Lone Worker Safety
Behavior-Based Self-Management Anchored in Personal Values
By Cloyd Hyten, Bart Sevin and Judy Agnew

More than 20 years of research and application provide evidence that properly applied behavior-based safety (BBS) strategies increase workers' engagement in safe behaviors, which thereby reduces incidents.

The critical elements of traditional BBS include:
- pinpointing important safe behaviors in need of improvement;
- real-time peer-to-peer observation of employees engaging in work tasks that require those safe behaviors;
- feedback and reinforcement to strengthen desired safe behaviors.

These strategies are most effective when workers work near one another and can observe each other frequently.

When observations occur infrequently (e.g., once per month), behavior change decreases and the process is much less effective.

So, where does that leave the lone worker population?

The Lone Worker's Challenge

Lone workers are those who work in the field by themselves or in an enclosed environment without co-workers or supervisors nearby. With increases in automation and leaner staffing models in modern industrial settings, an increasing number of workers falls into this category. This trend is predicted to continue into the future.

Lone worker situations are challenging because no one else is readily available to conduct observations and provide real-time feedback about safe and at-risk behaviors. Traditional BBS

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systems often fail lone workers because they are either excluded from the process or are observed so infrequently that the impact is minimal.

Furthermore, when lone workers are observed, it is unlikely they will act naturally given that they do not normally have others working with or observing them. Ideal observations of lone workers, or anyone, should occur when those being observed are behaving as they normally would when completing a job.

To fully engage lone workers in this process, a self-observation process is required. Self-observation must be set up carefully and takes some effort to maintain, but it has proven to be effective for lone workers when done well.

Research on Self-Management

A body of self-management research and case studies has grown over the past 30 years. College textbooks (e.g., Watson & Tharp, 2014) testify to the fact that university-level psychology courses routinely teach principles and best practices of self-management based on controlled research and careful case studies. This body of knowledge has been underutilized in ensuring the safety of lone workers in high-hazard work environments.

Behavioral self-management research indicates that lone workers might be fighting well-established at-risk habits, struggling to develop new skills, or dealing with temptations to ignore safe rules or cumbersome procedures to save some time and effort in getting through a largely unsupervised workday. Multiple theoretical orientations contribute ideas to the self-management literature, including traditional operant and respondent conditioning theories, self-regulation (cybernetic) models, as well as newer, language-based behavioral theories.

Self-knowledge through self-observation is a cornerstone of self-management. Without at least some form of tracking of key behaviors and their associated emotions, it is almost impossible to detect and analyze patterns of actions that are potentially problematic. Virtually all modern self-management approaches utilize techniques that enable individuals to track their own actions and note key features of the

contexts in which those actions occur. There are many more features to a comprehensive self-management approach that go beyond self-observation.

How Starting With Values Can Help

The motivation to change one's behavior, sometimes at considerable effort on the part of the individual, is often a hurdle. For lone workers in industrial environments, the motivation may be low because they feel protected by the existing safety management system: safety training, safety policies and safe work practices, proper tools and resources, PPE and so on.

They may also observe that, on a frequency basis, severe injuries are relatively rare and appear unlikely to happen to them. Why, then, should they engage in a mindful practice such as self-management, which takes time and effort as they work, to protect themselves from an injury that is highly unlikely to happen now or in the future?

Behavioral research on choices between immediate, certain consequences and alternatives that offer delayed and/or uncertain consequences shows that immediacy and certainty exert great influence on an individual's choices. Even a small amount of effort required now and certain to occur may inhibit that choice, even if it might pay off in the future. Without the addition of more immediate consequences, workers might avoid engaging in self-management now for a future benefit.

Subject-matter experts suggest helping individuals see the value of self-management so that they can learn how the benefits outweigh the effort costs. Most of the benefits for self-management related to safety are future-directed and pertain to the quality of a healthy life over a life span. Discussing with the employees in a structured manner their life's values, what they want to be able to do and experience, helps them see that the actions they take today to make themselves even a little bit safer could help them live the life they want later

on. In this way, discussion of personal values and future quality of life helps to establish the value of engaging in self-management today.

Such discussions are not mere speculation. Basic research, as well as clinical therapy models, have shown this process helps motivate self-regulatory improvement.

