Behavior-Based Safety Coaching

10 guidelines for successful application

By E. Scott Geller, Sherry R. Perdue and Anne French

WHEN CAREFULLY DESIGNED and implement- ed, behavior-based safety (BBS) coaching is a practical and effective means of initiating and sustaining safety behavior in a work setting. Without care, however, a BBS program can struggle or even fail. This article outlines 10 guidelines for establishing and sustaining a truly successful BBS coaching process. The case study worldwide discusses E. Scott Geller's efforts as a senior partner and cofounder of Safety Performance Solutions Inc., a consulting firm specializing in the human dynamics of safety, and director of the Center for Applied Human Factors in Safety at the Virginia Tech, both located in Blacksburg, Va.

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Safety Management

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BBS coaching are described in other publications [e.g., Geller(6); (7); Geller and French], but all 10 guidelines have not been documented together. It should be helpful to have all of these in one place, especially since most are relevant for any organizational culture and are applicable for practically all industrial safety processes whose success is contingent on employee involvement.

10 Guidelines for Implementing a BBS Coaching Program

1) Teach Procedures with Principles

A distinction exists between education and training [Geller(5)] that explains "why" and training shows "how." Motivation to learn what to do (the procedures) can come from understanding the underlying rationale (the principles). Before people are trained to conduct behavioral observation and provide feedback, they should be educated on the philosophical foundations of BBS [e.g., Geller(7); (8); (9); (10); (11); (12); (13)]. Participants can then appreciate the procedures that make the principles practical. Of the BBS projects the authors have led, most involve extensive, upfront training and education for employees at all levels of an organization, ranging from an eight-hour workshop for wage employees, a one-and-a-half day workshop for management, and five days or more for steering team members. Participants learn basic principles underlying the observation procedures as well as skills needed to effectively support it.

There have been a few notable exceptions. Because of organizational constraints, employees of a large distribution center received only a brief one-hour overview, focusing primarily on the mechanics of the processes, such as when to pick up and return observation checklists and how to complete the forms. Without continual prompting, participation rates dropped. The checklists contained little insightful information, indicating that few observers looked beyond the obvious. Those interviewed during an informal, follow-up assessment, participants admitted to merely "going through the motions" when completing the observations. They did not understand the rationale for the process and perceived it as additional paperwork to be completed.

When participants learn and accept the principles behind a safety initiative, they can help to define and refine tests and techniques applicable for their work groups. Such involvement in designing process steps facilitates empowerment and ownership—the next point.

2) Empower Employees to Own the Process

Genuine empowerment is not given; it is enabled, then released from people when they feel ownership (Blanchard; Byars). Ownership does not come easily or do it happen. It is not the same as compliance. Employees often comply with rules, regulations and operating procedures without ownership. In this case, they perform because someone is holding them accountable. Such behavior is self-directed (Watson and Thorgal). Ownership, on the other hand, implies internal control, accountability and self-directed behavior.

People who get involved in designing, implementing, evaluating and refining a process acquire a special degree of ownership. Their contributing behaviors are self-directed. These behaviors occur consistently because participants hold themselves responsible, not because someone else is holding them accountable [Geller(13)].

How can this level of ownership be reached? Employees of a large pharmaceutical manufacturing plant demonstrated how. They elected representatives to serve on their site's BBS steering committee. A group of employees charged with overseeing the design, administration and continual improvement of the site's BBS coaching process. The team characterized the observation process for the site, allowing some flexibility in how each department implemented the guidelines. The compiled data from employees' completed observations were not only reviewed by the steering committee, they were also forwarded to individual work teams to be analyzed for improvement opportunities. The steering team led a formal assessment of the process on a regular basis, which involved surveying and interviewing employees for improvement suggestions.

The remaining guidelines are key to achieving true employee empowerment. For example, the next implementation principle specifies that participants need to exercise some personal choice throughout a BBS coaching process—from designing and implementing initial procedures to evaluating and refining the protocol for continual improvement. Ownership imparts personal choice; people get more involved in procedures infused with their personal input.

