CSN Webinar Transcript

The S.A.F.E. Framework Approach to Prevent Injuries and Health Risks to Support Play Areas for Children

December 12, 2025

Michael Ely: Welcome, everyone, to our webinar today, *The SAFE Framework Approach to Prevent Injuries and Health Risks to Support Play Areas for Children,* sponsored by the Children's Safety Network.

The Children's Safety Network is supported by the Health Resources and Services Administration of the U.S. Department of Health and Human Services under the Child and Adolescent Injury and Violence Prevention Resource Center Cooperative Agreement for $5 million, with 0% financed with non-governmental sources.

Before I introduce our speakers, I'll hand it over to Caitlin to make a few technical announcements.

Children's Safety Network: Hi, everyone! I have a few tech tips for you today.

First, the quality of your audio depends on the quality of your internet connection. If your audio is choppy, please try to find a more stable internet connection, or listen over the phone by dialing one of the numbers in your Zoom invitation.

All participants are muted, but you can submit questions through the Q&A box throughout the event. The Q&A box is at the bottom of your screen. We'll address those questions during the discussion at the end of the webinar.

For captions, please click the captions button at the bottom of your screen. Sometimes that's within the "More" icon (the three dots) at the bottom of your screen. Click there to turn on automatic captions.

Finally, we will be sharing resources, the recording, and the slides from today's event within two weeks, and these will be available on the CSN website.

I'll turn it back to you, Michael.

Michael Ely: Great, thank you. Again, welcome to all.

My name is Michael Ely, Director of the EMS for Children Data Center at the University of Utah and a member of the Children's Safety Now Alliance. I'd like to introduce our speakers for the webinar.

Our first presenter is Dr. Heather Olsen, who is a full professor at the University of Northern Iowa's College of Education. She serves as the Executive Director of the National Program for Play Area Safety, which focuses on research and certification training for the health and safety of play areas for children.

Dr. Olsen's scholarship has concentrated on playground safety research, child injury and risk assessment, advocacy, and curriculum and instructional delivery. She has co-led three national studies conducting on-site playground safety assessments, which resulted in the co-development of 12 user-friendly theoretical models.

Additionally, she has a robust publication record and continues to serve on national and international committees for playground safety and is a reviewer for peer-reviewed scientific journals.

Dr. Olsen served as a principal investigator for the U.S. Consumer Product Safety Commission to conduct hands-on sampling to investigate the safety status of U.S. playgrounds. You can find more on that at playgroundsafety.org/research. She has also been instrumental in leading a team of researchers and topical experts for Public Health Canada and the Standards Council of Canada to develop contextual knowledge on the issue of thermal comfort in play areas for children. That research has been adopted as an informational annex in the Canadian standards.

After Dr. Olsen, we'll then be pleased to hear from Sarah Kreiss. For the first 12 years of Sarah's career, she worked as a teacher of very young children and as a university instructor. For the last 26 years, she has been the educational designer and founder of Spaces for Play, Inc.

Since 1999, she has spoken at educational conferences on the design and construction of outdoor learning environments. Sarah participates regularly in continuing education opportunities that have taken her to Prague, Berlin, and many parts of the U.S. She is committed to creating environments that reflect play theory and safety research.

The core of Spaces for Play designs incorporates an understanding of child development, safety, learning goals, and the integration of natural elements.

Thanks again to our speakers for being here. As a reminder to participants, please enter your questions into the Q&A box at the bottom of your screen throughout the presentations. I will now turn the time over to Dr. Olsen.

Heather Olsen: Thank you for the introduction, Michael, and to the Children's Safety Network for this time today—for this webinar for all of us to come together to talk about recent updates and emerging trends within public play areas for children and outdoor spaces.

I'm very excited today to be with one of my colleagues, whom I've known and worked with for the past 20 years. She'll be sharing a lot of site examples and her experience on how to take the SAFE framework into the local level.

During this webinar, you'll see a couple of QR codes. Those will lead you to checklists and resources that are publicly available and free. If you plan to reference any of the content from this presentation, please use the full citation shown on the slide to ensure accurate citation.

