

Proceedings of the 11th European Conference of BBS and  
OBM Rome, Urbaniana University, 14th June 2017

**Behavior Based Safety**  
**Organizational Behavior Management**

---

Journal of Applied Radical Behavior Analysis

**RELATORI INTERNAZIONALI  
LEZIONI MAGISTRALI**

---

**INTERNATIONAL SPEAKER  
PUBLIC LECTURES**

## INTERNATIONAL SPEAKER

# All I know about Reinforcement I learned from my Kidz

Timothy Ludwig, Ph.D.

*Appalachian State University, Safety-Doc.com*

## INTRODUCTION

“It’s just my bad luck to have a dad that’s a safety geek” my son exclaimed. The issue between my oldest son and his safety-consultant dad had to do with wearing elbow and knee pads while skate boarding. He had stopped wearing them because they “hurt his performance” and “looked stupid”.

Thus, we had one of those early adolescent talks between fathers and sons: “So son, I’ve seen you with the scrapes and bruises. You’ll be able to avoid those and more serious injuries if you wear the pads. So why are you not wearing them?”

“Dad,” my son said with some impatience as if I was missing the obvious. “They are uncomfortable and sweaty. And they make me less safe.”

“Less safe?“, I said with astonishment. “Let me cite some safety statistics ...”

“But you’ve seen the tricks I do where I use my legs like arms to flip the board. Those leg pads keep me from bending my knee well enough and then get in my way. When that happens I’m more likely to get hit by the board, fall and get hurt.”

In my behaviorist’s mind I knew he was right. Consider the concept of the basic Response Cost. Simply stated, the personal cost my son experienced for complying with my request to wear pads (from his perspective) was: a) discomfort, b) inhibit performance, c) inconvenience to put on, and d) looking silly (with the bulging knees and elbows that was not the fashion for pre-teens). In contrast, what was the benefit for wearing pads: a) Dad’s approval. Thus, Response Cost was greater for safety behaviors. When the costs outweigh the benefits, the safety-related behavior does not happen, it would be punished.



**PRINCIPLE 1: SAFETY-RELATED BEHAVIOR IS OFTEN LESS CONVENIENT, LESS COMFORTABLE, AND PROVIDES LESS DEXTERITY THAN THE MORE RISKY ALTERNATIVE**

But, what could possibly be more reinforcing than Dad’s approval? After a little investigation of his skateboard world I found out. Skateboarding magazines contain the ultra-cool boarding professionals photographed in impossible aerial poses, all with rock-star hair, the hottest gear, and... no pads (rarely helmets). When I took my son to the new skate park, I saw other kids had the tricks, the styles, even absence of pads and helmets modeled by the “pros”.

It made me think of the experienced worker who everyone goes to for advice because his production numbers are praised by supervisors. This “cool” worker also complains about the safety rules. This too is modeled by others. What messages do they communicate about safety? What behaviors are they doing to promote risk taking?

**PRINCIPLE 2: WE ARE INFLUENCED BY OTHERS, ESPECIALLY IF THEY ARE CONSIDERED “COOL”**

So I did what any dad would do. I declared a “threat”. “You WILL wear your pads when skateboarding or you will never skateboard again.” And he complied, or so I thought. The next week I drove up the driveway to my son taking his pads off after boarding. It was an illusion squashed when his younger brother tattled that he had just spent the afternoon boarding without pads. When he saw my car he ran to his pads, shoved them on, and then acted as if they had been on the whole time.

Ask any safety manager and you’ll hear countless stories of employees scurrying to correct their safety behaviors when they see a supervisor walking up. I’ve even heard about secret whistles and tapping codes employees use to let each other know that “trouble is coming”. Who of us hasn’t been driving when oncoming traffic flash their headlights to indicate a police trooper is ahead taking speed gun readings?

**PRINCIPLE 3: THREATS AND DISCIPLINE ARE ONLY EFFECTIVE WHEN THE DISCIPLINARIAN IS PRESENT**

My threats did not work so I upped the ante. I proceeded to contact the county parks director and county commissioners announcing myself as a safety professional and detailing what I had seen at the skate park – how unsafe behaviors were being modeled, and how there were no policies or signs requiring helmet and pad use in the skate park. I was not the only one.

Soon thereafter the county commissioners passed a law that all patrons of the skate park must wear helmets and pads. Up went the verbose sign with the new statute. Nothing changed.

