

**Injury Prevention in Child Care Part A:  
Playground Safety and Outdoor Learning  
Training Module  
version 4  
(Last updated 6/6/13)**

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**Suggested Citation**

National Training Institute for Child Care Health Consultants.  
Injury prevention in child care Part A: playground safety and outdoor learning version 4. Chapel Hill (NC): National Training Institute for Child Care Health Consultants, Department of Maternal and Child Health, The University of North Carolina at Chapel Hill; 2013.

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Supported by grant U46MC00003 from the Maternal and Child Health Bureau, Health Resources and Services Administration, US DHHS.

## **NOTE TO TRAINER**

This Module addresses the outdoor environment with a section on play area/playground safety and a section on outdoor learning environments. Each of these topics is described in relation to the *CFOC* standards along with supplementary guidelines and information. Learning activities previously included in the Module can now be found in the *Injury Prevention in Child Care Part A* Trainer's Toolkit. The Toolkit contains a Trainer's Guide to leading training sessions, PowerPoint slides, and materials for participants' packets.

In *Injury Prevention in Child Care Part B: Common Injury Risks* we discuss the following six common injury-related topics in child care:

- Airway Obstruction
- Poisoning
- Sudden Infant Death Syndrome (SIDS)
- Human biting
- Emergencies
- Vehicle-Related Injuries

For more information about using the NTI materials, please read "Guidelines for Using the NTI Curriculum Materials," available in the "Curriculum" section of the NTI Resources Website (accessed by entering your NTI username and password at <http://sakai.unc.edu>).

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## **LEARNING OBJECTIVES**

After reading this Module and suggested supplemental materials, Trainers will be able to:

### **Play Area/Playground Safety**

- List hazards most common to play area/playground structures and the most common injuries incurred for each type of hazard
  
- Assess outdoor play areas and structures using checklists and provide action items for problems identified
  
- Describe play area/playground safety and supervision recommendations
  
- Describe age-appropriate play areas/playground areas and structures based on typical child development

### **Outdoor Learning Environments**

- Explain the developmental impact (health and cognitive) of a high quality outdoor play environment on young children
  
- List three components of a high quality outdoor learning environment
  
- Describe the importance of having different types of outdoor play available in a child care facility
  
- Provide suggestions for how an outdoor environment can be optimized for children

## **INTRODUCTION: THE ROLE OF THE CCHC**

The CCHC is positioned to play an important role in improving the outdoor environment for young children in child care. That role is defined by two main tasks:

1. Preventing play area-/playground-related injuries
2. Working with child care staff to make the outdoor environment engaging for children

In particular, the CCHC must be able to assess the outdoor environment for safety risks and should aim to establish an outdoor environment that encourages outdoor play in order to reduce the risk of obesity and help children connect with nature. Since many child care programs are limited in their choices of outdoor play areas because of their location and/or climate, the CCHC should be prepared to exercise flexibility in the development of outdoor learning areas. The CCHC should be involved in the education of staff, parents/guardians, and the community on the two topics listed above. The CCHC should maintain a list of available community, state, and national resources for consultation and referral about play area/playground safety and outdoor learning environments.

This Module will focus on play area/playground safety and the outdoor learning environment. For more information on physical activity in child care, please read the NTI Module *Nutrition and Physical Activity in Child Care*.

## **CARING FOR OUR CHILDREN NATIONAL STANDARDS (3<sup>rd</sup> ED., 2011)**

*Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Early Care and Education Programs (CFOC)* is a set of 686 attainable standards that are intended for use by health care professionals, trainers, regulators, caregivers/teachers, academics and researchers, parents/guardians, and others “who work toward the goal of ensuring that all children from day one have the opportunity to grow and develop appropriately, to thrive in healthy and safe environments, and to develop healthy and safe behaviors that will last a lifetime” (*CFOC* 3<sup>rd</sup> ed., 2011, p. xxi). These standards, supported by the Maternal and Child Health Bureau, were developed by the American Academy of Pediatrics, the American Public Health Association, and the National Resource Center for Health and Safety in Child Care and Early Education.

