

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