**PRINCIPLE 4: POLICIES AND SIGNS ONLY DIRECT BEHAVIOR, THEY DO NOT MOTIVATE SAFE BEHAVIOR**

They cannot without consequences (see Principle 3 to review what happens to consequence without oversight). Is the only solution is to have a consequence provider watching at all times?

That’s what happened. The county hired a security guard to enforce the new safety policy. My son argued in an article to the local paper that the skate boarders will stop going to the park.

He was right: The park closed from lack of attendance that same year. But I was also right: He fell while skate boarding, broke his elbow and ruined his baseball season.

I took the issue to higher authorities, he resisted even more. We should have worked together. I guess we were both wrong.

But I got a second chance! My had turned the age where he had a license to operate a car on his own. I wasn’t going to blow this one using policies and discipline. So I monitored my own behavior and found myself only saying something to him when he did something “wrong” while I was teaching him how to drive. “You didn’t come to a complete stop son”. “Did you check your mirror before changing lanes? I didn’t see it”. I realized I was only trying to correct him and that more than likely resulted in him getting more tense and making more mistakes.

So I tried something different. I started only pointing out what he did safe. “Very nice stop back there, it gave you time to check the road both ways”. “I liked the way you hugged the inside lane when we went around the blind corner, if someone flew around that corner in your lane we would have been OK (we live in mountains).” The truth is that he was doing a most of his driving in a safe manner.

**PRINCIPLE 5: REINFORCEMENT IS WHAT INCREASES THE BEHAVIOR YOU DESIRE; POINT OUT THE GOOD AND IT WILL INCREASE**

I had started REINFORCING him for the safe behaviors and guess what; He started driving much safer! I went nuts, I told anyone when he was around that “My son is an excellent driver” and it even got to the point where he started remarking on my driving!

When you praise a safe behavior you strengthen it, you build upon it, and you make it more likely to happen. The more you do it the more “behavioral momentum” is built and the at-risk behaviors extinguish in favor of the safe alternatives.

**HOW TO REINFORCE 101**

Reinforcing behavior can be really simple and done by anyone. It just requires awareness of certain behaviors occurring and a little effort.

- 1) Identify the behaviors you need to build up. Write them in full sentences starting with an action verb saying what is to be done, when, why, and upon what instructions.
- 2) Make sure people know what these behaviors are and make sure they have the

capacity and time to do them.

- 3) Give them an opportunity to demonstrate the behavior in front of you and give them feedback until they do it fluently.
- 4) Watch and wait (like watching cement dry) until you see one of the behaviors occurring.
- 5) Go to that person and praise their action. Say, “you did this, it helped you stay safe while you did that because... or “you did this, it helped the team build that because...”
- 6) Repeat 4 & 5 abundantly, and get others to do the same.

Ask yourself: What behaviors in your safety process can you strengthen?

Happy parenting!

#### REFERENCES

- 1) Moran, DJ. ACT for leadership: Using acceptance and commitment training to develop crisis-resilient change managers. *Int J Beh Cons Therapy* 2011; 7: 66-75.
- 2) Hayes, SC, Strosahl, KD, Wilson, KG. Acceptance and commitment therapy: An experiential approach to behavior change. New York: Guilford Press, 1999.

#### AUTHOR



**Timothy Ludwig** earned his Ph.D. at Virginia Tech under E. Scott Geller. Dr. Ludwig is a professor at Appalachian State University where he was named a Distinguished Graduate Faculty and Board of Governors’ Teacher of Excellence. Dr. Ludwig is the editor of the *Journal of Organizational Behavior Management* and past President of the Organizational Behavior Management Network. He is the author of dozens of scholarly articles that empirically document behavioral methods to improve safety and quality in industry. His books include *Intervening to Improve the Safety of Occupational Driving* and *Behavioral Systems: Understanding Complexity in Organizations*. His upcoming books include *Best-in-Class Safety* and *Ticklish Safety Tales: Stories with a Purpose*.

Dr. Ludwig serves on the Cambridge Center for Behavioral Studies’ Accreditation Board that reviews best-in-safety practices and offers independent, objective feedback. Within his consulting practice Dr. Ludwig has helped design, deliver, and implement safety programs at dozens of companies. Dr. Ludwig was cited in *Industrial Safety and Hygiene News (ISHN)* 2012 Power 101 Leaders in the Safety and Health World.

