

Total Worker Health® Protection and Promotion Programs

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ABSTRACT

Total Worker Health is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness-prevention efforts to advance worker well-being. Thus, its application supports a more holistic, worker-centered approach to the health and safety of workers. The aim of this monograph is to provide occupational health therapists and other professionals with an understanding of *Total Worker Health* concepts and implications on therapy services to bridge the gap between clinical practice and workplace health protection and promotion programs. A variety of movement-based service components are presented within a new paradigm for direct contracting with employers in areas of injury prevention, wellness, and transitional work program consultation to promote staying healthier at work and home. This new paradigm also aims to generate healthcare and productivity cost savings for work-related and non-occupational injury and illness claims. The following document includes a review of legal and regulatory considerations, and 3 case applications that illustrate the integration of *Total Worker Health* concepts when: (1) implementing a movement-based screening and intervention program to reduce injury claims,

(2) establishing a transitional work program to prevent needless work disability, and (3) providing health coaching services to improve the musculoskeletal health of the workforce from hire to retire.

Key Words: injury prevention, injury reduction, population health, *Total Worker Health*

LEARNING OBJECTIVES

Upon completion of this monograph, course participant will be able to:

1. Define *Total Worker Health*® and Employee Population Health Management as they relate to problems facing employers in combating musculoskeletal injuries in the workplace.
2. Describe and appreciate the costs associated with employer-sponsored medical plans and how the occupational health therapist can play a role in reducing costs and combating injuries.
3. Describe how the Occupational Health and Safety Administration plays a role in *Total Worker Health*® and the significance of preventing and managing musculoskeletal injuries for the employer.
4. Discuss the role worker’s compensation insurance plays in *Total Worker Health*® and how to help employers reduce costs through physical and occupational therapy services.
5. Compare workforce wellness and health promotion from the historical perspective, musculoskeletal perspective, and program goals for employers.
6. List at least 4 workplace therapy solutions that promote *Total Worker Health*® principles and minimize musculoskeletal risk.
7. Analyze the variables associated with return on investments when marketing services to a potential employer.
8. Perform a calculation of cost migration.
9. Explain the statistics that are pertinent to an employer for reducing costs through therapist interventions.

INTRODUCTION

National Institute for Occupational Safety and Health (NIOSH) *Total Worker Health*®

Total Worker Health® (TWH) is defined by the National Institute of Occupational Safety and Health (NIOSH) as the policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness-prevention efforts to advance worker well-being. Thus, its application supports a more holistic, worker-centered approach, to the health and safety of workers.¹ The TWH approach seeks to improve the well-being of the United States workforce not only by identifying and mitigating work conditions that can affect the health of workers, but also by expanding programs and policies to help workers stay healthy

and productive, while making positive changes in their lifestyle, all with necessary leadership support. Accordingly, this holistic approach views well-being as more than the absence of disease and injury, but rather it is characterized by happiness and the ability to live well.¹ Using TWH strategies benefits workers, employers, and the community at large. Interventions focus on both work-related safety and health risk prevention factors, as well as broader organizational policies and health promotion interventions. *Total Worker Health*[®] interventions that take an integrated approach to reduce both workplace and personal health risks for injuries and chronic disease can improve workforce health more rapidly and effectively than more narrowly focused programs on the worker or workplace that seek to change the same outcomes.¹

Total Worker Health[®] was originally introduced by NIOSH and trademarked in 2011. In 2013, NIOSH Director John Howard pointed out that the workplace has great potential for taking a broader approach to prevention.¹ Most of the United States population is employed, and inherently, there is high value in having a healthy workforce to lower healthcare costs and improve productivity. Comprehensive programs that integrate both organizational and individual processes to reduce injuries in the workplace have better outcomes. Specifically, Howard noted that the workplace depends upon comprehensive programs to reduce injuries and illnesses suffered on the job; in addition to reducing risk factors for developing chronic diseases. This combined approach will not only improve occupational health, but personal health and the well-being of the community at large.¹

