Scott Fowler

Hello everyone, welcome to the Case for Safety Podcast. I'm your host, Scott Fowler. Appreciate you being with us today. Now, falls from height and exposure to hazardous energy are consistently among the leading causes of syndrome of serious injuries and fatalities in the workplace. What can be done about this? Earlier this year, ASSP brought together EHS professionals and industry leaders.

To examine that question and work to identify solutions. And one of the industry leaders who participated in those convenings is with us today to share her thoughts on what came out of those meetings and where we go from here. She is Chris Cain, executive director of CPWR, the Center for Construction Research and Training. Chris, welcome. Glad to have you back on the show.

Chris Cain

Thank you, Scott. I'm glad to be here.

Scott Fowler

Looking forward to the conversation. A lot to dive into here, so let's get to it. I mentioned at the top just there, there were these two convenings that were held earlier this year, one in the Chicago area and the other in Washington DC to really focus in on, you know, how we can prevent serious injuries and fatalities, you know, among falls from height and hazardous energy. So, I thought we could start with just kind of an overview of, you know.

What the per what you know, get into more detail about what the purpose of these convenings was and what made CPWR want to get involved.

Chris Cain

Well, I think the purpose of the convenings is to keep the focus on the hazards that cause the biggest impact, right? We call SIF now, but we've always known that the largest impacts are from fatalities and from those serious injuries. Sometimes we look at it as days away from work.

So, looking at it from the different statistical angles falls and hazardous energy are definitely at the top of the list. In construction, falls are at the very top of the list. And the focus on falls is something that we have worked on tirelessly for many, many years, trying to make a dent in the number and rate, the number of construction fatal falls and the rate of construction fatal falls in our industry. And it is an unending battle to do that.

So, the idea of participating with ASSP in these convenings was exciting to me. Thinking about the different groups that were convened, they're not always the same people I talk to on a daily basis. So really listening to the different perspectives that were in both rooms was refreshing and encouraging and the ideas that came out were not necessarily what I would have thought not necessarily what I would have thought in every case. So yeah, I was really excited to participate and really glad I was there and I learned a lot from the groups in those two rooms.

Scott Fowler

Glad you mentioned you know kind of some things that may have gone against preconceived notions of you know in in these areas we'll get to into that in a little bit but, I mentioned you know these are two of the leading causes of serious injuries and fatalities that exposure to hazardous energy and falls from height but beyond that when you think about you know your work the work that CPWR does particularly with falls, but hazardous energy as well you know why is it so important to really focus in you know, on these two areas to help, you know, prevent those serious injuries and fatalities.

Chris Cain

Well, truthfully, we have not made as much progress as we should have. thinking about the number of construction workers in particular who die from being at work and on the job each year is consistent and the rates of those fatal injuries have not, in particular with falls, have been pretty flat over the last ten or so years. I think keeping the focus on these hazards is essential.

I often really try to understand the data and ask a lot of questions about the data and see what we can learn from the data, and it always points to the same thing. And it doesn't matter the year, it doesn't matter the focus, it's about small employers, particularly in the construction industry. And we can't stress that enough. Really understanding how the construction industry works is the smallest employers don't have a lot of resources to devote to prevention efforts.

They're busy keeping the doors open and the work flowing and there's a vast, overwhelming majority of small employers in our industry. So even if we see that some construction employers grow over time and learn and learn how to control these hazards, they're also growing and learning how to be a better business at the same time. So, they're growing the size of their business.

But there's always new construction firms coming in. and always new construction firms being created. So, thinking about the unending battle to reach the small employers, it's exhausting and it's also it keeps us on target.

But there's always employers in the pipeline behind them, the smallest of the smallest starting out their business with a lack of resources in place. The work is unending and we ha we can't give up. we don't know how bad it would be if we did give up. We would give up on these issues. we expect it would be a worse experience than it's what's happening now, particularly with Falls. So, we're gonna stay at it.

Scott Fowler

I I'm glad you mentioned that. I because I know the continuing education is something you and CPWR do such a fantastic job of, you know, for these small employers that they continue to keep learning to your point, you know, as they grow, that, you know, they understand the hazards they're facing and how to mitigate those, that it's, you know, it's a continuing learning experience as the company itself grows.

