Best Defence Against Errors and Error Precursors: Behavioural Based Safety

We have a lot of good Standard Operating procedures but the accident kept repeating, why? Do you know how to reduce errors according to human behaviour approach?

Introduction

To err is human. Workers are fallible. Errors are inevitable (as well as predictable). These are some fundamentals of the human performance approach to understanding safety. Generally speaking, human performance encompasses the way workers, the organisation, the environment and the management system work synergistically as an entire system. Workers are the focal points of this system, since any flaws in the system can affect workers' performance and, conversely, any worker flaws can change the system. Errors are viewed mainly as consequences of working in a flawed system. To prevent human error from affecting operations, management can keep workers from making dynamic errors (error avoidance) or stop the mistakes from changing (controls). Human performance tools have been designed to help workers anticipate, prevent and catch dynamic errors. The application of the tools and system is incorporated with the Behavioural-Based Safety. Many tools are geared toward identifying the presence of error precursors. In this module, the participants would learn the 10 human performance tools that have been determined. These tools are practical because they provide error-avoiding defences and promote active worker engagement. This workshop helps the participants to apply the human performance tools into behavioural based safety.

Program Objectives

This program aims to:

- Heightened sense of situational awareness concerning safety, presence of error precursors and error traps, tasks to be performed, conditions and surroundings
- Increased deliberation, cautiousness and mindfulness in workers as they approach and perform their tasks

Learning Outcomes

After complete this program, the participants should be able to:

- More accurate estimates of risk levels of activities
- Higher levels of self-awareness, including a more informed understanding of one's biases, vulnerabilities, deficiencies and limitations
- Communication and feedback promotion, including facilitation of interactions with others
- Slowing down activities to give workers more time to think about tasks
- Identification of warning signals that indicate that the situation is degrading or trouble is brewing
- Recognition of assumptions that need to be challenged

- Continual improvement of procedures

Who should Attend?

Safety officers, safety coordinator officer, quality officers, managers and all senior management

Methodology

Interactive lecture, videos, presentation, discussion, case study, case simulation, Socratic questioning, flipped classroom, brain-storming, worksheet, problem solving, inductive method, team exercise, peer to peer, action learning, coaching and mentoring

Program Outline

Day One	
9:00am-10:30am	**Workplace Accident. Plan for Safety? Plan for Risk?** Human performance perspective, it should not be surprising that workplace incidents are triggered by human actions and in many cases, the human actions causing these events are errors (which are unintentional actions without. malice or forethought). About 80% of all incidents are attributed initially to human error.
10:30am-11:00am	Tea and Networking
11:00am-1:00pm	**Human Performance Approach as the Behavioural Based Safety** Safety management systems and human nature are both flawed. Many incidents are initiated by human error. Human error is often a response to the presence of error precursors caused by management system deficiencies. Human error also is based on an individual's biases, vulnerabilities, assumptions and limitations. Worker-centric human performance tools that engage workers provide a defence against the safety management system and human nature deficiencies. Many human performance tools increase employees' situational awareness and sense of mindful uneasiness to protect them from flaws in the organisation and themselves.
1:00pm - 2:00pm	Lunch and Networking
2:00pm - 3:30pm	**Behavioural Approaches to Reducing Error** Workplace incidents are triggered by human actions, which can be acts of commission or omission. These errors are human actions that unintentionally depart from expected behaviours or performance. Active errors are physical, initiating actions that have immediate, observable and undesirable outcomes. Workers on the front-line commit most active errors because they "touch" the work, task or equipment. Most errors are insignificant, resulting in few or no consequences. However, since most initiating actions are active errors,

	a strategic approach to preventing incidents includes workers anticipating and preventing active errors through the use of human performance tools. The participants would learn the typical error precursors found at the workplace. Various types of confirmation bias are identified as organisation prevention.
3:30pm - 4:00pm	Tea and Networking
4:00pm - 5:00pm	**Modes of Workplace Safety For Performance** In this module, the participants would learn three modes of worker performance that are key to understanding how and at what frequency errors occur, as well as how human performance tools can be used to combat errors when operating in these particular modes of performance.
Day Two	
9:00am - 10:30am	**Key to Reducing Errors** A strategic approach for improving human performance involves the anticipation, prevention, identification and recovery from active errors on the job, especially at critical steps, where error-free performance is necessary. Events can be avoided by understanding the reasons mistakes occur and applying lessons learned from past events and errors. Anticipating and preventing active errors often relies first on identifying error precursors and error traps, which is the primary role of many human performance tools. In this module, the participants would learn the three basic approaches to reducing error: through planning, through performance, and communication and feedback.
10:30am - 11:00am	Tea and Networking
11:00am - 1:00pm	**Human Performance Tools as Behavioural Based Safety I** In this module, the participants would learn the tools are worker-centric in that they tend to engage workers to be more aware of their surroundings, error traps, tasks to be performed, conditions/surroundings and safety in general. In this module, the participants would learn the basic tools including pretask and post-task briefings, self-checking, take-a-minute and Jobsite review, stop & seek when unsure and pause when unsure.
1:00pm - 2:00pm	Lunch and Networking
2:00pm - 3:30pm	**Human Performance Tools as Behavioural Based Safety II** By improving human performance, active errors are reduced. By reducing active errors, organisations help eliminate unwanted events. In this module, participants would learn the questioning attitude, identifying critical steps, coaching and observation, three-way communication. Concurrent verification and peer checking and procedure use,

	adherence and review.
3:30pm - 4:00pm	Tea and Networking
4:00pm - 5:00pm	**Way Forward for Behavioural Based Safety** In this module, participants would be exposed to the application of industry 4.0 into behavioural based safety. The intervention of enhancing sustainable culture into behavioural based safety.