#### INTERNATIONAL SPEAKER

## Training for Sustainable Behavior Change

Lori H. Ludwig

*Performance Blueprints, Inc.*

#### ABSTRACT

Employee safety meetings are a good thing. They communicate your safety message and allow the sharing of up-to-date information on hazards and changes in the workplace. They also cost a lot in labor hours and preparation time, perhaps more than you think. Have your safety meetings devolved into a monotone voice going through rote material via a PowerPoint presentation while bored employees slouch in their seats? This presentation will introduce you to a performance-based solution to increase engagement in your monthly safety meetings and transfer important safety skills and knowledge to the job. This performance-based approach encourages work teams to take action on their safety concerns, continuously improve safety tools and processes, and participate in safety related discussions and activities beyond the safety meeting itself.

*Keywords: Performance-Based Training, Safety Meetings, Instructional Design, Employee Engagement*

#### REFERENCES

- 1) Bluedorn, A., Turban, D., Love, M.S. (1999). The effects of stand-up and sit-down meeting formats on meeting outcomes. *Journal of Applied Psychology, Vol. 84(2), Apr 1999, 277-285.*
- 2) Brethower, D.M. & Smalley, K. (1998). Performance based instruction: Linking training to business results. San Francisco: Jossey-Bass.
- 3) Davis, J., Balda, M., Rock, D., McGinniss, P. & Davachi, L. (2014). The Science of Making Learning Stick: An Update to the AGES Model. *NeuroLeadership Journal, Vol. 5, August 2014, 1-15.*
- 4) Miller, G.A. (1956). "The magical number seven, plus or minus two: Some limits on our capacity for processing information". *Psychological Review. 63 (2): 81–97.*

**INTERNATIONAL SPEAKER**

# **Performance Management: Creating Accountability and Injury Reduction**

Lori H. Ludwig

*Performance Blueprints, Inc.*

**ABSTRACT**

To sustain a Behavior-Based Safety program through its maturity, multiple people must be aligned including leaders, support teams and front-line employees. Alignment can seem overwhelming due to the complexity many moving parts and priorities. Performance management is a technique used to achieve desired results by engineering behaviors of multiple people across the complexity of your organization. The method examines each key role as a Human Performance System, a model that describes the variables influencing your people, working in your system, governed by behavioral law (Rummler, Rummler & Ramais, 2010). This presentation will introduce you to a template to design and diagnose performance allowing you to manage various key roles in your BBS program illustrating how to systematically troubleshoot performance issues.

*Keywords: Performance management, Human Performance System, Behavior Based Safety Program*

**REFERENCES**

- 1) Brethower, D. M. (2001). Managing a person as a system. In L. J. Hayes, J. Austin, R. Houmanfar, & M. C. Clayton (Eds.), *Organizational Change* (pp. 89-105). Reno, NV: Context Press.
- 2) Gilbert, T. F. (1996). *Human competence: Engineering worthy performance*. Amherst, Massachusetts: HRD Press, Inc.
- 3) Malott, M. E. (2003). *Paradox of organizational change*. Reno, Nevada: Context Press.
- 4) Rummler, G.A., Ramais, A.J., & Rummler, R.A. (2010). *White space revisited: Creating value through process*. San Francisco: Jossey-Bass.



**DR. LORI H. LUDWIG** is the Founder and CEO of Performance Blueprints, Inc. As a Business Strategist, Lori's goal is to add value by providing expert guidance to other inspired entrepreneurs to optimize their performance. She is passionate about bringing scientific tools to small business entrepreneurs to help them cut through complexity and develop strategies to execute their vision. She does this through coaching, hands-on workshops and online training. Lori also helps entrepreneurs of all types design targeted performance solutions to achieve their goals. Through her own lifelong learning, Lori is dedicated to disseminating Behavioral Systems Analysis and does this by continuously testing and refining tools with a variety of companies

across different industries. Lori has worked with global Fortune 500 companies, creative start-ups, human services, non-profits and local small businesses. Her specialties include strategic planning, organizational system mapping, process design, measurement and management system design, technology integration, accountability and feedback tactics, performance-based learning programs and leadership coaching. Lori received her B.S. in Psychology and Creative Writing, M.A. in Industrial Organizational Psychology and Ph.D. in Applied Behavior Analysis from Western Michigan University in 2003. She currently serves as a Trustee of the Cambridge Center for Behavioral Studies. To learn more about Performance Blueprints visit: <http://www.performanceblueprints.com>

## INTERNATIONAL SPEAKER

# Hardwiring Behavioral Excellence in Healthcare

Julie M. Smith

*CEO and Co-Founder ChangePartner, Inc.*

## ABSTRACT

Dr. Julie M. Smith will share the successes and challenges of developing a powerful, outcomes-driven, behavior-centric performance improvement tool in partnership with Nemours Children's Health System. The goal is to use technology and human-to-human touchpoints to hardwire "behavioral excellence" across Nemours' healthcare system over a two-year period.