Chris Cain

Absolutely, and the more tools they have at their disposal the better. You know, and there's lots of ways to reach small employers and there's lots of tools that are of value to them and we're always looking for new ways to share good information so that they can put the controls in place that need to be in place to eliminate hazards.

Scott Fowler

Sure. And I know that's, you know, one of the big things that, you know, these convenings were all about is, you know, how to get them that information, get the people, you know, get people talking, get them in the same room about what's working, what's not working.

And continuing on that note, you know, in your conversations at these convenings, you know, what were, you know, some of your big takeaways, some things you learned, you mentioned you know, things you were surprised by. You know, what were your big takeaways from these conversations?

Chris Cain

Well, I was very, very encouraged because a lot of aside from the specific hazards of hazardous energy release and falls from heights, you know, the framework about prevention through design really rose to the top in both Chicago and in Washington. Both of those meetings recognized that we have to move the controls further upstream.

When we think about controlling occupational safety and health hazards, we think about the hierarchy of controls, right? We want to eliminate the hazards and, in some cases, you can't completely substitute the need for working at heights, right? Sometimes we do have to work at heights, but then how in in a case like that, how do you apply the engineering

controls to that hazard? And by keeping the focus on that will change the discussion, right? And it's less about personal protective equipment and choosing and maintaining the correct anchorage point to arrest a fall. It's really about putting up the guardrails, right?

And thinking about how we can always engineer out the hazard if humanly possible. And planning for engineering out the hazard even before, I'm gonna date myself, before the pencil hits the paper on the design process. But it's all done on computers now. But thinking really about in the design phase, like planning for the construction, planning for the work and planning to eliminate the hazards along the way is what we want to see.

Scott Fowler

That's when you say moving the hazards upstream, thinking about it, you know, at the beginning of the process so, you know, certain hazards never come into being to put it one way, that you're thinking about it so early that it doesn't come back down to, this person's at height, we need to give them the harness. You found a way to keep that you know, keep them protected that so that PPE doesn't come into the picture.

Chris Cain

Training plays a much smaller role if you can design out the hazard, right? You don't have to train people front how to use personal protective and safely work at heights if you've eliminated the hazard.

Scott Fowler

Kind of staying on this, you know, what were some of the you know common themes that emerged? I mean, it seemed like in both the Chicago convening and the Washington DC convening, different locations, different participants, that a lot of the findings were the same. You know, what were some of those things that that emerged you know from both of those meetings?

Chris Cain

Well, I think one of the things themes that emerged was that we have the good standards, right? The standards that ASSP/ANSI you the work that's done through ASSP and your ANSI standard setting bodies are good. They do eliminate hazards, they control hazards. It's really about how to take the technical tools out of those standards or create the pathway for those standards to get onto job sites. And thinking about the opportunities that exist to better spread the words about the technical information in the standards, I think that it's almost limitless.

There are so many different ways that we could share the information that would impact the outcome, would impact the number of workers who die on the job, I think, if we can do a better job of getting the information into the hands of people who will use it. So, I think that was a theme of the meetings and there were a lot of creative ideas that were thrown around in that within that theme that I think are worth exploring or worth doing some research on.

Scott Fowler

You mentioned like you know, getting the standards into the hands of people who need them, you know, going back to your note about small employers, things like how do you think we can, you know, create that pathway that we, you know, as you mentioned, we've got so many great resources out there. How can we get, you know, create that pathway to get to the people who need them so they can help keep their workers safe?

Chris Cain

I think there are a few different ways in in just in looking over the results of the whitepaper that you published after the meeting is are there tools, are there infographics, are there booklets or kind of at CPWR we call we call it like translating the text tech at CPWR we call it translating the technical information into usable and actionable information, we call it research to practice.

In the case of ASSP standards, it's more about standards to practice. How do you bridge that gap and what are the mechanisms and the best ways to do that? And I think there's a lot of ways partnering with the industries affected that that that could happen. A lot of creative ways.

One thing that I was intrigued by was in a couple of the groups and the discussions during the meeting and during the different, the report identified a few interesting things that came out of the discussions in both meetings and one of them was a sliding scale of cost based on employer size and that was intriguing.

I just don't know how it would be implemented, but I think thinking about if smaller employers wanted access to something in the A10 series or something in the fall protection standards, the specific technical ones that are written by your committees, you know, how would that work?