Create Individualized Plans

To utilize self-management as a means to improve lone worker safety, people must have specific behaviors and habits on which to work. Generic lists of behaviors will not work for lone workers. They need shorter lists tailored to their unique challenges and work settings. Therefore, any serious safety self-management system must allow workers to develop customized targets to guide their self-management efforts.

Every individual may struggle with a different issue when working alone. For some, it may be habits learned from previous work or employers with a weak safety culture. For others, problems may be centered on staying work-focused in the face of other distractions. Letting workers use a process to analyze their own habits and develop a personalized safety action program will address these issues. A personalized safety action plan should address the safety hazards that workers can encounter in their workday. Let's look at the role hazard assessment and hazard controls play in safety self-management.

The Role of Hazard Assessment in Self-Management

A hazard assessment can reveal actions and circumstances that make workers prone to injury. These are the risks to safety, even if they have not caused a high number of injuries yet. Potential injuries include high-frequency, low-severity injuries (e.g., minor cuts and abrasions) as well as low-frequency, high-severity injuries such as those that lead to lost time or fatalities. Each category of potential injuries

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should be examined from a hierarchy of safety controls standpoint, with elimination of the hazard, if possible, the first priority. If the hazards cannot be eliminated, they should be mitigated through various hazard controls.

It is important to note, however, that all hazard control systems other than complete elimination require at least some behavior on the part of the worker for the control to serve its protective function. A worker cannot stay safe if his/her own actions bypass a machine guard, if s/he routinely takes shortcuts in following standard operating procedures, or if s/he fails to use PPE properly. A safety self-management approach must include prework in identifying on-the-job hazards and current hazard controls, then help connect the lone worker's own behavior to the effectiveness of those controls in order to meaningfully reduce injury risk.

Self-Management Plans in the Workplace

Lone workers need a simple process to deploy their individualized self-management plan. Such a process requires low training overhead, offers easy-to-use self-tracking, and provides some simple analysis tools to help workers see how features of the setting, the task, one's own current state, and the results of safe and at-risk behaviors influence actions on the job.

Lone workers must be able to see whether their current actions are consistent or inconsistent with their personal values and the quality of life they envision, and they must be able to detect influences that they can address themselves. Identifying and overcoming the obstacles of their progress toward safer actions increases their self-awareness and empowers them to tackle their own habits. An effective process will also let them see over time how they have removed these obstacles and understand why they engage in at-risk actions, despite knowing the risks.

Self-Management Is a Misnomer

One principle of effective self-management is to provide high levels of social support. Self-management is not strictly an isolated process. Effective self-management requires involving others to help deliver feedback and reinforcement to encourage and sustain habit changes. Companies that employ

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lone workers must find ways to provide this social support.

Social support can be provided in multiple ways and through various social channels. A key piece of social support is the role of company management, who must adopt a more helpful coaching approach to lone worker safety than the traditional safety police approach that comes with audits, heavy focus on rule compliance, and over-reliance on initial training ("we told you what to do") and discipline ("you didn't do it") as tools.

Since self-management requires individuals to record their own at-risk behaviors, lone workers must not experience negative consequences from their self-management. Management must encourage recording of at-risk behavior and honest evaluations pertaining to why the behaviors occurred. If management criticizes or disciplines lone workers who report at-risk behaviors, then the process will fail, as lone workers will simply report all safe behaviors and disengage in the process.

Other social supports for self-management include sharing of best practices among lone worker groups via electronic media and support from their families, who are intimately associated

with their personal values and desired quality of life. Lone workers who share their self-management plans with their families make a public commitment to change. This also allows the workers to retell and celebrate their successes.

Best Practices for Lone Worker Safety Self-Management

An approach that helps lone workers develop self-management skills is a novel direction for frontline worker safety. But it is an approach whose time has come. To improve lone worker safety self-management, a company can take several steps:

•Help lone workers connect their safety and self-regulation to their personal values about their desired quality of life for the present and for the future.

•Help lone workers assess their own unique struggles and develop individualized plans for managing their actions to improve safety on the job.

•Utilize existing safety data and analyses to identify workplace hazards, and how safe behaviors can help reduce the likelihood of injury.

•Employ simple tracking and analysis systems so that lone workers truly see what they do and why they do it. Teach them and support their efforts to utilize their own self-management plans to overcome temptations and other safety obstacles as they work.

•Ensure that lone workers have multiple social support systems for their self-management efforts.

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