaches to identifying leading health metrics will be more informative than single topic measures. It appears that no singular survey measure or outcome is currently recommended to assess all TWH policies, programs, and practices within an organization. A combination of surveys can serve to address the TWH structure, process, and outcome-based features, informing the organization's intervention approaches. Finally, a combination of predictive leading and lagging indicators (which these tools represent) will often profile an organization transparently enough that its workings provide opportunities for identifying strengths, challenges, and opportunities to optimize the organization, its people, and business success.

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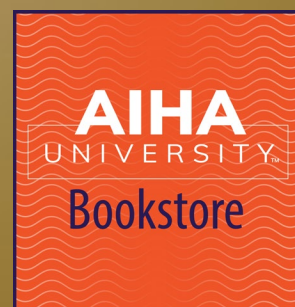
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