Whether you're here to learn something new or add to your resource toolbox, we promise to keep things short, practical, and worth your time. The webinar centers around four questions:

1. Why does this topic matter?
2. Where are playgrounds and who has access?
3. What has shaped the path to where we are at the present moment?
4. How can we each play a role in moving forward?

To begin, let's start with the "why." Outdoor play isn't just a childhood pastime—it's foundational to children's health, well-being, and development. But with children growing up in the age of generative AI and with changing and shifting climates, making public play areas more usable and thermally comfortable is where we want to be focusing.

As we move into this topic, we have to ask ourselves: are playground injuries a problem? There have been several studies in the past few years that have led us to know that playgrounds are a leading cause of recreational injuries for children 1 to 10 years old. For the last 20 years, the Consumer Product Safety Commission has shared data showing that each year about 200,000 children are injured severely enough on playgrounds to seek emergency room treatment.

Recently, we conducted a study in a very large local school district and found that, in the elementary school setting, the playground was the leading location where school-aged children received injuries. Here are some other data points: studies looking at upper extremity and head-neck injuries indicate these are common and concerning. Children are sustaining fractures, head and neck injuries, and more. A couple of these studies are highlighted in the slides.

The Consumer Product Safety Commission in 2012 released a report sharing that approximately 240 children per year are burned severely enough on playgrounds to warrant ER care. A few recent studies have also shown that playground environments can reach very high temperatures, and we know that children can receive a burn injury in less than three seconds. Most playground environments studied have been found to lack adequate shade.

As urban spaces continue to expand and city infrastructure develops, healthy spaces for children are significantly important to quality of life and livability. Children are our future, so we really want to protect these spaces so they can be used in the evenings, on weekends, and throughout the day.

This topic matters because science and research have indicated that all regions are experiencing environmental, social, and economic impacts that are attributed to weather shifts. As weather patterns shift and extreme conditions become more frequent, we must take into account how we plan and maintain public outdoor spaces for children.

One of the images you'll see was generated by Microsoft Copilot, and it's really meant to illustrate future predictions for temperature increases. We need to remember the importance of children being outside, and we need to think about our public play areas differently than we have in the past.

The second question for today's webinar is: where are our playgrounds, and who has access? Play areas for children are in nearly every community. They're found in childcare programs, schools, parks, and neighborhoods. Most often, they're surrounded by built environments with materials such as asphalt, concrete, and dark parking lots. These environments easily absorb and radiate heat at high, hazardous levels.

Who has access to playgrounds and play areas? Children. Research studies have reported that children are vulnerable to heat stress, even more so than adults. Children's bodies don't regulate temperature as efficiently, which puts them at greater risk.

When public play areas for children become too hot or too cold, they become uncomfortable. And when they're uncomfortable, play areas go unused. So if we want our public spaces for children to truly work, we need to rethink these outdoor spaces for our children.

The third question is: what has shaped the path to where we are today? Organized play areas in the United States were first created in the early 19th century as part of a response to the Industrial Revolution. In the first half of the 20th century, individual and professional organizations that valued the importance of play and learning outdoors built the foundation for organized play areas.

Toward the end of the 20th century, more and more children suffered major injuries. Taking the lead in efforts to address this, the U.S. Consumer Product Safety Commission began working to determine where these injuries were happening and the nature of the injuries. Although playground standards address many issues, injury rates continue to be a concern. Even playgrounds built under voluntary standards pose risks because hazards and injuries go beyond what those voluntary industry standards cover.

In the slide, I share a photo of the Consumer Product Safety Commission's work. They have worked very hard in the last few years addressing and looking at playground safety, and they released a new Public Playground Safety Handbook in 2025. It is filled with good information. For those of you who maintain playgrounds or who work with programs and school districts, you should consider accessing this handbook. It's a valuable, free resource that you can download.

I had the opportunity to work closely with the Consumer Product Safety Commission in 2017 and 2018 on a field-testing study. We have a lot of information on our website under playgroundsafety.org/research. I'm happy to talk more about that study. As with many projects, you do one study, you learn, and then you build on that work with the next project.