It's an intriguing process, but just to get the entire standard into the hands of people who wanna use it would be a huge win, right? And in removing economic barriers would be a huge win if that were possible.

Scott Fowler

You mentioned the whitepaper that came out of this and we'll be sure to link to that in this in the show notes to the episode. Yeah, the report kind of talking about, you know, the different findings, what came out of these convenings. Or talking, you know, a lot about organizations of any size.

You could have, you know, you've got small, medium, large construction employers, you know. How regardless of the size, yeah, how would you encourage organizations, you know, to use that report, you know, to you know, improve conditions on their work sites and to help prevent these kinds of incidents?

Chris Cain

I think if folks were interested in hearing ideas that may be different from what they've always done and hearing things that kind of contradict their own line of thinking about how to address occupational safety and health standards in general, I think the report would be a good thing to look through. Drawing from really interesting people who practice occupational safety and health at both of those meetings.

In what they said in a candid and anonymous and collaborative environment that was really judgment free, just exploring different ideas and listening to each other. It's not a consensus document, the whitepaper, but it does somebody listened.

I think the team that ASSP worked with looked really hard, listened really hard, and identified some great approaches to occupational safety and health in the whitepaper that like I said, do go beyond false and lockout/tagout. And just illuminating ways of looking at hazards and controlling hazards in in ways that maybe you haven't thought of before.

Scott Fowler

Sure. And you know, one of the goals of these convenings was really closing that that feedback loop, that there maybe was, you know, a gap within the EHS community. And that was like, that, you know, getting people talking can, you know, help remedy that. Why do you think, you know, that that gap in the work that you do?

Why do you think that gap exists and, you know, how can we, you know, start to have you know, more of these conversations so we can, you know, get that good data, that good information out to, you know, EHS professionals, industry leaders, and beyond.

Chris Cain

Truthfully I think I felt most refreshed listening to people in the Chicago meeting. And I don't know if that's what you want to hear, but for me to get out of the beltway as they as they call

it, get away from Washington DC and listening to people who don't work locally, is something that I found really helpful.

A lot of the folks in the DC meeting were people that I know and work with here in this area. So, listening more to the contractors who are present in Chicago, the practitioners who were implementing standards on the job, hearing what barriers they have to implementing standards closer to the work face than we are in Washington D C.

I thought was really, really refreshing and the things that they identified as ways to move forward were novel to me and also encouraging because there's some contractors in particular, construction employers who were at your meeting in Chicago that I thought were phenomenal and had some great ideas that we need to listen to more.

Scott Fowler

Sure. You mentioned barriers there. What were, you know, some of the thing we've talked about, you know, common themes. What were some of those barriers that that they identified for, you know, contractors, EHS professionals, whoever it might be what yeah, we talked about, you know, moving you know, taking more prevention through design perspective, things like that. But what were some of those barriers that they identified?

Chris Cain

Well, one I saw a theme come out of the meetings was around training. training shouldn't be a check the box matter. It's not just a record keeping effort that needs to be done. It's really about effective means of training and means of communication that convey competence versus sitting through a lecture kind of training.

Yes, competence more than completion. I think that was in the report actually used that term. And also competency of the instructor. You know sometimes that has a huge impact on what is taken away from the training is the experience, skills and competency of the instructor.

I think another theme that came through was technology, the good and the bad. That there's hesitancy around technology, in particular of people older potentially than a certain age. I'm not sure what that age is. but how technology is applied but how technology is deployed, how it's used.

What the objective of implementing technology is and I'm I think technology we talk a lot about AI and the use of AI on construction sites and around construction safety and health training but that's to me AI and technology are we can be used interchangeably because AI is a technology to treat whatever data you're collecting, but how it's used, what are the parameters you're applying towards it.

What are the privacy issues and reliability issues in the use of technology? It's something that I'm hearing an awful lot about, and I did hear a lot about in these in these meetings and always keeping the worker in the center and that focus because that's what's the technology is for is to identify and eliminate hazards.

Scott Fowler

I'm curious thinking about technology like in the fall protection space, what are I wonder whether it's, you know, your personal experience or through these convenings, what are some of those applications that folks are finding to, you know, implement technology in in the fall protection world?