A population is a group of people. The use of occupation to define a population may depend on industry, company, and location. Occupation, as method of defining a population, also may intersect with other worker characteristics in a meaningful way, such as education, wealth/income, gender, race, sexuality, and living conditions. These features, which may be considered as apart from the workplace, may serve as facilitators or barriers to a worker's health and job performance. Social determinants that affect health in a population may include work, and thus the focus of TWH interventions is to prevent ill-health conditions at work and beyond before they occur or address them early in the pathologic process. For workers, when employers focus on health protection and promotion, it helps build their trust, motivation, and commitment, and it is also an opportunity to stay productive and healthy at work and beyond. For employers, TWH interventions are good opportunities to avoid high Workers' Compensation insurance premiums and related expenses, high turnover rates, absenteeism and presenteeism related to disease and injury, and develop goodwill among employees.

The goal of this monograph is to give occupational health therapists several strategies to simultaneously make improvements to the safety, health, and well-being of the workers they serve by identifying and implementing best practices for

prevention and early intervention that follow a TWH model. We believe that occupational health therapists taking this course will gain competencies needed to champion the TWH model within the workforce. Information from this monograph is intended to supplement and strengthen pre-existing knowledge and skills. For further information and resources related to NIOSH TWH, visit: <https://www.cdc.gov/niosh/twh/>.

Relationship to Employee Population Health Management

Population health management is an approach through which employers can ensure the highest possible health for their employees, by using targeted interventions to meet defined health outcomes. According to the National Academies of Sciences, Engineering, and Medicine, population health provides "an opportunity for health care systems, agencies, and organizations to work together in order to improve the health outcomes of the communities they serve."² When we relate this to the workplace, employee health management refers to the employer working in partnership with the healthcare therapist or medical insurer to improve workers' health and health outcomes. Using aggregate reporting, we use this strategy to manage the health risks of the entire employed population. The goal of an effective *employee* population health management strategy therefore is to use employee health data to make informed decisions which will improve overall health and well-being for workers. In a population health management system, employees' health data are the foundation for the identification of efficacious and cost-effective prevention programs. Specifically, employers and healthcare organizations use employees' health data to identify risk factors, key determinants of health, and build prevention and treatment plans that focus on both lifestyle and disease management.¹ Using employee population health model metrics such as access to care, quality of care that is provided, and health outcomes, becomes equally important as is the cost of care.²

Work and health are inextricably linked for many people. According to a recent survey by Harvard University, the Robert Wood Johnson Foundation, and National Public Radio, 40% of working adults in the United States reported their job affects their overall health, stress levels, and family life.³ Workers in relatively low-paying jobs are more likely to report dangerous work conditions and increased occupational-related stress than workers in relatively higher-paying jobs. For many workers, the workplace is a source of support for healthful behaviors; three-quarters of workers reported that their workplaces provide healthy work environments and half of workers report their workplaces offer health improvement programs. The association between work and health may be positive or negative. Worker health may be influenced directly by exposures in the workplace and characteristics of the job, psychosocial supports or barriers of the workplace, and work-related resources and opportunities.⁴ Programs to ensure worker health and safety can serve as a

facilitator to worker health and safety in the form of providing resources and opportunities in the workplace.

Most people in the United States spend a substantial amount of time working or preparing for work. *Total Worker Health*⁴ approaches are expected to facilitate the adaptations to upcoming changes to current work processes and labor market trends such as the gig economy, emerging technology usage, and the increase in aging population demographics. In 2020, the average person spent 7.6 hours per day working and 47 minutes per day commuting on the days they worked. The coronavirus (COVID-19) pandemic also has changed the characteristics and locations of work. Workers in the financial activities, professional and business services, and education and health services sectors have increased the share of employed persons working from home, which is now between 23 and 40% of all workers. Overall, the number of employed persons working remotely for their organization nearly doubled during the COVID-19 pandemic.⁵ The dynamic nature of the characteristics, locations, and tasks of the 21st century workplace requires a flexible yet worker-centered approach. Thus, occupational health therapists and other professionals must have the knowledge and understanding of how to design