I also had an opportunity to partner with an international organization—Health Canada and the Standards Council of Canada—to study playground design priorities. It was an international study involving topical experts and survey data. You can find those reports through the links shared in this webinar.

The research confirmed what we suspected: what has been prioritized for playgrounds largely mirrors existing playground standards and guidelines—particularly safety of equipment and surfacing to prevent life-threatening head injuries. Extreme weather

challenges, fractures, and child-sized infrastructure in relation to climate and temperature have not traditionally been part of the safety equation.

I've also had the opportunity to work with a number of educators at different levels, childcare nurse consultants, engineers, and scientists for the past 30 years. Since the early 1990s, researchers and educators affiliated with the National Program for Play Area Safety have been studying the different risk factors in children's environments.

The SAFE framework is a model showing the relationships and interactions among different variables. Rather than being hierarchical in nature, these four elements interact with each other to create a safe and healthy play environment. In other words, focusing on only one element—such as surfacing—will not create healthy, active play areas and will not prevent all injuries.

Next, I'm going to briefly highlight each one of these elements and offer practical tips that you can take back and use.

The first element of the SAFE framework is **Site location and supervision**—that's the "S." As urban areas continue to grow, the environmental conditions of the site location are critical in our planning and maintenance of these spaces.

Play environments can cause adults to worry because it's impossible to predict every move a child will make, especially very young children. Adults must be prepared to supervise children at these play sites. We also need to think about how children use equipment: is it age-appropriate, and is the equipment located appropriately within the site?

We have conducted several studies on play supervision, and we offer workshops and training on this topic. We've learned a great deal through observation and by talking with the adults who are out there working with and supervising the children.

The second element of the SAFE model is **Appropriate design.** We're here today to share a more holistic view of health and safety in outdoor spaces. It's more than just the voluntary standards and guidelines for equipment and surfacing.

To promote safe and healthy play areas, we need to look at both short- and long-term health. We have a wealth of information available about appropriate design. In order to achieve more comfortable environments, we must manage and think about children's spaces so that they are age-appropriate and thermally comfortable for safe and active outdoor play.

The third element—the third risk factor—is **Fall protection.** Once a child is elevated, it's important that we protect them from fall injuries. We know that falls are the leading cause of severe, life-threatening playground injuries.

Installing equipment over hard surfaces such as grass, asphalt, concrete, or packed earth can result in serious injury or death from falls. I took a photo a few months ago, in 2025, that shows a playground with elevated equipment and no protective surfacing at all. The severity of a child's injury when they land on a hard surface can be significant, so we want to make sure they have a soft, cushioned landing surface when equipment is elevated.

One of the resources that has recently come out, which I want to share with you today, is our *Selecting Playground Surfacing Guidelines* book. It's available digitally, and we also have printed copies. If you're interested in printed copies, you can email us—we do charge a bit for shipping and handling. If you want a handful of copies for a school district or for youth programs in your community, we're happy to work with you.

The SAFE Surfacing Decision-Making Model is a four-step model for programs to use when they're selecting types of surfacing. It's written in plain language and is easy to understand. We've been studying this topic for over 30 years. The SAFE decision-making model was first launched in 1999 and continues to evolve with new research and emerging insights.

There are four factors to consider concerning safe play areas for children. The manual walks you through those factors. It's an educational resource available for free on our website under "Research." If you go to playgroundsafety.org and click on "Research," you can find it. If you'd like hard copies, let us know—we can package them up and send them.

The last element we highlight as a risk factor for children's outdoor environments is **Equipment and environmental maintenance**—that's the "E."

Nearly 60% of injuries that result in litigation list lack of maintenance as the primary cause of the injury. We've also seen chemicals that are not approved or appropriate for young children being sprayed in public environments, as well as environmental hazards from adjacent properties.

The number one goal of a comprehensive maintenance program should be the protection of children, viewed holistically. We would also encourage programs, individuals, schools, and communities to seek training and further education so they can address all the safety elements and factors present in children's spaces.

Now, where do you begin? Our final question is: how can we each play a role in moving forward?