*Keywords: Behavior Analysis, Pediatric Healthcare, Tools, Behavioral Excellence*

## INTRODUCTION

The Behavioral Excellence platform will be merge proven behavior science principles and methods with artificial intelligence-driven technology to guarantee performance improvement. The platform will be able to:

- Provide real-time performance feedback to care providers from multiple sources, including patients, and guide daily performance improvement.
- Effortlessly forge a partnership between patients, families, and care teams to improve the overall quality of the care provided—real time—resulting in reliable, measurable "5-Star" performance, including top-tier outcomes in quality, safety, and patient experience.
- Ensure care providers get the appreciative feedback they deserve every day.

## CORE ELEMENTS OF HARDWIRING BEHAVIORAL EXCELLENCE

The behavior-based performance improvement platform will be comprised of the following core elements

### A. TARGETED OUTCOMES & VITAL BEHAVIORS

An organization's outcomes-driven, behavior-centric improvement projects will be prioritized to determine where the platform will make the biggest impact by reducing variability in how people perform their jobs. The platform can be used to improve any one of the following outcomes, alone or in combination:

- Improve quality, safety, and the patient experience.
- Reduce costs.
- Execute and sustain process improvements.
- Achieve operational or strategic goals.
- Enhance teamwork and communication among staff.

Once targeted outcomes are selected, the protocols, processes, and standards that enable the outcomes will be quickly distilled into unambiguous, evidence-based Vital Behaviors™ that contain the minimum essential actions critical to achieving and sustaining top-tier performance.

### B. BEHAVIOR SAMPLING FROM MULTIPLE PERSPECTIVES

Vital Behaviors will be organized into distinctly different but “interlocked” behavior sampling tools that are used to gather observational data from multiple perspectives, including:

- Patients and families at strategic Points of Care throughout the patient journey.
- Leaders through direct observation, behavioral interviewing of patients and families, and monitoring of behavioral outcomes.
- Respected peers, at the request of the individual being observed.
- Self-observations to compare against the input of others.
- Educators, during training and simulations.

As individuals and teams adhere more consistently to Vital Behaviors, the behavioral sampling schedule will change to infrequent probes to measure sustainability.

### C. REAL-TIME BEHAVIORAL FEEDBACK

The platform will ensure that meaningful, behavior-based feedback is provided to individuals and teams, both on an automated basis and in human-to-human interactions. Behavior sampling and coaching will be personalized and occur at the needed frequency to ensure that Individual Habit Strength™ and Organizational Behavior Momentum™ (detailed next page) are achieved for the desired outcomes. The goal is to create a feedback-rich environment that improves employee awareness, engagement, and consistent execution of high quality care.

### D. DAILY IMPROVEMENT ACTIVITIES

The platform will provide real-time coaching and direction to help make data-driven adjustments as situations change. It will have the following unique features:

- Patient Engagement: Involves patients daily in improving their care, real-time, by providing their actionable feedback to individuals and care teams.
- Self-Management: Helps individuals use daily feedback to increase self-awareness and continuously improve the behaviors that produce desired outcomes.
- Informs Team Huddles: Provides care teams with behavior/outcomes data from the previous day, as well as trends. Each team huddle begins with a celebration of successes from the prior day, as well as insights-based learning to identify improvement opportunities. This discussion results in an actionable care delivery plan for the current shift and beyond.
- Rapid-Cycle Experimentation: Engages employees in discovering, customizing, and updating evidence-based Vital Behaviors in their particular work unit.
- Leader Rounding and Coaching: Ensures leaders regularly observe and provide meaningful feedback to every healthcare worker until Individual Habit Strength is achieved. Measures each leader's effectiveness in setting expectations, providing coaching, and improving communications and teamwork.
- Performance Dashboards: Guides leaders and teams at all levels to use the behavior/outcomes data to remove barriers and support performance improvement efforts.

At their fingertips, healthcare workers will have easy access to their own data showing the cause-and-effect relationships between their behaviors and their outcomes. This is the only way for them to know that their efforts are improving care.