Chris Cain

You know, at CPWR we've funded well we at CPWR we fund w a series of studies we call small studies where we invite investigators to apply for funding to do one-year projects. We get a lot of technology related applications, but some of the ones that we have looked at that seem to be promising is the use of technology to detect whether or not an engineering control is compromised. And this one particular study that we funded,

I was really encouraged by, was using drones during non-working hours, during high-rise construction to see if the drones could detect and the algorithms could be developed and the codes written to automatically detect the missing fall protection components like board rails that have been removed.

Cause I don't know if you took the same OSHA courses that I took over the years about multi-employer work sites, right? So, you have so many different employers who are responsible for different things on a multi-employer job site. You may have one employer who's responsible for moving materials in from a hoist that has to come through a wall opening.

But you may have another employer who's responsible for putting up the guardrails. And so you have multiple employers who are playing a role. One needs to take them down to get the materials in, another needs to come and put them back up. And there's you know more opportunities for errors. So how do you better detect errors in complex job sites.

And I think that study we did was encouraging because it showed that you could use drones, you could use AI and the algorithms to look at job sites to detect missing fall protection or in particular guardrails. And so that was an effective use of technology. It proved it could be done.

To look at those upstream controls that we're always striving for in our industry, right? we have had a lot of researchers suggest that we they study using drones to observe worker behavior. But the last thing we want to do is send a researcher to shoot a drone over workers working at heights and startle them and cause them to potentially lose their footing and potentially suffer a fall.

So, thinking about, you know, I think a lot of times we're hearing about technology being used to monitor workers and to look for behaviors that contradict a workplace rule. And to me that's not the right use of technology. I think the right use of technology is to remain consistent with our profession's hierarchy of controls and look for ways to eliminate hazards.

Use technologies to help eliminate hazards and think about how technology could be used in a way that's not really consistent with safety when it's touted by vendors as a safety intervention. So, it's still that's kind of like, yes, I see that as a big solution in some cases, but it's also there's a s a lot of distrust out there from a lot of different levels on technology. And I think it just described one particular reason why workers in may distrust technology on the job.

Scott Fowler

Right. Shifting gears a little bit and looking ahead, you know, the work of these convenings is going to continue through our standards-based user groups and other ways. The SBUGs, as we're calling them, will you know, help do this, you know, validating the findings from the convenings, identifying additional implementation barriers and testing practical solutions. So that's one way. And, you know, looking at future convenings, you know, all of these elements together, how do you see them really creating impact moving forward, how we keep this momentum going?

Chris Cain

Well, I think one way you mentioned testing interventions or testing, you know, different ways to get good information from the standards out in consumable and digestible pieces. And so a meeting can have many purposes, right? And thinking about not just relying on the expertise in the room to well, that's a huge thing.

Think about in addition to relying on the expertise in a particular room to move our profession forward, thinking about the opportunity that having professionals in our field in the same room gives us to actually evaluate this type one type of intervention, A versus B type of testing, just with a group of professionals.

I think is a great opportunity and I'd love to talk to ASSP further about a few ideas because we've done some A-B testing on different ways to use safety and health information to reach workers. We may want to do some together do some A-B testing or advise ASSP how to do good A-B testing on how to influence safety and health professionals to use standards.

So, thinking about different opportunities in convening, there's so many. There's so many. And it will further our profession and improve worker safety the more we do.

Scott Fowler

Right. Absolutely. Yeah. That's critical to, you know, as you just said, making sure everybody gets home at the end of the day and that collaboration is key to all this. We all have to work together and talk to each other, you know, to work towards that goal. Well, Chris, I will give you the last word.

Chris Cain

I think, you know, at the end of the day, the talking to people who aren't like you and who don't think like you is really how we can use the membership of ASSP and the people who use the standards and other folks we how we can I think best convene and invite discourse that is expanding for all participants is I think a really great way to kind of continue this momentum that ASSP has set in its meetings in Chicago and Washington DC so far.

Scott Fowler

Absolutely. And we appreciate, you know, of course the participation of CPWR and so many other organizations who have who have joined this conversation as we've been talking about it's critical that, you know, we all work together to help prevent these serious injuries and fatalities. So, I thank you again for being part of that conversation and for coming on and sharing your insights about that today. So, thank you so much again.

Chris Cain

Thank you, Scott. Have a good afternoon.