We have an opportunity to reshape how we think about children's outdoor spaces. Whether you represent an agency, a municipality, a school district, a Head Start program, a child care program, a child care nurse consultant, or a local community group, a great starting point is to ask: *Would my playground make the grade?*

On this slide, you'll see two resources. On the left is an infographic designed for owners, managers, directors, and users. If you want to use it, let us know—we're happy to support including it in a newsletter, brochure, newspaper, or social media. Just reach out. We want these resources to be shared widely. The infographic is meant to spark conversation and action.

Next to it, on the right, is the *Playground Report Card*. It's a structured evaluation tool that helps assess the health and safety of play areas. On the back side, there's a lot of information. For example, I brought a jump rope from one of my kids. The report card asks questions such as: Are there any dangling hazards? Loose parts? It's written in plain language and helps people know what to look for. I also brought a sample of chains to show how to look for open S-hooks.

You can find this report card at playgroundsafety.org, and it will guide you through some of those environmental and maintenance hazards that can occur.

I also want to put in a plug for the National Program for Play Area Safety's certification program. The content offers insights drawn from over three decades of research and field testing. The information is comprehensive and addresses health and safety issues across research, best practices, and industry standards.

Every topic is informed by data and real-world situations to ensure relevance and understanding. So if you're interested in further training or in gaining in-depth knowledge of some of the concepts we're talking about today, please reach out to the National Program for Play Area Safety.

With that, I'm going to turn the presentation over to my colleague, Sarah, who will be sharing how, in her work, she has used the SAFE framework.

Sara – Spaces for Play: Thanks, Heather, for your work with the National Program for Play Area Safety.

I was fortunate to have a professor like Dr. Heather Olsen who inspired me as a master's student in education, while I was taking a play theory class, to completely redesign our university early childhood center playground where I was both a teacher and an adjunct professor. From that experience, I started what is now a 26-year-old design-to-build playground company called Spaces for Play.

One of the first things I always say when meeting with a client is: take all those playground catalogs and all your internet ideas and stick them under the table—for now. We really need to start with your goals and objectives for the playground. I think starting with catalogs can confuse you and send you down the wrong path.

As you look at your playground, every site will vary greatly. We're using an example here from Round Lake, a district school. Each client's challenges, goals, and objectives for their playground will differ.

In this example, there are two climbers in the space. There is no concrete leading to the ramp, so anyone using a wheelchair can't get up into that play space. The engineered wood fiber safety surface you see was well maintained and at the correct depth of nine inches, and the wooden border was in good condition.

We continued to inspect the equipment, which is something you should always do during an initial safety inspection. Many of the climbers did not meet safety standards. One climber exceeded 60 inches in height, which is not age-appropriate for preschool children ages 3–5, and accidents were reported. Many components repeated the same climbing opportunity.

Imagine a 2- to 5-year-old attempting this climber. I later found out that a school-age climber had been relocated to this preschool playground. Someone thought it was a great idea: instead of throwing away a school-age climber, they moved it into the preschool state pre-K program. But it was too difficult for the children. There is healthy risk, and then there are hazards. In my opinion, this was a hazard for the age group it was serving.

Going back to web-planning—planning on paper or digitally—a teacher or program director can't do it all, but they can step back and look at their outdoor space and ask: what are our goals?

In this slide, the teachers highlighted the learning experiences they wanted to achieve. This will be different at every school and site. You'll get different reactions and priorities from teachers about what they want to do with children outside. It's really important to engage

teachers in the process because they are the ones doing the active learning outdoors with children.

Number two: you need to address current site conditions. Are there hills or slopes in the surfacing? Manholes, drains, or pooling water in the playground? Elevation changes are something we often see. What about existing safety surfacing? Existing hard surfaces such as concrete or asphalt? Existing natural elements—should we keep them? Are some of them dead or hazardous? Are they hurting children? Or should we add new natural elements such as trees and plantings?

Number three: what is the age of the users on the playground? Are there infants and toddlers (6 weeks to 2 years old)? Preschoolers (2 to 5)? Or school-age children (5 to 12)? The playground industry breaks down age groupings in exactly this way: 6 weeks to 2 years, 2 to 5 years, and 5 to 12 years.