Specific reports include:

- Behavior / Outcome Correlations: For your specific hospital and across other hospital systems, behaviors are correlated with outcomes to identify the minimum but necessary evidence-based Vital Behaviors.
- Individual Habit Strength Index: Gauges when an individual has demonstrated high-reliability performance. Provides a strong indicator about whether Vital Behaviors are “hardwired” for an individual.
- Organizational Behavior Momentum Index: Analyzes the speed with which Individual Habit Strength is being achieved across an organization and predicts time to results/ROI and cultural sustainability.
- Vital Dashboards™: Shows Behavioral Excellence at all levels of granularity (by patient, staff, shift, department, hospital, network, state, etc.), with comprehensive online, real-time analytics.



**ADAPTIVE BEHAVIOR ANALYTICS™**

Adaptive Behavior Analytics, derived from the principles and methods of the science of Behavior Analysis, will power the Behavioral Excellence platform. Using both big data analytics and machine learning, the Adaptive Behavior Analytics will continuously search relevant databases to pinpoint the complex interrelationships of multiple variables that influence behavior individually and organizationally. Data-based insights, guided by the Laws of Behavior, will be automatically converted into highly accurate, actionable decision support that helps direct, reinforce, and hardwire Behavioral Excellence at all levels of the organization.

**CURRENT IMPLEMENTATION AT NEMOURS**

Dr. Smith will share the successes and challenges of developing and implementing this system at Nemours Children's Health System. The system currently is being designed and prototyped in the Emergency Department and the Allergy Unit. Change management is occurring across the entire enterprise to prepare everyone for a multi-year implementation.

**INTERNATIONAL SPEAKER**

# The Science Behind Hardwiring Behavioral Excellence

Julie M. Smith, Ph.D.  
*ChangePartner, Inc.*

**ABSTRACT**

Dr. Julie M. Smith will compare and contrast a behavior-based approach to performance improvement with other improvement methodologies. She will show how behavior analytic principles and tools have been used to reliably hardwire “behavioral excellence” in three healthcare applications.

*Keywords: Behavior Analysis, Healthcare, Tools*

**INTRODUCTION**

Often referred to as the science of learning and motivation, Behavior Analysis is one of the most well-established, scientifically-respected approaches for what works in behavior change. Some of the most successful applications of Behavior Analysis have been in behavioral economics, individualized programmed instruction, behavioral medicine, and behavior-based safety. Behavior analytic principles and methods informed the development of Amazon's search engine. Now Behavior Analysis is being used to hardwire Behavioral Excellence in healthcare to achieve improved outcomes in safety, quality, and the patient experience.

Behavior-Based Safety has been particularly successful in high-risk industries that require behaviors to occur with high reliability, such as the airline and nuclear energy industries. Decades of evidence-based research, both in the lab and in the real world, prove that the Laws of Behavior, derived from behavior analysis, work.

Successful applied interventions arise from comprehensive and identifiable theoretical and experimental bases rather than from a set of behavior change “packages.” Behavior Analysis provides science-based, cause-and-effect methodologies that work in even the most challenging healthcare environments.

**AUTHOR**

**Julie M. Smith**, is a world-class expert in applying behavior science in innovative ways in organizations to achieve unprecedented results. As co-founder of CLG, one of the world's largest behavior-based strategy execution firms, Julie and her colleagues pioneered the most powerful and practical organizational behavior-change approach available today, as evaluated by multiple independent benchmark studies. Working with national and global clients, her track record proves this approach leads to superior strategy execution and dramatic performance improvement.

In an interview with *The New York Times*, the CEO of a global pharmaceutical attributed a great deal of his personal and company success to leadership lessons he learned from Julie while he shaped a new culture of innovation, customer focus, and patient centricity.

Seeing a great need to improve healthcare provider performance, Julie launched ChangePartner in 2016. She and her team are developing a Behavioral Excellence™ enterprise application, based on Adaptive Behavior Analytics™, that will transform healthcare. The Behavioral Excellence approach guarantees that organizations can efficiently convert external ratings and point of care patient surveys on quality, safety, and patient experience into “5-Star” behaviors that are delivered reliably every day by individuals and teams—at all levels, across an organization. This technology platform will be like providing a personalized behavioral coach, at a moment's notice, to any healthcare worker. At a personal level, Julie is looking forward to the day when the behavioral root causes of poor patient care are drastically reduced—or even eliminated—because of this innovative approach.

Julie is an accomplished author, speaker, and international thought leader. In her keynote presentations, Julie incorporates extensive experience, humor, and real-world examples from her consulting engagements and one-on-one coaching relationships. Audiences at all levels say she brings a masterful clarity to even the most complex change issues and leaves them with tools they can put to use immediately. In 2016, she was honored to receive the Outstanding Contributor Award for lifetime achievement by the Association for Behavior Analysis International.