3) Provide Opportunities for Choice

Choice, involvement and ownership are interrelated. Each supports the other. More of one tends to heighten the other. But choice is also motivating. Research has shown that even insignificant choice benefits commitment and performance. For example, people have improved performance when they select aspects of a task that are actually involved in their work (Simons; Mottet; Perlmuter et al.).

How much choice is optimal? Is it possible to design BBS coaching to provide an adequate level of choice? A recent experimental evaluation of 20 successful BBS programs indicated that too much choice can be detrimental (Fox; Geller; Sripal). More specifically, these researchers found that BBS programs labeled "completely voluntary" were generally not as successful as BBS programs that included some indication that everyone will get involved to some degree. Programs that incorporated an accountability system to track involvement obtained the most participation and success. However, the most successful and enduring programs include some element of choice throughout process development, implementation and continuous improvement (Geller, et al.).

Maintaining an effective balance between personal...
Coaching Tips

1. To maintain a non directive style, the safety "primary duties" of coaches such as must, never and always. For example, instead of saying "You always ignore the safety on that machine," say "I notice you were working on that machine this morning. How is it a safeguard?"

2. The coach uses "I" statements instead of "you" statements. For example, instead of saying "You are always late," say "I notice you are sometimes late for work.

3. Use non-directive communication techniques including open and non-risk statements. For example, "There's room for improvement" and "There is not a perfect score." Use terms of "area of concern" or "opportunities for growth" instead of "risk," "negative behavior," or "negative feedback.

4. The effective coach states interpretations as personal opinions, not facts.

5. To improve safety behavior, the coach must walk the fine line between supporting the process and driving the process. With support, the process is more likely to be effective in improving safety behavior.
Coaching Tips

To maintain a non directive style, the safety manager (or another manager such as the nurse, or employee) should:

1. Use "I" statements instead of "you" statements. For example, "I've noticed that you're talking a lot." instead of "You talk too much.

2. Use "I" statements to acknowledge the behavior, not the person. For example, "I notice that you're being very friendly with the patients." rather than "You're being too friendly with the patients.

3. Use "I" statements to express your own feelings, not to blame others. For example, "I feel overwhelmed when I have too many patients." rather than "You're making me feel overwhelmed.

4. Use "I" statements to request behavior change, not to demand it. For example, "I'd like you to tryspeaking more slowly when you're with the patients." rather than "You have to speak more slowly when you're with the patients.

5. Use "I" statements to express your own needs, not to criticize others. For example, "I need some help with the paperwork." rather than "You're not doing your job.

6. Use "I" statements to express your own preferences, not to mandate others. For example, "I prefer if we worked in pairs when we're doing the paperwork." rather than "You have to work in pairs when we're doing the paperwork.

7. Use "I" statements to express your own intentions, not to force others. For example, "I plan to ask the doctor to come in early tomorrow." rather than "You have to come in early tomorrow.

8. Use "I" statements to express your own evaluations, not to judge others. For example, "I think we're doing a good job on the paperwork." rather than "You're doing a good job on the paperwork.

9. Use "I" statements to express your own desires, not to demand them. For example, "I want to go home early today." rather than "You have to go home early today.

10. Use "I" statements to express your own feelings, not to blame others. For example, "I feel relieved when we finish the paperwork." rather than "You make me feel relieved when we finish the paperwork.

By using "I" statements, you can maintain a non directive style, which helps to keep the focus on the behavior and on finding solutions, rather than on blaming and criticizing. This approach also helps to build trust and cooperation, as employees are more likely to feel heard and understood when their behavior is acknowledged and valued.

Managers must walk the fine line between supporting the process and driving the process.
Company X is a global engineering construction organization with 44,000 employees who are trained with cultural and business competencies across 90 projects in nearly 60 countries. The company provides technical, management, design, and field services to manage, engineer, build and operate installations for customers worldwide. Construction projects include tunnels, airports, smelters, pipelines, highways and trains, as well as privatization of companies and governments. Some projects are small, while others are extremely large and complex.

