



# International Society for Occupational Ergonomics & Safety

Spring 2024

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- The XXXVI<sup>th</sup> Annual ISOES Conference is August 5-6, 2024!

Register now to attend in-person or remotely.

<https://isoes.info/conference-registration/>

## Updated Website Brings New Benefits

- Steve Fleming, BSE, MBA, CPE

If you have not visited the ISOES website recently, please surf over to [www.isoes.info](http://www.isoes.info) to see the latest! ISOES has recently updated its website to be more user-friendly. Some of the practical changes include a members' area, automated membership renewals, and access to conference proceedings. The new website will also make it easier to perform content updates and effectively share those updates with the ISOES membership.

ISOES is among the most affordable ergonomics and safety societies, offering 1-year and 2-year renewal options for students and professionals. The membership dues are used to further the mission of ergonomics and safety students and professionals through our outreach & research grant programs, student awards, and generating proceedings for each year's conference. Many of our members have unwittingly allowed their membership to lapse simply because they did not receive renewal reminders in the past. With automated membership renewals, you will never miss a renewal again!

To access the members' areas of the website, log on using the same credentials used to purchase your membership. We also strongly encourage our members to update their profiles for the searchable online membership directory. Finally, a big thank you goes to our Webmaster, Dr. Marc Snell, for leading this great effort!





# Integrating Behavior Based Safety into Ergonomics

- Richard Wyatt Ph.D, PE, CPE, CSP, CQE

Behavior Based Safety (BBS) has evolved over the past 30 years from a couple of Psychology professors to a lot of big-name companies promoting BBS. I know in the Insurance community there's a whole area of expertise devoted to teaching BBS principles. The most common core of BBS, in my opinion, is to think about what you're doing and think about the best or safest way of doing a job task. For example, an electrician should make sure an electrical repair job is at a zero-energy state or locked out. Employees have injuries because they get in a hurry or want to take short cuts. I remember an employee who told me he didn't have time to use a crane, so he elected to manually lift a 100-pound part. Bypassing lifts and other work aids only adds to the stressors on the body.

My personal functional definition of how to integrate BBS into Ergonomics involves an even simpler approach. I've seen a lot of employees who don't stop and think about setting up a work area and keep the work on the floor. Let's pretend we are restocking shelves in a retail store. A lot of employees will place the box they are working from on the floor. They then bend forward and back to get the merchandise and place it on the shelf. Is this good ergonomics? Of course not. But people aren't thinking about "the best way to set up this task".

My advice: Develop some one-page training tips that contain the method you'd like to avoid (e.g., the box on the floor), and beside it put some tips and photos of some common sense ways to integrate ergonomics into the task. Hopefully, some of these tips get locked into the memory bank and ergonomics becomes second nature.

# NIOSH Prevention Through Design Award Nomination

- Jim Borchardt, Construction Ergonomics LLC

Sang D. Choi, ISOES' 29th President (2028-19), was nominated for NIOSH's 2024 Prevention through Design (PtD) Award in partnership with American Industrial Hygiene Association (AIHA), American Society of Safety Professionals (ASSP) and National Safety Council (NSC). Contributions of all nominees were honored, and the winner for the NIOSH 2024 Prevention through Design (PtD) Award was announced in Columbus, OH at AIHA's Spring Conference on May 20 - 22, 2024.

Sang is currently a Professor of Global and Community Health at George Mason University, Fairfax, VA. For the past couple of decades, in an effort to



Dr. Sang D. Choi

ISOES Past President (2018-2019)



make NIOSH's goal of Research to Practice (RtP) a reality, he has designed the following Research to Practice, Practice to Research (RtPtR) model (shown left). This model's stated objective is to bridge the long-standing gap between academic Safety, Health and Ergonomics (SH&E) researchers and knowledgeable practitioners. This model of continuous collaboration provides an effective roadmap for SH&E Professionals to achieve enhanced Prevention through Design (PtD) solutions to industry's SH&E problems. He has promoted the benefits of this model in numerous papers and presentations in/at national & international journals and conferences such as Panel Discussions at ISOES Conferences in Seattle & New Orleans and HFES Conference in Washington, DC.

