IHSA SAFETY Podcast

transcription

Episode 4: Fall protection and when to use it

Host: Michelle Roberts
Guest: Brian Barron

Announcer

It is time for the *IHSA Safety Podcast*.

Enzo Garritano:

Welcome to *IHSA Safety Podcast*. My name is Enzo Garritano and I'm President, CEO of the Infrastructure Health and Safety Association, again, otherwise known as IHSA. I want to welcome you to this new series of podcasts regarding fall prevention in construction. Despite ongoing efforts by construction employers and safety professionals to prevent falls, provide fall protection systems, and train workers, falls continue to be a leading cause of death in the construction industry. According to recent WSIB data, 13 construction workers died from falls from a height in 2019 and 2020. Whether we go back five, 10, or 15 years, falls have been either the number-one or number-two cause of construction traumatic fatalities, no different in 2019 and 2020 when 13 workers tragically died as a result of a fall. The number of workers who experienced a lost time injury or an injury bad enough to skip the next day's work in the construction industry totaled an astounding 2015 over the same period, 2019 and 2020.

To raise awareness of construction falls and work with the industry to better prevent them, IHSA in partnership with the Ministry of Labour, Training, and Skills Development launched the Falls Awareness Week campaign, which coincides with the U.S. National Safety Stand-Down to prevent falls in construction campaign. This year marks the fourth annual Falls Awareness Week, where we encourage employers and workers to schedule things like strategic discussions, meetings, and/or safety talks to focus on preventing falls. This year, due to COVID-19 restrictions, business leaders, labour organizations, community groups, and other construction industry stakeholders will participate in virtual or socially distanced events from May 3-7.

This *IHSA Safety Podcast* will focus on fall prevention in the construction sector and include our featured guest, Brian Barron, Senior Manager of the Construction Health and Safety Program within the Ministry of Labour, Training, and Skills Development. We'll sit down with Brian to discuss legislative requirements and enforcement issues, but also include helpful tips and reminders to assist us in preventing fall injuries during Fall Awareness Week and beyond. Your host for the series will be IHSA's Director of Stakeholder and Client Engagement, Michelle Roberts, welcome Michelle, and featuring our very special guest from the Ministry of Labour, Training and Skills Development, Brian Barron, for this series on fall prevention. Thanks for joining us today, Brian. With that, I'll pass it on to Michelle.

Michelle Roberts:

Thank you, Enzo. In this episode, we're going to be talking about fall protection, what to use and when to use it. It is common that when we think about staying safe while working at heights, many probably think about wearing a harness and tying off. So in other words, you're probably thinking of a fall arrest system. Fall arrest certainly can be an effective method of protecting you and your workers from falls, but it's not the only one. In fact, using a fall arrest system should be your last resort.

We'd really want employers to assess the hazards and apply the hierarchy of controls, and I describe that as the “good, better, best system,” so that we can determine what's the most effective and the best way to protect the workers from falls. So Brian, can you expand more on what we mean by applying the hierarchy of controls and touch on some of the ways employers can meet those needs?

Brian Barron:

Yes, thank you. So whenever possible, workplace parties should eliminate the hazard. Within the hierarchy of controls, elimination is your first priority. When you cannot eliminate the hazard, you work through the hierarchy with the last option being personal protective equipment. Examples of this could include changing the work schedule, so arranging the work to take place after permanent safety features such as guardrails, walls or other structural features have been installed, or potentially even moving the work location, so relocate the work to a place where fall hazards no longer exist. A good example of this would be where you build a roof on the ground and hoist it into place.

However, if those aren't options, then guardrails or floor opening covers should be your first choice when it comes to preventing falls. They provide workers with the best protection because when erected properly, they actually eliminate the fall hazard. With guardrails in place, workers can't fall because there is no open edge. Another reason guardrails are a preferred method of fall protection is that they protect all the workers that come into the area, not just one worker. Protection is not dependent upon each worker remembering to tie off, as is the case with travel restraint or fall arrest systems. Once guardrails are up, workers can move freely through the work area as though they were working on the ground with no risk of falling.

From time to time, you may have to remove guardrails to allow material delivery or access certain equipment, or even build walls in their place. Remind your workers that before guardrails are removed, they must erect signage and barriers informing workers of the fall hazard, and they must all be protected by another form of fall protection, for example setting up a travel restraint system that prevents the workers from exposure to the fall hazard as soon. As it's possible, put the guardrails back in place.

It's important to be familiar with the requirements surrounding the guardrails and the structural requirements on how they need to be built. Refer to Section 26.3 of the Construction Projects regulation to review all the specific requirements for guardrails. A good example of this is when erecting a guardrail system along the open edges of a floor, install the guardrails no more than one foot from the edge, they must also have a top rail that is between 0.9 m and 1.1 m in height, have a mid-rail and a toeboard that is at least 89 mm high.

Michelle Roberts:

Okay, so thank you for that. So we know that in that hierarchy of control system, trying to eliminate the hazard is the preferred approach, and you mentioned guardrails being preferred. You also talked about floor coverings. Can you expand on that a bit?

Brian Barron:

Yeah, so a significant number of workers who are injured by a fall, fall through and opening in a roof or floor rather than off the edge of the structure. That is why floor opening covers are so important. Guardrails are still your best option. Ideally, you should build guardrails around all floor openings, however we know that's not always possible. Depending on the size and position of the opening, you may need to use a floor opening cover in place of guardrails. In this case, the cover must first completely cover the opening, so there can't be any gaps, it has to be securely fastened, so a worker couldn't pick it up, adequately identified as covering an opening made from a material that's strong enough to support all the loads to which it might be subjected to, and capable of supporting a live load of at least 2.4 kN per square meter without exceeding allowable unit stresses for the material used. In other words, meeting the same strength requirements as the floor surrounding the opening.