The following is a list of the standards relating to the outdoor environment in the child care environment, along with a short description and the page number in *CFOC* on which the standard can be found. All listed standards are referenced throughout this module.

[2.1.2.3](#) – Space and Activity to Support Learning of Infants and Toddlers, p. 58  
States that the facility should provide a safe and clean learning environment, both indoors and outdoors, and colorful material and equipment arranged to support learning.

[2.1.3.2](#) – Opportunities for Learning for Three-to Five-Year-Olds, p. 61  
Explains that programs should provide children a balance of guided and self-initiated play and learning indoors and outdoors. These should include opportunities for children to observe, explore, order and reorder, to make mistakes and find solutions, and move from the concrete to the abstract in learning.

[2.1.3.3](#) – Selection of Equipment for Three- to Five-Year-Olds, p. 61  
States that the program should select, for both indoor and outdoor play, developmentally appropriate equipment and materials, for safety, for its ability to provide large and small motor experiences, and for its adaptability to serve many different ideas, functions, and forms of creative expression.

[2.1.3.4](#) – Expressive Activities for Three-to-Five-Year-Olds,  
States that caregivers/teachers should encourage and enhance expressive activities that include play, painting, drawing, storytelling, sensory play, music, singing, dancing, and dramatic play.

[3.1.3.2](#) – Playing Outdoors, p. 93  
States that children should play outdoors when the conditions do not pose a safety risk, individual child health risk or significant health risk of frostbite or of heat related illness. Outdoor play for infants may include riding in a carriage or stroller; however, infants should be offered opportunities for gross motor play outdoors, as well.

[3.6.3.1](#) – Medication Administration, p. 141  
Details what the administration of medicines at the facility should be limited to.

[5.7.0.2](#) – Removal of Hazards from Outdoor Areas, p. 259

Details the specific hazards that should be removed in order to maintain a clean and safe outdoor activity area.

[6.1.0.1](#) – Size and Location of Outdoor Play Area, p. 265

States that the facility or home should be equipped with an outdoor play area that directly adjoins the indoor facilities or that can be reached by a route that is free of hazards and is no farther than 1/8-mile from the facility. The playground should comprise a minimum of 75 square feet for each child using the playground at any one time.

[6.1.0.4](#) – Elevated Play Areas, p.266

States that elevated play areas that have been created using a retaining wall should have a guardrail, protective barrier, or fence running along the top.

[6.1.0.7](#) – Shading of Play Area, p. 267

States that children should be provided shade in play areas (not just playgrounds) and how shade should be provided.

[6.2.1.2](#) – Play Equipment and Surfaces Meet ADA Requirements, p. 270

States that play equipment and play surfaces should conform to recommendations from the Americans with Disabilities Act (ADA).

[6.2.1.8](#) – Materials Defects and Edges on Play Equipment, p.271

Provides specifications for remedying sharps edges, protruding parts, weaknesses, and flaws in materials construction of play equipment in order to prevent lacerations and contusions on a child's body.

[6.2.1.9](#) – Entrapment Hazards of Play Equipment, p.272

Specifies the appropriate measurements for preventing entrapment and strangulation from equipment openings.

[6.2.2.1](#) – Use Zone for Fixed Play Equipment, p.272

Specifies the minimum use zone (clearance space) between fixed play equipment and walkways, buildings, and other structures to prevent injuries.

[6.2.2.2](#) – Arrangement of Play Equipment, p.272

States that all equipment should be arranged so that children playing on one piece of equipment will not interfere with children playing on or running to another piece of equipment.

[6.2.2.3](#) – Location of Moving Play Equipment, p.272

States that moving equipment should be located toward the edge or corner of a play area, or should be placed in such a way as to discourage children from running in to the path of the moving equipment.

[6.2.2.4](#) – Clearance Requirements of Playground Areas, p.273

States that playgrounds should be laid out to ensure clearance in accordance with specific ASTM standards.