Number four: now is the time you bring the catalogs out. You match your learning goals and your ideas with equipment options and ask, “Does this match what we’re trying to achieve in our new playground?”

When choosing the equipment for your design, make sure that it meets ASTM and CPSC guidelines, which Heather mentioned earlier. Don’t assume that all equipment is appropriate for your children just because a company is selling it. Use your gut instinct. If something doesn’t feel right about a piece of equipment, trust that instinct and investigate further. There are products still in the industry that may not reflect best practices for certain age groups.

Number five: what do we want to keep, and what equipment would we like to remove? Make a clear decision about that. This is where using Heather’s inspection charts can help guide you in deciding what to keep and what to remove.

Number six: think about future maintenance needs. When you’re choosing equipment, consider what will be required to maintain it and estimate the annual maintenance budget this new playground will need. Don’t ignore maintenance—it’s essential to keeping the playground safe and functional.

Number seven: the dreaded financial budget. This is probably the biggest challenge. Ninety-five percent of our clients need to phase their playground over time. Very rarely can a client buy the entire “dream” playground at once.

Having a long-term design for permanent equipment—remember, permanent equipment is installed into concrete footings—will prevent what I call “buy-and-plop” planning. Too often I visit playgrounds where people have bought items from catalogs over time and just “plopped” them into the next available space. That disrupts the flow of a long-term playground design.

Instead, create your design and then slowly work in phases to achieve your goal. Don’t think of your funding as a one-time opportunity. There will likely be many phases. I see it often—clients come back to us for a second, third, or fourth phase while keeping their long-term goals in mind.

Remember that use zones—those large safety areas around structures and swings—are reserved for future structures or swings. If you place something temporary there, you may have to relocate it later, which costs more money. Stick to your plan.

Another topic I like to address, because I see this issue so often, is the height of play structures. Since most new playground projects will include at least one play structure, remember, when choosing the highest deck:

- For children under 2, the highest deck should not be higher than 32 inches from the ground.
- For preschoolers, believe it or not, there is no mandated maximum height in the standards. Educators commonly recommend keeping the highest deck under 60 inches.
- For school-age children, I personally do not design decks higher than 72 inches.

We take children to a playground to exercise a variety of motor challenges and to strengthen their gross motor skills. Choosing climbing components that support upper body strength, oblique movements, bilateral movements, and perceptual-motor skills should be considered. Evaluate each component of the play structure for its learning outcomes, not just how the climber looks.

Too often, I see structures that repeat the same gross motor challenge over and over. That makes the structure boring and can contribute to supervision issues as children seek more excitement in unsafe ways.

There are four main types of play. When designing, think about incorporating each of these:

1. **Exercise play** – climbers, tunnels, swings.
2. **Social-dramatic play** – playhouses, theaters, gas pumps, outdoor classrooms.

3. **Constructive play** – water and sand play, garden boxes, building areas.
4. **Games with rules** – basketball, soccer fields, hopscotch, and similar activities.

In one of the slides, the play structure shown has a variety of gross motor challenges. The size of the climber is larger than most I design because this early childhood center has 40 children on the playground during one play period. The number of children using the playground at one time should always be considered.

In the images we show, you'll see the variety of climbers we incorporated.

We also expanded the existing music area on the playground. The center had a very short trike path, so we expanded it to make it more suitable for 40 children and added a seating area under an existing natural tree.

We added water tables and created theaters with natural log seating for dance, music, and storytelling.

We added storage, because you need storage for dress-up clothes, dramatic play props, and instruments. Many areas of the playground have small storage areas near the water and sand tables or playhouses. This allows children to choose the manipulatives they want to play with and to clean them up—just like in their indoor classroom.

The playhouse you saw in the slide was existing on the playground, and there was no reason to remove it. It had a nice built-in kitchen, so we kept it on site.

We added a new outdoor classroom with picnic tables, a funnel goal for tossing, and a building area. Farther back in the shot, you can see a natural building play area.

To accommodate all the new trikes, we had to expand our trike storage. We also provided a supply cart for open-ended play opportunities so that not all experiences are fixed or built-in.

And don't forget to incorporate natural elements such as pollinator perennials, annuals, new trees and bushes, or garden boxes for vegetables or herbs.