The firm is recognized as a leader in employee safety. Its traditional safety system included self-appraisal, self-profiling, and functioning well (e.g., safety meetings, safety training, incident reporting and control, policies and procedures). However, because safety is a key value-based performance criterion, the company decided to implement a BBS process to take safety beyond "good" to world-class performance. Company X partnered with Safety Performance Solutions to design and customize a BBS program for the firm. The company's safety division owned initiative put the responsibility for changing and eliminating at-risk practices on its BBS program-based safety team, with strong support from project superintendents and the company's CEO.

The company and consulting firm developed a customized set of modules called "safety coaches" for all project groups in the process. Special guides were designed for the project's facilitator, group members, and project leader. The BBS observation Team (BOT) was to serve as a reference group for the first tier of expertise within the life of a particular construction project.

The company's process follows the 10 guiding principles of the BBS model for establishing and maintaining an effective interpersonal BBS coaching process for action-oriented improvement of critical ingredients of this process are:

1. Facilitator. Responsible for guiding, developing, and facilitating role of the BBS in implementing the process.
2. Administrator. Responsible for entering data, producing reports, and recording and distributing BBT meeting minutes and reports. The administrator also compiles the weekly BBT agenda and acts as an observer. The team looks for trends and improvement opportunities, then develops specific solutions for implementation.

Projects 1. Project Safety Team. A team composed of a cross-section of a project, including its managers, the BBS certified instructor, and the BBS consultant. The team is responsible for developing the BBS as a tool for improving the company's safety culture. The team reviews data from various sources to identify trends and develop solutions for BBS improvement.

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The company's BBS Mission Statement

Company X strongly believes in recognizing and celebrating success. The company's BBS program is designed to facilitate employees in their work and to establish a culture of recognition and celebration. The mission statement is:

"Company X believes in recognizing and celebrating success. This is a company where all employees are valued and appreciated for their contributions to the organization. Our goal is to create a culture of recognition and celebration that encourages employees to feel valued and appreciated for their work. We believe that recognizing and celebrating success is essential to building a positive and supportive workplace culture."

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The company's BBS Mission Statement
Large-Scale Case Study

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The firm is recognized as a leader in employee safety. Its traditional safety programs focus on training and functioning well (e.g., safety meetings, safety training, incident reporting and analysis, policies and procedures). However, because safety is a key value, the firm’s commitment to safety requires that the company decide to implement a BBS process to take safety beyond “good” to world-class performance. Company X partnered with Safety Performance Solutions to design and customize a BBS process for their company. The partnership owned initiative puts the responsibility for changing and eliminating at-risk practices in the hands of the line workers with strong support from project management.

The company and the consulting firm designed a customized set of modules that are specific to each of the company’s groups in the process. Special guidelines were designed for the project’s facilitator and for new BBS team members. The Observation Team (BOT) was entered as a reference in the company’s project. The company’s process follows the 10 guiding principles to establish and maintain an effective interpersonal BBS coaching process for identifying and correcting critical injuries of this process are:

1. Facilitator: Responsible for guiding, facilitating, and implementing the BOT and interpreting the process.
2. Administrator: Responsible for ensuring data, producing reports, and recording and documenting BVT meeting minutes and reports. The administrator also compiles the weekly BVT agency reports and forwards them to the OSH department.
3. Auditor: Conducts the initial audit of BBS principles as well as strategies and tools to train the line-level database management software.
4. RS Cadre: A senior manager dedicated to driving the implementation of BBS principles and practices.
5. Project Safety Team: A team composed of a cross-section of a project, including line managers. The team includes an overview of all BBS procedures and includes strategies and tools used for training the line-level database management software.
6. BBS Champion: A manager (usually the site manager) responsible for supporting the BOT and the BVT process. 5/6 supports implementation of the participating in training, establishing clear expectations and holding supervisors accountable for supporting the supervision and feedback process. 5/6 is optimistic, energetic, and inspiring, as well as practical in approaching problem solving. This person reviews observation data and BVT recommendations, and makes decisions necessary to support process improvements.
7. Behavior Observation Team (BOT): A team of “natural leaders” usually from those craft employees educated in BBS principles and trained in the observation and feedback process. A team of employees brainstorms to determine what was monitored by a “natural leader”. A natural leader is someone:
   a. responsible and dependable
   b. a good communicator
   c. listens to and follow
   d. to the point
   e. dedicated to the success of the project
   f. can take charge
   g. experienced in his/her craft.