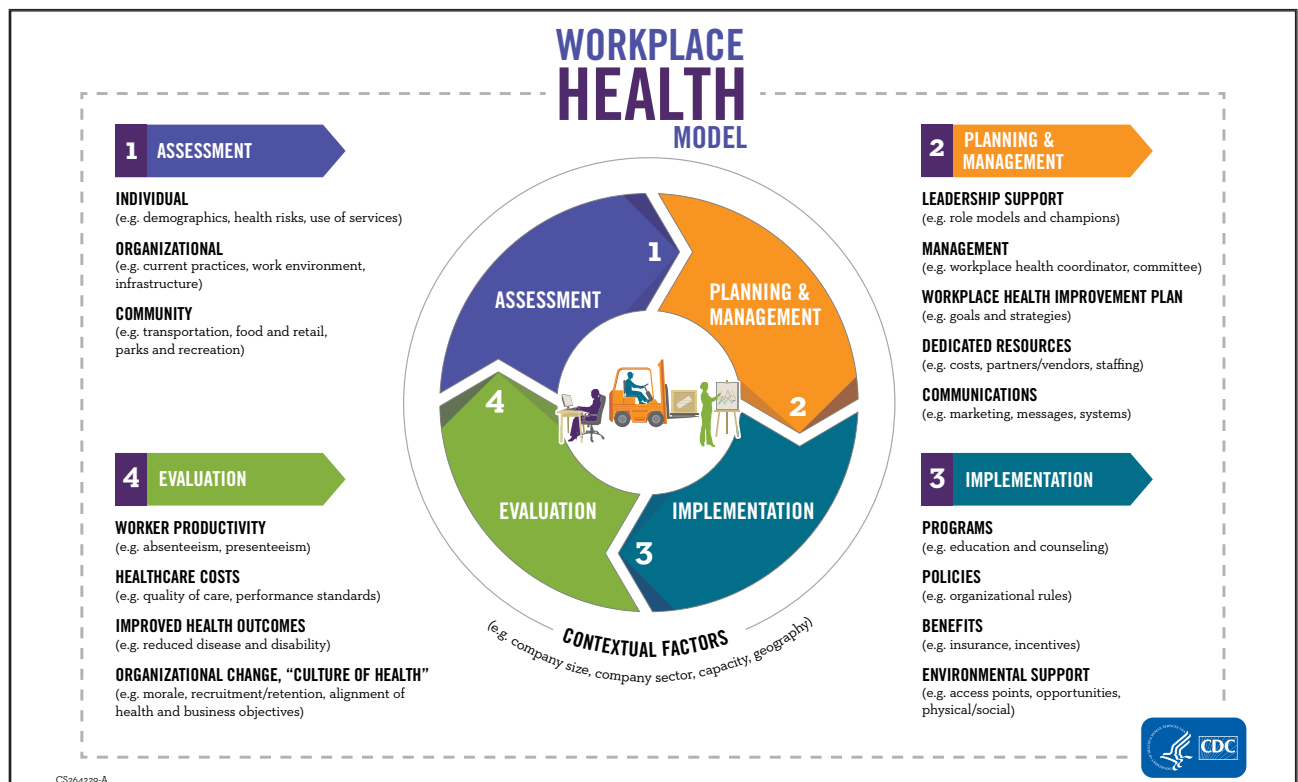
holistic programs that ensure health equity and advance occupational health and safety protection for the 21st century.

Steps to Design a Program for Worker Safety, Health, and Well-being

The United States Centers for Disease Control and Prevention created the Workplace Health Model that is depicted as an infographic in **Figure 1**. This model can be used to guide the development, implementation, and evaluation of workplace health promotion initiatives⁶⁻⁸:

- *Assessment* is used to identify individual, organizational, and community needs, and issues related to the health outcome of interest and the priority population. At the individual level, the characteristics of the priority population are identified, such as key demographic features, health risks, service utilization, absences, and medical expenditures. Assessment at the organizational level involves an administrative scan regarding current policies, procedures, practices, work environment, infrastructure and resources, and informal thoughts, attitudes, and beliefs consistent with the current culture of safety and health. Community-level resources

Figure 1. United States Centers for Disease Control and Prevention Workplace Health Model



also should be assessed because they involve health-related opportunities outside of the workplace that may affect worker performance. For example, access to local transportation, healthful food, and parks and recreation may be considered as social facilitators or risks to worker health.