## ISOES Booth #273 at ASSP Safety 2024 Conference and Expo

- Jim Borchardt, Construction Ergonomics LLC



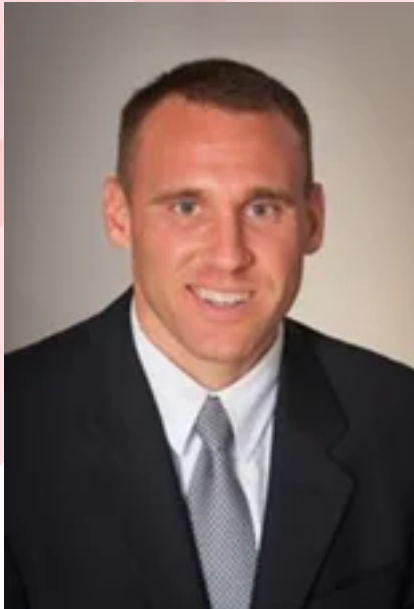
For the seventh time, ISOES will be an exhibitor at [ASSP Safety 2024 Conference and Exposition](#) in Denver, CO USA at the [Colorado Convention Center \(CCC\)](#) August 7-9, 2024. The [CCC](#) is located in downtown Denver and is the 12<sup>th</sup> largest convention center in the US with 2.2 million square feet for exhibitors and presentations.

Our [ISOES Booth #273](#) joins 550 National and International Exhibitors and is strategically located near universities exhibiting their Safety/Health and Ergonomic (SH&E) programs.

Our Joint ISOES/SISE Conference is being held 3 blocks away from the CCC at [Staybridge Suites Downtown Denver](#) on August 5 & 6, immediately before Safety 2024. If you are participating in-person (presenting or attending), you could have "complimentary" access to the Safety 2024 Conference and Expo by "volunteering" to work at our ISOES Booth. For details, contact Jim Borchardt at [ConstructionErgonomicsLLC@gmail.com](mailto:ConstructionErgonomicsLLC@gmail.com) for specific details.

# How Insurance Carrier Loss Control Consulting Impacts Client Financial Performance

- James Vachon; MS, ARM, AIC, Starr Insurance



Insurance is not only a paper document that binds the insurer to pay losses as the result of a covered occurrence. The insurance business relationship services available need to help provide some tangibility to the transaction. Insurance Carrier Loss Control Consulting can provide this value-added component for the client. Often times the Loss Control Consultant is the only person that a client meets unless there is a large loss. Loss Control is a professional service that must be perceived as a benefit to the client. This requires an investment in the insurance carrier training program, not only in the technical component of the job, but also in relationship management and leveraging technology to deliver impactful consulting services. Loss Control interactions with insured clients present a key opportunity to leave a positive impression that they will want to partner together, in the long run, to help stabilize and even reduce insurance premiums. The relationships that Loss Control builds over time should impact a client's risk management program by assisting them in the identification of loss-producing exposures and providing guidance in the elimination or control of these exposures. Loss Control consultations should be viewed and presented as business consulting

that can have a return on safety investment.

The primary Loss Control consulting objective is to make safety a major contributor to both growth and profit. Workplace safety is not just the right thing to do, but a profitable investment. A portfolio of safety solutions comes with its own expected level of investment returns because workplace safety is also a profitable investment opportunity. Investments in long term capital expenditure safety solutions offer competitive returns relative to the market with relatively limited investment risk. When convincing insureds to undergo a safety solution investment, the Experience Modification Rating (EMR) is often used in this effort.

The EMR helps establish a baseline for effective safety performance and benchmark against best-in-class risk management programs and organizations. The Experience Modification Rating (EMR) is a metric used by insurance carriers to gauge both the past cost of workers' compensation claims and the future probability of additional claim costs. The EMR is determined by actual losses divided by expected losses according to respective three-year payrolls. An employer with an experience modification rating of 1.00 is exactly average in its claims cost loss experience compared to businesses of similar size and industry. The EMR represents a primary determinant when pricing insurance coverage, with approximately 70% of an insured's premium tied to actual accident costs, which is where loss control consulting makes the most impact.

Other insurance carrier loss control consulting tactics used to help convince their clients to implement safety and risk management programs include 1) Cost Benefit Analyses, which sums the potential rewards expected from a solution and then subtracts the total costs associated with taking that action, 2) Cost Allocation Programs, a method used to fairly and equitably divide the shared costs of an organization to each of its programs and 3) First Reporting Efficiency studies showing the longer it takes to report a claim, the higher probability of litigation and increased lost time days associated. We will now review a few Loss Control consulting examples where these concepts are applied to solutions-oriented loss control consulting:

1) After reviewing a company's loss history, the Loss Control Consultant noticed a frequency of slips and fall claims. After working with their insured to implement a slip resistant footwear program, the losses were reduced by

40%. To show what that's worth to the insured, the Loss Control consultant reruns the client's loss experience modification rating using the assumption that they have already implemented this slip and fall control four years ago - in other words, what would the client's EMR be now if the client had the chance to implement this four years ago. The answer is that the client's experience modification rating would be, for example 1.04 instead of 1.10, which would result in a standard premium of \$15K lower than it is now. So, this approximately \$1K a year investment in footwear achieves a \$15K per year return.