Unfortunately, we can't share photos or videos of children at this playground, but I can tell you that they are engaged in a variety of play opportunities, playing safely in a high-quality, supervised environment that is well-maintained with age-appropriate equipment. I hope the one-minute drone video example of Round Lake Early Childhood Center inspires you.

Heather, I'll turn it back to you.

Heather Olsen: Thank you so much, Sarah. Thank you for the design examples—they really help bring these concepts to life. For those of you in the audience, it may seem complex, and yet every safe and healthy play area becomes manageable when you begin with a plan. Sarah, I think you did a really nice job highlighting all of the concepts you've used to help different environments achieve their goals. Thank you for that.

This slide highlights a free, user-friendly infographic packed with design ideas. It's based on original research, journal articles, and technical reports. There are seven design ideas focused on thermal comfort and on maximizing the usability of these spaces.

Again, if you would like to share this resource or print it at the local level, let us know. We're happy to work with city planners, designers, or any group that is talking about these issues. Share it with your social media networks. I'm happy to work with you on the file size you need. The infographic includes a lot of design ideas that are affordable, and some require no cost at all—just rethinking placement or using existing features differently.

The final resource we wanted to share with you today was especially exciting to create. Sometimes it's the simplest messages that make the biggest impact. This infographic is a reminder to children and adults—caretakers and supervisors—to drink water, wear a hat, apply sunscreen, and choose lightweight clothing to stay cool. It encourages adults to check playground equipment before use: if it's too hot to touch, it's too hot to play.

We'd love to see this infographic posted in every community, childcare program, school, and summer program. We need your help sharing it with agencies that serve children. We also hope it reaches parents and grandparents to make them aware of the importance of staying cool and safe while playing. You can access it on our website and via the QR code shown in the slide.

Thank you for your care and attention to this important topic and for being here today. Together, we can create meaningful awareness and drive positive change just by remembering these four key points:

1. Play areas for children truly matter.
2. They exist in every community—at schools, childcare programs, housing developments, and youth-serving organizations.
3. The path forward has already been shaped by research and standards.
4. Each of us can contribute to the future by advocating for safe and healthy play, sharing these resources, and talking about this important topic.

Thank you. Michael, I'll turn it back over to you.

Michael Ely: Great. Thank you, Heather and Sarah, for those excellent presentations and all of that good material.

We apologize for any background noise you may have heard during the presentation. We're now going to jump into the Q&A portion of the webinar. We've had some great questions come in—some were submitted beforehand and others during the webinar—so thanks, everybody, for your engagement.

I'll go ahead and read these out loud. We'll answer the ones we can, and if there are others we can't get to, we'll see if we can follow up after the webinar.

First question: How can we navigate Head Start preschool centers housed within school district buildings and using their playgrounds?

Sara – Spaces for Play: Over 50% of our work is with Head Start, so I see a lot of situations where Head Start programs are housed in school districts and the children in Head Start are playing on school-age equipment.

Head Start has its own guidelines for playgrounds that must be met. If you'd like to email me, I can provide you with the Head Start playground guidelines.

There should always be a manufacturer's label on school-age equipment. That sticker on the structure will say "Ages 5–12." If your licensor or Head Start inspector comes into your facility, they're going to look at that sticker. Right there, you have a violation, and it will be noted.

If you're using ECERS or ITERS (the Environmental Rating Scales), those evaluators will also come in and cite you if the equipment is developmentally inappropriate.

Start by creating a design for your own age-appropriate playground. The school-age structure is not appropriate for your preschool playground, so begin a design process and develop a proposal. There is capital funding for Head Start, especially if you currently have no playground. We see this funding come through all the time.

You sometimes have to "write yourself up" using those Head Start guidelines. Identify where your space does not meet standards, then apply for funds. I'd be happy to send you those guidelines.

Heather Olsen: Can I add to that, Michael? Thank you, Sarah—that was perfect and very much aligns with my experience.

One thing I want to emphasize is that, oftentimes, school districts and educational leaders—superintendents, principals, decision-makers—are simply not aware of these issues. I'm in educational leadership and faculty work, and playgrounds are not typically in the curriculum. They often don't have the awareness or understanding of these age-related differences.