When you label opening covers, make it stand out, use brightly colored paint and make wording clear. It should say something like, "Danger: floor opening. Do not remove, do not load." It may be surprising, but we do have workers who have fallen through an opening when picking up an opening cover thinking it was extra material.

Michelle Roberts:

Oh, wow. Yeah, I can imagine that. And so that's a really key important piece there of clear communication, making that sign very visible, obviously marking it as you described. I'm Michelle Roberts, and we're continuing our discussion with Senior Manager Brian Barron, the Construction Health and Safety Program with the Ministry of Labor, Training and Skills Development. We also have heard many concerns related to skylights and workers working around skylights. Can you touch on that one, please?

Brian Barron:

Yes, this is a significant issue. Workers don't perceive fall hazards due to skylights being in place. So when they're up on the roof, they'll see a skylight and they perceive really that skylight as really kind of the same as that roof material. But the fact is skylights rarely have the strength to resist the load of a worker stepping onto or falling into a skylight, so potentially worker backing up into one and falling, tripping over the curb, falling into it, that sort of thing. It's important to remind your workers to be careful around skylights. Before the skylight has been installed, you should treat the skylight opening the same as any other floor or roof opening, install a guardrail or opening cover. And even after the skylight's been installed, it's important to protect them from worker stepping onto them or falling into them.

Michelle Roberts:

Okay, thanks for expanding on that. Our key messaging here that we want to reinforce is that falls are certainly preventable and it does take effort from all the different workplace parties to assess the hazards and select the most appropriate form of protection. So you've touched on the guardrails, we talked about floor coverings, hazards related to working around skylights. Let's talk about the probably most commonly seen fall protection, and that's personal protective equipment, whether that's fall arrest or travel restraint systems.

Brian Barron:

Yeah, so if you can't use guardrails or opening covers, because in some cases you just can't, you have to rely on either a travel restraint or fall arrest system. They're really kind of your next best option. Most of you probably used a standard fall arrest system with a lifeline attached to an anchor, but you may not be as familiar with travel restraint. In most cases, travel restraint is the better option over fall arrest.

Michelle Roberts:

Okay, can you touch on that? Why is travel restraint the better option?

Brian Barron:

Yeah, fall arrest system really prevents you from hitting the ground in the event that you fall. So if you fall over the edge, fall off of a roof, you're effectively left sort of dangling by a rope, so it arrests your fall. A properly set up travel restraint system, however, prevents you from reaching the fall hazard. So with a travel restraint system, the lifeline is measured to be just long enough to allow you to reach the edge of the work area, but not long enough to let you go over. Despite this big difference. Travel restraint systems are still similar to fall arrest systems. They both use the same equipment, so CSA approved full body harnesses, lanyards, rope grabs, and lifelines. Plus, both types of these systems required to tie off to an anchor point meeting the prescribed strength requirements. So both fall arrest and travel restraint are forms of fall protection, personal fall protection, but they only protect one person from the hazard of falling. A guard rail, as mentioned earlier, protects everyone who is working in the area from the hazard.

Now, I must state that it's really important when using a fall arrest or travel restraint system to select an appropriate anchor. You must inspect all of the fall protection equipment and ensure the system is in good shape and meets all the manufacturer's recommendations. It's also important to note that the equipment is used in accordance with manufacturer's instructions. Not all pieces of equipment are designed for fall arrest, where others may just be designed for travel restraint. Despite multiple different options being available for protecting workers from falling, we still see workers not tying off around fall hazards, often in the roofing trade. Regardless of what we may think, falling from any height will typically result in a significant injury or unfortunately death. None of us are immune to the effects of gravity and we can't control how or where we land.

Michelle Roberts:

Well, thanks, Brian, and that's certainly the most important piece there is we're not immune to that, and we need to take all efforts to protect ourselves and prevent those falls. So thanks for sharing those tips related to the hierarchy of controls, the preferred method of fall prevention, and the different systems we can use and most appropriate time when to use those. So we do want to encourage all those listening to certainly take action in preventing falls. So a reminder here is to support Falls Awareness Week. We would encourage you to have a safety talk, have a meaningful conversation with your workers about the hazards related to working at heights, and share some of those best practices and safety tips to ensure that everyone gets home to their loved ones at the end of the day. So you can use this podcast along with other resources available from IHSA to structure some of those conversations and be able to apply some of those tools that are in the fall prevention toolkit. Thank you, Brian.

Enzo Garritano:

Thanks for listening to this episode. In support of preventing falls from heights on construction projects, we recommend you take action, deliver a safety talk, have a meaningful conversation with your workers about the hazards relating to working at heights, but most importantly about safety tips, practices, and expectations to ensure they get home safe to their loved ones each and every day. For more on this topic, visit ihsasafetypodcast.ca for your link to fall prevention tools and resources. I'm Enzo Garritano, and thanks again to our host, Michelle Roberts and special guest, Brian Barron, Senior Manager with the Construction Health and Safety Program of the Ministry of Labor, Training and Skills Development. Thanks for listening.

Announcer

The *IHSA Safety Podcast.* For more episodes, tips and all things safety, go to ihsasafetypodcast.ca. Thanks for listening.