One of the key responsibilities of the BOT is to review data collected during the interpersonal coaching process (critical behavior categories include PPE, line of fire, pinch points, tools, and equipment use, lookout/tag-out procedures, housekeeping, or safety equipment and practices). The team looks for trends and improvement opportunities, then develops strategies to address them. The team also establishes customized training for the bus driver, including fundamentals such as “Bus Safety”.

The training includes an overview of BBS principles as well as strategies and tools used for training the line-level database management software.

Company X strongly believes in recognizing and celebrating success. The firm asks its workers to support the facilitator and BVT to establish safety feedback and recognition for accomplishments in the BBS coaching process. Each site is given a budget and develops award criteria and recognition program. To recognize the BOT members, special critical injuries, BVT members are given special recognition and are celebrated. The company requested that each site use award items related to safety such as safety glasses and gloves, instant reward programs, or on-the-spot recognition and additional training, better locations and parking spaces.

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The training includes an overview of BBS principles as well as strategies and tools used for training the line-level database management software.

The data analysis for the BBS coaching is critical to its success. Behavioral data enable effective implementation of corrective procedures (Danko; Kellner). Such data provide objective evidence of whether the BBS coaching is effective and the recognition and celebration. Thus, the data available from BBS auditing procedures are invaluable, but it is important to consider the data in context with other data and assess the effectiveness of the process. It is easy to become over-analyzed with the results of BBS observations. The benefits of BBS coaching are realized by the workforce.

In fact, most records of behavioral observations are likely biased and unreliable, they are typically collected as part of the daily routine when the observations are announced beforehand. In addition, people tend to look for at-risk behavior, especially if the observed behavior is expected to be able to be observed.

The use of BBS observations and feedback sessions provides useful information. The use of BBS observations and feedback sessions provides useful information.
between different work teams. But the absolute values of these numbers should not be taken too seriously. Above all, consider that the process of interpersonal observation and feedback is more powerful than the numbers with regard to achieving an actively caring work culture and an injury-free workplace. When done well, a structured observation process leads to regular informal peer coaching—coworkers giving one another rewarding and corrective feedback wherever the opportunity arises.

The communication components of BBS coaching discussion components are a key part of peer support, develop inter- personal trust, and help to cultivate the kind of learn- ing-oriented organization that brings out the best in people. In organizations with high literacy rates and multiple languages spoken, realizing these benefits may be slower, but not impossible to achieve. In a school or workplace setting, for example, checklists with pictures illustrating safe and at-risk behaviors were developed to aid the largely illiterate workforce. The pictures also help during one-on-one feedback when coworkers, who collectively speak five lan- guages, can pick up verbal techniques such as gestures and facial expressions to communicate.

A BBS coaching process teaches workers that they can be "unconsciously incompetent" and that they need feedback from others to improve (Geller[6]). This leads to an interpersonal mindset—a realiza- tion that the success of an organization is depend- ent on systems of people contributing diverse talents and relying on each other synergistically to make the whole greater than the sum of its parts.

9) Continuously Evaluate & Refine the Process
Evaluation and refinement have been mentioned throughout this article. No process targeting human behavior is carved in stone. Behavior is dynamic, continually adjusting to chang- ing demands, expectations, and ergonomics. Consequently, CBCs need to be revised peri- odically, along with addi- tions to the procedures to used to conduct behavioral observa- tions and promote feedback.

With experience, BBS coach- ing becomes more adept at noticing the subtle features of safe versus at-risk work practices, such as the use of PPE. This continual increase in coaching expertise needs to be reflected in revised CBCs.

In addition, techniques to support BBS principles and procedures such as supervision, accountability techniques and group meetings need to be responsive to changes in the workplace, including behav- ioral changes, attitudes, management systems and the environmental context in which work is performed.