[6.2.2.5](#) – Clearance Space for Swings, p.273

Specifies the minimum use zone (clearance space) for swings, and that swings should be arranged in accordance with specific ASTM standards.

[6.2.3.1](#) – Prohibited Surfaces for Placing Climbing Equipment, p.273

Specifies the type of surfaces that should not be under or near play equipment used for climbing.

[6.2.5.1](#) – Inspection of Indoor and Outdoor Play Areas and Equipment, p. 277

Details what the indoor and outdoor play area and equipment should be inspected for daily.

[6.2.5.2](#) – Inspection of Play Area Surfacing, p. 277

States that loose-fill surfacing materials used to provide impact absorption beneath play equipment should be checked frequently to ensure surfacing is of sufficient depth and has not shifted or displaced specifically, especially in areas under swings and slide exits.

[9.2.6.1](#) – Policy on Use and Maintenance of Play Areas, p. 374

Details what should be included in a child care facility's policy on the use and maintenance of play areas.

[Appendix Z](#) – Depth Required for Shock-Absorbing Surfacing Materials for Use Under Play Equipment, p.472

Specifies the required minimum depth for a variety of loose-fill materials, and includes tips to consider when choosing to use loose-fill materials under play equipment.

[Appendix HH](#) – Use Zones and Clearance Dimensions for Single- and Multi-Axis Swings

Provides clearance dimensions for swings.

## **PLAY AREA/PLAYGROUND SAFETY**

### **What the CCHC Should Know: Hazards and Statistics**

The CCHC should be familiar with hazards common to the play area/playground environment: improper surfacing; inadequate use zones, clearance, and spacing; inadequate or nonexistent guardrails and/or protective barriers; and protrusions, entanglement, entrapment, pinching, crushing, and shearing hazards. The brochure provided in Appendix B: *The Dirty Dozen ... Are they hiding in your child's playground?* (National Recreation and Park Association, National Playground Safety Institute, 2008) as well as the Consumer Product Safety Commission's Public Playground Safety Handbook, 2010 (provided at the on-site training) offers a summary of these common hazards, including the risk of injury posed by each hazard and what action(s) can be taken to reduce the risk of injury. Furthermore, the following CFOC standards support the prevention of these hazards: play area and playground surfacing ([6.2.3.1](#), [Appendix Z](#)), use zones and clearance requirements, and spacing ([6.2.2.1](#), [6.2.2.2](#), [6.2.2.3](#), [6.2.2.4](#), [6.2.2.5](#), [Appendix HH](#)), guardrails/protective barriers ([6.1.0.4](#)), and protrusions, entanglement, entrapment, pinching, crushing, and shearing hazards ([6.2.1.8](#), [6.2.1.9](#)).

When explaining or instructing a child care caregiver/teacher or parent/guardian about play area/playground safety, the CCHC should be able to explain how specific changes can help reduce risks and injuries to children, which is why it is important to know not only the hazards present on the play area/playground but the associated injuries they may cause.

### ***Child Care Injury Statistics***

More than 200,000 children ages 14 and younger are treated in emergency rooms each year due to a playground-related injury (CDC, 2004). Nearly half of the injuries sustained are considered severe and include fractures, concussions, dislocations, and amputations (Tinsworth and McDonald, 2001). In 1999, playground-related injuries for children under five numbered about 29 per 10,000 children and accounted for more visits to the emergency room than any other child care-related injury (CPSC, 2001). Most injuries occur when a child falls from the playground equipment onto the ground. From January 1990 through August 2000, CPSC received reports of 147 deaths to children younger than age 15 that involved playground equipment. In the 128 incidents for which location was reported, 90 (70 percent) occurred in home locations and 38 (30 percent) occurred in public locations (CPSC, 2001).