I would encourage everyone to look at the new Consumer Product Safety Commission Public Playground Safety Handbook. I printed my copy in color and bound it—it cost a bit—but I think it's worth it. It addresses childcare and infant/toddler equipment separately from school-age equipment.

This becomes a very helpful resource if you are in one of these situations. You can provide this document or make the agency aware of it to support your case.

Michael Ely: Great, thank you. Here's another question:

Redesigning play spaces is extremely costly. Do you have advice on different avenues for funding to support creating or updating playgrounds?

Sara – Spaces for Play: Yes, they are costly—there's no way around that. There is definitely an expense in removing existing equipment, installing new equipment, and adding safety surfacing.

If you're in a Head Start federal program or a state pre-K program, many states have something called a Child Care Block Grant. I've seen those funds used for playgrounds.

I'll go back to what I said earlier: sometimes you have to "write yourself up." If you're NAEYC-accredited, there are accreditation criteria tied to quality environments. If you're using ECERS (the Early Childhood Environmental Rating Scale), there are grants connected to improving scores and quality. These can support raising the quality of your environment, including playgrounds.

Identify where you're not meeting standards. No one is going to shut you down just because you identify areas for improvement. That process can make you eligible for funding. Then you write grants that clearly outline what you need.

Having a design and a cost proposal really helps get attention for funding. Without a design, it's just words. Once funders can see a drawing and a cost estimate, that's where it begins.

Other options include private groups—this year we're seeing support from companies like Dick's Sporting Goods and from county-level grants. We've had playgrounds funded in part by county grants, so look at your county to see if they support enhancements to playgrounds.

Service clubs like Kiwanis and other volunteer groups can help, too. Volunteers may help install playground equipment under the guidance of a CPSI-certified supervisor, which can cut costs.

But again, you have to get a design. The design gets the attention and leads to the funding.

Michael Ely: Great, thank you, Sarah. Here's another question:

Will there be any updates to the fall surfacing requirements in the Public Playground Safety Handbook? For example, in a previous version, there were options for different depths of fall surfacing. We get questions about whether having 12 inches of sand increases the allowable fall height.

Heather Olsen: Thank you for this very good—and complex—question. Hopefully, the resource we highlighted today will be a good starting point for those interested in surfacing.

On our website at playgroundsafety.org/research, you'll find a study I had the opportunity to lead in 2017 with the Consumer Product Safety Commission. This was before the newest handbook came out. The purpose was to do field testing on playground surfacing materials.

Most of the data we previously had came from testing materials in laboratories, in controlled conditions. In this study, we conducted over 3,000 impact attenuation drops across several states. We discovered that the performance of surfacing materials is significantly different when installed and used outdoors. Northern climates differ from southern climates, and conditions vary on the East and West Coasts.

Field-testing procedures and results are different from what you see in lab-based product data. That report is on the research page and provides more context.

Depth of surfacing—such as sand or wood product—depends heavily on the specific product and how it is processed. The CPSC does address recommended depths for loose-fill surfacing in the handbook, including for sand.

I would strongly encourage you to look at our *Selecting Playground Surfacing Guidelines* resource. It's publicly available and also posted as both a research and resource

document. It does a nice job walking through environmental conditions, types of surfacing materials, what's been tested, what hasn't, and the implications for depth.

If you haven't seen it, I think it paints a bigger picture that can help you answer questions from communities. Again, if you want printed copies—10, 100, or more—we're happy to work with you on cost and shipping. The digital version is free.

Surfacing and depth are critical issues and, frankly, might warrant a follow-up webinar. Since we know falls are the leading cause of playground injuries, a Part 2 focused just on surfacing might be a great next step.

Michael Ely: Great, thank you. There are so many good questions coming in; I know we can't get to all of them. We may need to schedule a second webinar!

Here's another question:

I saw stop and yield signs in the photos. Can you talk a bit more about the potential for pedestrian, bicycle, and driver safety education in these playground spaces?