- *Planning and Management* involves the identification and coalescence of stakeholder groups around the assessment findings, which indicate the strengths and opportunities surrounding the health outcome of interest or priority worker population. Goals and strategies should be developed to address the factors leading to the health outcome of interest. Dedicated resources should be identified to meet the stated goals and strategies of the program. Leaders for the initiative, both formal and informal, should be identified in the planning process to act as role models and champions for worker health and safety. Management resources must be mobilized to reinforce the importance of health and safety program in organizational operations, such as the appointment of a coordinator or committee for the program within the organization. Communications should be organized to advertise the benefits, processes, and services of the program, to promote transparency.
- *Implementation* involves the mobilization of health and safety program operations. These include specific program activities (eg, education, counseling, and exercise), changes to organizational policies, benefits, and incentives for participation (eg, insurance premium reductions, sponsored gym memberships, and protected time for exercise at work), and necessary environmental supports (eg, access during working hours and formalized social supports to allow workers to use the program). During the implementation step, information may be gathered about whether the program is meeting its intended outputs, such as number of workers served, number of staff working within the program, quantity of educational materials created and disseminated, and occurrence and attendance at program meetings. Process data collected during the implementation step ensures the program is being delivered how it was proposed, which assists with demonstrating and maintaining program fidelity.
- *Evaluation* is the process of determining the effectiveness of the health and safety program, using data collected from workers and the organization. In the context of worker safety and health programs, program developers often must integrate worker health and business objectives to demonstrate value. Program evaluation involves specific metrics that were pre-identified during the planning process to assess each goal and objective of the program. Metrics should be valid, reliable, and determined in collaboration with a broad representation of organizational stakeholders. Examples of evaluative data include worker productivity (eg, absenteeism and presenteeism), medical costs, health outcomes, worker satisfaction, and worker retention. Program evaluation should

aim to preserve worker privacy and confidentiality using secure data management collection, storage, and retrieval, analytic procedures based on de-identified data, secure disposal of personally identifiable worker data, and reporting practices that minimize the chance to identify individual workers. These steps will help protect organizations and employees from situations in which data from worker health and safety programs may be misused for retaliatory or discriminatory purposes.

Keeping to employee population health principles, addressing both work-related and non-occupational causes of injury and disability, is important in the overall workplace health model. Stratifying the data so work-related and non-occupational causes can be addressed independently can often demonstrate trends that can be addressed through programming. The 4-step process outlined for the Centers for Disease Control (CDC) [Workplace Health Model](#) is foundational for the health promotion component of *Total Worker Health*[®]. This includes a [Workplace Health Program Development Checklist](#) to review and monitor progress toward building a workplace health program. *Total Worker Health*[®] applies this program structure to integrate with interventions that address safety concerns. For example, identifying underlying ergonomic issues leading to repetitive motion injuries can be addressed with re-engineering work-related factors, while obesity as a contributing factor can be addressed through health promotion planning around nutrition. For the employer, programs that focus on reducing both work-related and personal health risks have greater potential for improving workforce health outcomes.

Defining Elements of *Total Worker Health*[®]

Total Worker Health[®] acknowledges the direct link between occupation and health. To optimize this relationship, NIOSH developed implementation strategies for TWH that are based on 5 defining elements, including:

1. Demonstrate **leadership commitment** to worker safety, health, and well-being at all organization levels.
2. Promote and support **worker engagement** throughout program design and implementation.
3. **Design work** to eliminate or reduce safety and health hazards and promote well-being.
4. Ensure **confidentiality and privacy** of workers.
5. **Integrate** relevant systems to advance worker well-being.²

The defining elements were not written as a sequential set of interventions to follow or a set of numbered steps to follow in establishing a program, but rather summative elements: ie, all TWH interventions should have all these characteristics to the extent possible. Together, the 5 defining elements of TWH help employers, workers, labor representatives, and occupational health therapists to implement health and safety programs that consider the whole worker. In this section, we will discuss each

defining element in detail and provide examples for occupational health therapists' services.