The bottom line is it is critical to continually assess the behavioral and attitudinal impact of ongoing BBS coaching procedures and to make refinements accordingly. The data analysis referred to in the Guideline 5 procedures provides objective information regard- ing behavior change. An evaluation of people’s opinions and attitudes about a BBS coaching process requires interpersonal relations and takes place both with parti- cipants and nonparticipants. These should occur in both group and individual one-on-one sessions.

Perception surveys can enable a broad wide- spread assessment of employees’ feelings about an organi- zation’s safety culture and BBS process in particular (Geller[6]). However, a percep- tion survey alone provides no specific direction for procedural refinement. Interviews, focus groups and round discussions should follow the survey. Although this approach takes longer than a simple objective survey, especially if the repre- sentative sample is desired, the added benefits far outweigh the costs. While gaining employees’ opinions and ideas for improvement, opportunities are provided for employee involvement, choice and ownership. The value of these opportunities cannot be overstated. These perception processes were discussed in Guidelines 2 and 3.

10) Make the Process Part of a Larger Effort

While this article focuses on BBS coaching as the intervention approach, BBS principles can be applied to many other domains of occupational safe- ty, including ergonomics, training, recognition and celebration, injury surveillance, employee health and ergonomics, hazardous identification and corrective action (Geller[6]; McKeown[6]; Lofland[6]). In each case, BBS reflects a specific approach toward initiating the human dynamics of the intervention process. Therefore, observation and feedback is not BBS but rather an interdepartmental process for improving safety-related behavior that applies certain research-supported principles and tools derived from BBS.

Behavior-based observation and feedback must be viewed as one of many systematic ways to pre- vent injuries in the workplace. Although this interven- tion approach was developed by behavioral scientists, and it incorporates basic principles and procedures required for BBS, either. Rather, BBS rep- resents an overall approach toward dealing with the behavioral dynamics of injury prevention (Geller[6]; Jacobs[6]; Geller and Williams[6]). Just like the guidelines presented here are relevant to the development, application and evaluation of more safety programs than an observation and feedback process, the philos- ophy and technology of BBS are applicable to more occupational safety efforts than an observation and feedback process.

A chemical processing plant of approximately 600 employees had a successful peer observation process in place for a number of years when its inci- dent statistics began trending upwards. Figure 1 shows a 15-year history of the organization’s total recordable incident rate. The organization under- went a concerted effort to evaluate and apply BBS principles to other systems, namely reviewing the firm’s incident analysis procedures, developing a safety accountability program and improving supervi- sors’ “safety coaching” skills. After four years of hard work, the firm’s efforts paid off when its inci- dent rate reached zero for the two consecutive years.

Conclusion

This article reviewed 10 guidelines or rules for establishing and maintaining an effective inter- departmental behavior-based coaching process for injury prevention. These guidelines were not derived overnight, nor were they gleaned from research arti- cles or textbooks. Rather, they were developed from a decade of studying hundreds of actual industrial applications. These guidelines can be considered "lessons learned" from actual experience helping organizations initiate and sustain an effective behav- ioral observation and feedback process.

This list is certainly not exhaustive, nor is it imitable. It is just the start of-the-art as the authors see it today. Significant adjustments to this "top 10" list can be expected as the result of continuous learn- ing. Indeed, this is the essence of Guideline 9—continu- ously evaluate feedback to achieve an injury-free workplace and use the feedback from this process to adjust the next attempt to prevent personal injury.

References

Blanchard, K. "Building Gang "No Traumas How to Turn "No Traumas Troubled" into a BBS Project" presented at HfH; Roanoke, Roanoke, VA, Nov. 1990.
between different work teams. But the absolute values of these numbers should not be taken too seriously. Above all, consider that the process of interpersonal observation and feedback is more powerful than the numbers with regard to achieving an actively caring work culture and an injury-free workplace. When done correctly, a structured observation process leads to regular informal peer coaching—coworkers giving one another rewarding and constructive feedback whenever the opportunity arises.