2) After analyzing an insured's loss history, the Loss Control consultant noticed a frequency of manual material handling claims. If the insured implemented a safe lifting program, the losses would be reduced by 40%. To show what that's worth to the insured, the Loss Control Consultant put together a cost benefit analysis model showing the benefits expected over the next 5-10 years if the program was implemented today. As a result, the total net present value of the safe lifting program recommendation is \$5K and the expected return is 5%.

3) The Loss Control Consultant noticed that the insured reports 55% of all claims more than three days after the accidents happen. Based on the types of claims reported, the Loss Control Consultant ran a report showing that claims reported within three days would cost on average of 15% less than claims reported after three days. This tends to happen because if the insurance carrier's Claims Team can get to the claims quickly, they can better control the costs. The investment required to get claims reported quickly is nominal at best, so the return should be extremely favorable.

4) The Loss Control Consultant recommends a cost allocation program be implemented, which would involve budgeting the company's total insurance costs across all of the divisions of the company. If any division's experience comes in worse or better than expected, it would impact the base from which their annual performance bonuses are determined. The cost allocation concept is a great way to push down the importance of safety and a sense of responsibility for safety to the company's front line manager level. The only cost to the company directly tied to implementing this is the time someone spends setting goals and ensuring they're achieved.

Working with your insurance carrier loss control consultant to establishing leading and lagging safety indicators helps to achieve key performance indicator, KPI goals. Not only do achieving these KPI's impact reduced labor, material, equipment, and administrative costs but also insurance premiums as a result of accident cost savings. This translates to a company's improved competitive position and increased profitability.

## Clinton Global Initiative Award

- Chiemezie Anthony Udemba PhD Student, The Ohio State University

Receiving the Clinton Global Initiative (CGI) award at such an early stage in my life has been an incredible honor and privilege. I am on a mission to build a legacy focused on improving lives. Despite the enormous uncertainty, I am driven by a desire to help those affected by the global pandemic. It takes bravery to help people, and an action carried out by one can illuminate the lives of many.

As a young man growing up in a war-torn country, I saw many people who were homeless, poor, uneducated, and mourning the loss of people dear to them. I learned to take every day as a new chance to learn more, live more, dream more, give more, love more, and ultimately become more. However,



most of the greatest lessons that have helped me grow as an individual have come from difficult situations. The principles such moments teach and the evolution of character it drives dwarfs the momentary discomfort. Embrace difficult situations, learn the lessons they confer, and keep growing.

I aim to teach others to extend a helping hand, offering a clean start to others as part of a continuous journey. I carry with me a power stronger than a magnet charged by the sun, knowing that every hero has a story. My CGI project is the Nigerian Hand Hygiene Training Even with Poor Water Quality. As a passionate person it enables me to change the world, society, and change me as a person as well as change the world to be a better place. My project was targeted to address the critical issue of poor hand hygiene practices exacerbated by inadequate water access in rural communities in Nigeria. Insufficient access to clean water often hinders effective handwashing, contributing to the spread of preventable diseases. This initiative targets underserved communities where water scarcity is prevalent, leading to increased vulnerability to waterborne illnesses.

The Hand Hygiene Training with Poor Water Project explains current training and locates the hurdles to implementing effective hand hygiene under these unique conditions. This research aims to:

- Explain the current treatment.
- Discuss possible future treatment (One-day national hand hygiene event).
- Use simulation to describe the concepts of patient zero (Strategic engagement).
- List the major issues faced by healthcare entities in this virus disease situation.
- Use mathematical models of virus transmission (Hand hygiene self-assessment framework, sustainability, and patient safety situation analysis).

Finally, I am here today as a representative of the International Society for Occupational Ergonomics and Safety (ISOES) and a past executive committee member, acknowledging the invaluable support and opportunities you have given me. Every person is worth knowing, and we all have the potential to overcome every trial. My challenge to you is to stand out and persist in pursuing your purpose in life. Remember, you are victorious.