Sara – Spaces for Play: Some clients choose to put signage up permanently—stop signs, yield signs, and so on. Honestly, if I were teaching again, I would prefer many of those signs to be portable so that children can make decisions and change up their trike or bike paths.

Portable signs can support children's understanding of traffic flow, stopping, yielding, and so on. They can rearrange the signs and experiment. These are great tools for social awareness, early social studies, and safety education. I hope that answers your question.

Heather Olsen: I love Sarah's point about the internal teaching tool—using signs to educate young children. My mind also went to the external environment: streets, crosswalks, and parking lots adjacent to the outdoor play space.

If you're in the planning phase, or even in a safety review phase, bringing in local law enforcement or traffic safety personnel can be extremely helpful. They can look at how people are entering and exiting the school, childcare center, or park. This is something we do in our teaching and consulting work, whether it's about supervision or facility planning.

It's really about both the internal education of the children and the external environment—stop signs, messaging, speed limits, and what happens around play zones. All of those are important. Great question.

Michael Ely: Great, thanks. Here's another:

In a time where resources are limited, if an agency is only able to focus on one or two of the SAFE components, which do you feel are the most impactful for reducing injury? Or do you recommend holding off until all four can be addressed?

Heather Olsen: Through more than 30 years of research, what we've learned is that every situation is unique. In the thousands of playgrounds I've seen across all 50 states, every environment, community, and age group looks a bit different.

That makes this a tough question. The SAFE model is intentionally interactive and holistic. We don't recommend focusing solely on one element.

What we don't want to do, especially when talking about funding or conducting a staff meeting, is to say, "We're just going to focus on surfacing," or "We're just going to focus on supervision." We encourage people to view the framework holistically: site and supervision, appropriate design, fall surfacing, and equipment/environmental maintenance. Even if you phase work over time, use the model to guide your thinking in all four areas.

Michael Ely: Great. I think we have time for a couple more questions, and then we'll have to end right at the top of the hour.

Here's one: With all these regulations for playgrounds, are we noticing an increase or a decrease in child playground injuries?

Heather Olsen: That's another really good—and challenging—question. There is injury data out there, but it's limited. Much of what we have comes from national emergency room statistics.

On our research page, we've referenced a number of child injury studies, and you can see many of those in the references of our resources.

One thing we advocate for in our certification trainings and consultations is that agencies look at their own injury data over time: five years, ten years, twenty years. Are there repeated types of injuries? Are they happening in the same area? At the same time of day?

Often, it's not just the equipment. It may be falls, layout issues, equipment placement, or lack of supervision. Supervision training is critical. We know from research that when individuals are educated and trained, their practices change and their behaviors matter.

Whether injuries are going up or down nationally is hard to answer definitively with the current data. Many injuries are never reported into national databases. In one of our recent publications in *Clinical Pediatrics*, we discussed some of these issues. That article is linked on our research page if you're interested.

The most important thing is to look at your local data, identify patterns, and use that to make changes.

Michael Ely: Great, thank you. I wish we had more time, but unfortunately we don't.

We are so grateful to our speakers, Heather Olsen and Sarah Kreiss, for this excellent information and presentation. And thanks to our audience members and participants for being here and for asking such thoughtful questions.

The recording will be made available. We'll do our very best to address questions we weren't able to answer and get responses back out to folks.

We'd like to ask everyone to take a moment to fill out a brief evaluation. You'll see a QR code on your screen—if you can grab your phone and take a quick snapshot of that, we'd really appreciate it. Your feedback helps us shape the direction of future webinars.

Again, thank you so much to our presenters, to the Children's Safety Network for hosting this webinar, and to all of you for attending.

Sarah or Heather, any last thoughts? We have about one minute left.

Sara – Spaces for Play: Just a big thank you for joining us. Please email if you have any other questions or would like to follow up. I'm happy to take some time and respond to emails as best I can. My email is Sarah@SpacesForPlay.com.

Heather Olsen: And thank you, Michael, for hosting and managing all of these questions and facilitating the discussion, and thanks again to CSN for hosting this topic. Thank you to everyone for joining.

Sara – Spaces for Play: Have a great rest of the week.

Michael Ely: Thanks, everybody.