## **Play Area/Playground Injury Prevention: Plans and Policies**

### ***CFOC Standards for Maintaining a Safe Play Area/Playground***

The child care play area/playground is constantly changing as a result of everyday use. In order to ensure safety in this dynamic environment, it is imperative to conduct regular safety checks. *Caring for Our Children* states that facilities should have a policy on the use and maintenance of play areas that includes the following on inspections of the facility and equipment [9.2.6.1](#):

1. an inventory of equipment at time of purchase and when changes are made to the play area/playground;
2. an audit of active play areas (indoors and outdoors) by an individual with specialized training in playground inspections once a year;
3. an inspection to check for U.S. Consumer Product Safety Commission (CPSC) recalled or hazard warnings on equipment, broken equipment or equipment in poor repair that requires immediate attention once a month and whenever injuries occur;
4. a safety check of the grounds for safety hazards daily; and whenever injuries occur.

*CFOC* states that the child care caregiver/teacher should complete daily and monthly checks to both examine deterioration of structures and initiate correction or removal of hazards. [5.7.0.2](#), [6.2.5.1](#), [6.2.5.2](#)

### ***Site Specific Safety Assessment Checklist***

Although play area/playground safety checklists have been developed by many organizations, they are often too general and contain irrelevant information for the specific facility the CCHC is visiting. Each facility should have a safety checklist in place that is specific to the play area(s)/playground(s) in use by the facility. CCHCs should assist child care staff in developing checklists that are specific to their facilities and environments. Staff should use both daily and monthly checklists.

### ***Supervision***

The National Program for Playground Safety (2004) estimates that more than 40% of playground injuries may be due to inappropriate or a lack of adult supervision. A supervisor should be attentive to the children as well as to the environment in which they play. According to the National Program for Playground Safety (2004) and Kern and Wakeford (2007), supervision means:

- Being alert and attentive
- Being aware of age-appropriate equipment
- Evaluating and inspecting hazards
- Observing signs
- Knowing and applying safe play area/playground rules
- Training the children on how to use the play area/playground equipment correctly
- Being consistent with the indoor adult: child ratio
- Intervening when inappropriate behavior occurs
- Ensuring safe clothing for children (no cords or ties)
- Having injury prevention and response plans

Children can move into a hazardous situation very quickly. Listed below are some specific tips on how child care caregivers/teachers can help to reduce this risk.

- Assign staff members to a “zone” (grass, play equipment, etc.).
- Rotate staff to help relieve monotony and/or fatigue. (See Appendix I of *Model Child Care Policies* 4<sup>th</sup> ed. for an example of a rotation chart.)

- Maintain, at minimum, the same staff: child ratio that is used in the classroom. Often, the ratio outdoors may need to be higher than in the indoor environment depending on the size of the outdoor play area and how easily visible the children are as they play.
  - Review the play area/playground rules with children before outdoor play.
  - Be prepared for an emergency by having a detailed plan and a fully equipped first aid kit that is easily accessible.
  - Always arrive at the play area/playground ahead of the children.
  - Check play area/playgrounds for hazards.
  - Report broken or dangerous equipment immediately and prohibit children from playing on it.
  - Be alert; delay adult conversations.
  - Plan and explain caregiver-/teacher-organized games with children while indoors to avoid distraction when outside.
  - Move around the play area/playground so the children (and staff) can be seen, and they can see you.
  - Make sure children are using play structures appropriately.
  - Stay in close proximity of a child who is challenged or is trying out an activity for the first time.
  - Discourage rough play.
  - Do not allow children to wear clothing with attached strings (i.e., sweatshirt cords).
  - Follow cold and hot weather temperature and air quality advisories from the National Weather Service in evaluating suitability for outdoor play.
- (Adapted from Peaceful Playgrounds, 2002, and California Childcare Health Program, 2006)

## **Design of the Outdoor Play Area/Playground**

### ***Elements of an Appropriately Designed Play Area/Playground***

Cradock et al. (2010), CPSC (2005) and The National Program for Playground Safety (2004) recommend the following list of elements for an appropriately designed playground:

- Natural elements, vegetation, trees, land forms, topography
- Sand, water
- Soft surface material (Ex: sand, wood chips, rubber, or pea gravel for children age 3 and over)
- Proximity of pathways, emergency equipment storage, restrooms, water fountains
- Locate away from parking areas and roads
- Good drainage
- Representation of different types of play (passive/active, physical, social, dramatic)
- Garden opportunities
- Age-appropriate equipment
- Space to migrate safely around equipment

- Accessibility of pathways, exits
- Seating (for supervision and passive play)
- Shade covering for sun protection
- Play props

***Guidelines for Safe Play Area/Playground Equipment***

To ensure that children are using safe play area/playground equipment, it is important that the equipment itself be safe and properly maintained, but it is also critical that the play equipment be matched with the size and age of the children at play. For more information about matching children and play equipment, please review the following resource, available in Appendix B of this Module:

- *Matching Children and Play Equipment: A Developmental Approach* (Thompson, Hudson, Mack, 1999)

***Playground surfacing***

Appropriate surfacing is important to reduce the risk of serious injuries. A fall onto a shock absorbing surface has a lesser chance of causing a severe injury than a fall onto a hard surface. However, some injuries may occur from falls regardless of the surfacing.

Surfacing materials should meet standards for the Americans with Disabilities Act (ADA) and the American Society for Testing and Materials (ASTM) including fall attenuation. The table below differentiates between appropriate and inappropriate surfacing.

<b>Appropriate Surfacing</b>	<b>Inappropriate Surfacing</b>
Any material tested to ASTM F1292, including unitary surfaces, engineered wood fiber, etc.	Asphalt
Pea Gravel	Carpet not tested to ASTM F1292
Sand	Concrete
Shredded/recycled rubber mulch	Dirt
Wood mulch (not CCA-treated)	Grass
Wood chips	CCA treated wood mulch

Reproduced from: U.S. Consumer Product Safety Commission (CPSC). 2010. Public playground safety handbook. <http://www.cpsc.gov/cpscpub/pubs/325.pdf>.

Frequent and regular testing of the surfaces is necessary. To assure the safety of children, all loose fill surfacing materials require daily raking to sustain the required depth of material. Loose fills materials also require replenishment because over time they get packed down or kicked away. These types of maintenance often do not happen as frequently as they should causing unsafe playground conditions. Manufacturers should supply the critical height rating of their materials.

***Play Area/Playground Accessibility for Children with Disabilities***

According to the Americans with Disabilities Act Accessibility Guidelines (ADAAG), all public accommodations are required to be accessible to people with disabilities. Children with disabilities have the right to participate in the same play and learning activities as typically developing children. Child care centers, even those that are privately run, are considered public accommodations and must be accessible to persons with disabilities. Reasonable modifications to the building, such as adding ramps, must be made to accommodate the needs of children with disabilities (Fromberg & Bergen, 2006).

Information about the ADAAG is accessible online at:

The Access Board. ADA accessibility guidelines for buildings and facilities. Available at: <http://www.access-board.gov/adaag/html/adaag.htm> . (Scroll down to Section 15: Recreation Facilities, *then go to* 15.6: Play Areas)

**Action Items for the CCHC**

The CCHC should:

- Routinely assess play areas/playgrounds for potential risk of injuries
- Recommend that all structures be repaired in order to comply with CPSC standards
- Recommend that all structures that cannot be changed to comply with CPSC standards be removed
- Periodically check structures to make sure hazards do not exist
- Periodically review daily and monthly play area/playground safety checklists and supervision plans with staff
- Act as a liaison with community pediatricians to distribute safety information to staff and parents/guardians
- Link child care caregivers/teachers with local playground safety consultants for more in-depth guidance

To obtain a list of Certified Playground Safety Inspectors in your area, send an email to the National Recreation and Parks Association at:
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<a href="mailto:certification@nrpa.org">certification@nrpa.org</a>
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Be sure to include the state you are requesting!
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## **OUTDOOR LEARNING ENVIRONMENTS**

### **What the CCHC Should Know: The Value of Outdoor Play**

Children learn through play. The outdoor environment can provide children with the opportunity to creatively explore new ideas and behaviors during play while also developing important gross motor skills and benefitting from exposure to fresh air. Child care programs should be able to utilize the outdoor environment for a variety of play and learning activities. Outdoor play and exposure to the natural world provides an avenue for children to learn and develop important physical, emotional, social, and cognitive skills that cannot be offered indoors (McGinnis, 2000).