When working with employers, it is important to understand where they are in terms of their mindset towards worker health and population health. Both strategies have similar elements as seen below.

- Do worker safety and health goals align with business goals?
- How do you ensure that work is designed to eliminate safety and health hazards?
- How do you ensure that the work environment promotes worker well-being?
- What strategies do you employ to engage workers with your health care program design and implementation?
- What steps do you take to ensure confidentiality and privacy of personal health information?
- What systems have you integrated to advance worker well-being (ie, this workforce is better off working for this employer now than they were when they were first employed)?

Leadership commitment to safety and health at all levels of organization

No TWH-aligned program will be effective without active support from organizational leadership.⁹ Organizational leaders are charged with creating policies and procedures that guide the operations of the organization according to its mission. Policies and procedures that place value on the health and safety of workers is an important first step to incorporate these values into the organizational culture. Mid-level supervisors and managers must interpret, communicate, and reinforce organizational policies and procedures at the level of small working groups and each individual employee. Thus, middle managers are often a critical link between organizational leaders and employees and integral to the success of health and safety programs. Clear policies and procedures, as well as incentives to follow them, can assist middle managers with ensuring the success of worker safety and health programs. Although written policies, procedures, and performance evaluation can assist in the development of effective worker health and safety programs, unspoken aspects of organizational culture also must be assessed and addressed. The process of interrogating informal thoughts, attitudes, and beliefs about an organization's worker health and safety also may elucidate important barriers or facilitators to a TWH program.

After identifying a key issue or priority population within the organization, program development should involve an organizational scan to determine policy alignment. This organizational scan serves 2 purposes. First, it helps determine whether the program is relevant or necessary. Second, it identifies the relevant supports and barriers within an organization that must be considered during program development. Occupational health and safety program designers should identify all relevant organizational stakeholders in the program. This is key to

cultivate a broad base of information upon which to make decisions about: to whom the program will be targeted, how the program will run, goals and objectives of the program with timeframes, what support and outputs are necessary for the program to achieve its goals, and who will be accountable for program funding and implementation.

According to the NIOSH Fundamentals of Total Worker Health® Approaches: Essential Elements for Advancing Worker Safety, Health, and Well-Being, top leaders within an organization should be encouraged to¹⁰:

- establish and clearly communicate the principles of the proposed initiative to all levels of the organization; teach managers to value workers' input on safety and health issues;
- maintain the visibility of the initiative at the organization's highest levels by presenting data that are linked to the program's resource allocations;
- promote routine communications between leadership and employees on issues related to safety, health, and well-being;
- openly support and participate in workplace safety and health initiatives;
- facilitate participation across all levels of the workforce;
- add safety- and health-related standards into performance evaluations;
- build safety and health into the organization's mission and objectives;
- establish a mechanism and budget for acting on workforce recommendations;
- emphasize that shortcuts must not compromise worker safety and health;
- provide adequate resources, including appropriately trained and motivated staff or vendors, space, and time; and
- ensure dedicated funding over multiple years, as an investment in their workforce, if necessary.

In the development of TWH programs, organizational leaders should encourage mid-level managers to¹⁰:

- recognize and discuss the competitive advantage that considering worker safety and health brings to the long-term sustainability of the organization, such as employee recruitment, retention, satisfaction, as well as community engagement, reputation, and workforce sustainability;
- highlight examples of senior leadership's commitment to TWH aligned approaches; and
- provide training on how managers and supervisors can implement and support TWH-aligned approaches, such as those related to work-life balance.

Establishing an organizational structure and access to program materials is a visible demonstration of leadership commitment. For example, if an Occupational Safety and Health Administration (OSHA) inspector showed up at the worksite