The communication components of BBS coaching determine the type and degree of peer support, develop interpersonal trust, and help to cultivate the kind of learning-oriented organization that brings out the best in people. In organizations with high reliability and credibility, multiple languages spoken, realizing these benefits may be slower, but not impossible to achieve. In a society where one is mine, for example, checklists with pictures illustrating safe and at-risk behaviors were developed to aid the largely illiterate workforce. The pictures also help during one-on-one feedback when coworkers, who collectively speak five languages and use several verbal techniques such as gestures and facial expressions to communicate.

A BBS coaching process teaches workers that they can be "unconsciously incompetent" and that they need feedback from others to improve (Geller(1)). This leads to an intermediate mindset—a realization that the success of an organization is dependent on systems of people contributing diverse talents and relying on each other synergistically to make the whole greater than the sum of its parts.

9) Continuously Evaluate & Refine the Process

Evaluation and refinement have been mentioned throughout this article. No process targeting human behavior is cast in stone. Behavior is dynamic, continually adjusting to changing demands, expectations, and ergonomics. Consequently, CBCs need to be revised periodically, along with the components to the procedures used to conduct behavioral observation and feedback.

With experience, BBS coaches become more adept at noticing the subtle features of safe versus at-risk work practices, such as the use of PPE. This continual increase in coaching expertise needs to be reflected in revised CBCs.

In addition, techniques to support BBS principles and procedures need to be developed. Accountability techniques and group meetings need to be responsive to changes in the workplace, including behaviors, attitudes, management systems, and the environmental context in which work is performed.

The bottom line is it critical to continually assess the behavioral and attitudinal impact of ongoing BBS coaching procedures and to make refinements accordingly. The data analysis referred to in the Guidelines 5 provides objective information regarding behavior change. An evaluation of people’s opinions and attitudes about a BBS coaching process requires interpersonal analysis and feedback both with participants and nonparticipants. These should occur in both group and individual one-on-one sessions.

Perception surveys can enable a broad onsite assessment of employees’ feelings about an organization’s safety culture. Perception surveys in the BBS process in particular (Geller(2)). However, a perception survey alone provides no specific direction for procedural refinement. Interviews, focus group, and team discussions should follow the survey. Although this approach takes longer than a simple objective survey, especially for a representative sample is desired, the added benefits far outweigh the costs. While gaining the confidence of employees for improvement, opportunities are provided for employee involvement, choice, and ownership. (The value of these changes in practice and their influence was discussed in Guidelines 2 and 3.)

10) Make the Process Part of a Larger Effort

While this article focuses on BBS coaching as the intervention approach, BBS principles can be applied to many other domains of occupational safety, including ergonomics, training, recognition and celebration, incident analysis, human error prevention, hazard identification and corrective action (Geller(2); McWeeney & Fredrickson(6); Roberts). In each case, BBS reflects a particular approach toward handling the human dynamics of the initiative or process. Therefore, observation and feedback is not BBS but rather an interrelated coaching process for improving safety-related behavior that applies certain research-supported principles and tools derived from BBS.

Behavior-based observation and feedback must be viewed as one of many systematic ways to prevent injuries in the workplace. Although this intervention approach was developed by behavioral scientists, and it incorporates basic principles and procedures that are BBS, it is not BBS. Rather, BBS represents an overall approach toward dealing with the behavioral dynamics of injury prevention (Geller(2); McWeeney). Just like the guidelines presented here are relevant to the development, application, and evaluation of more safety programs than an observation and feedback process, the philosophy and technology of BBS are applicable to more occupational safety efforts than an observation and feedback process.

A chemical processing plant of approximately 600 employees had a successful peer observation process in place for a number of years when its incident statistics began trending upwards. Figure 1 shows a 15-year history of the organization’s total recordable incident rate. The organization undertook a concerted effort to evaluate and apply BBS principles to other systems, namely reviewing the firm’s incident analysis procedures, developing a safety accountability program, and improving supervisor’s “safety coaching” skills. After four years of hard work, the firm’s efforts paid off when its incident rate decreased to the lowest ever.