An appropriately designed and well-equipped outdoor environment can encourage a number of educational activities that contribute to overall brain development early in a child's life. Observing the natural habitats of animals and plants outdoors can contribute to a child's understanding of science and nature. Exploration of the natural environment through play can assist in the development of important problem-solving skills and promote sensory learning. Physical growth is promoted during various outdoor games and activities, such as running, jumping, skipping, and planting. Working in teams and exploring the outdoors as a group are also important as children use creative thinking and develop necessary social skills. Solitary play, role-playing, fantasy play, and group participation in outdoor settings can contribute to emotional growth (McGinnis, 2000; Moore & Cooper, 2008).

Outdoor learning can provide children with information about our changing environment, and give them an understanding and an appreciation for nature (McGinnis, 2000). In addition, contact with animals, which can be incorporated into the child care setting, can be an important way for children to learn about the natural world (Taylor et al., 2006; McGinnis, 2000).

### ***Health Benefits of Outdoor Play and Learning***

In order to fully understand the health benefits of outdoor play, it is important to use a holistic definition of health, which includes physical and mental/emotional health. Outdoor play can have a significant impact on the health of children of all ages (McGinnis, 2000). For more information about research-based indicators of the value of outdoor play, please visit the "Research" section of Children and Nature Network online at: <http://www.childrenandnature.org/research/Intro>.

**Physical Health:** General lifestyle changes during the past few decades have led to a decrease in outdoor time and overall physical activity. Various outdoor activities are critical to the development of motor skills and physical strength. It is necessary for children to run, jump, and be physically active in order to develop large muscle groups, as well as to achieve overall positive physical development. With the increase in the number of overweight children (even into the preschool-age range), it is particularly important that parents/guardians, caregivers/teachers understand the importance of providing children with many opportunities for physical activity throughout the day (NASPE, 2009). (Please refer to NTI's *Nutrition and Physical*

*Activity in Child Care Training Module for more information about the importance of physical activity.)*

Additionally, the outdoor environment presents children with the opportunity to breathe fresh air. Outdoor air is relatively free of germs, and children are less likely to transmit diseases in an outdoor environment. Furthermore, the sun provides full spectrum light, which has been proven to have positive health benefits. The sun is an important source of vitamin D which helps the body absorb calcium (McGinnis and Moore, 2000; Moore & Cooper, 2008).

**Mental and Emotional Health:** A well-developed, interesting outdoor learning environment offers children the opportunity to explore, experience successes, and a sense of freedom. They do not have to use their “indoor voices” and “walking feet” outdoors. They can experience a sense of competence and independence that is less available indoors. They can be more carefree, move around more easily, squeal, laugh, and express feelings that may be kept in while they are indoors. The outdoor environment can be particularly beneficial for children with certain behavior problems, because the outdoor learning environment can provide an appropriate outlet for pent-up energy. Physical activities such as throwing, jumping, and running also provide opportunities for children to practice and master skills, feeling a sense of accomplishment. Engaging in outdoor activity can also help to prevent depression and reduce stress among children, parents/guardians, directors, and caregivers/teachers (Taylor et al., 2006; McGinnis, 2000).

### **High Quality Outdoor Play and Learning Time**

It is important to keep in mind that play does not (and should not) follow a set schedule. In order to fully explore an outdoor environment, children need extended periods of time to play without being rushed. Play is often viewed as recess, or a “break” from learning. It may be more useful to design outdoor play time as an extension of classroom activities (McGinnis, 2000). This can be done by providing a smooth transition from indoor to outdoor play areas by having children bring their indoor activities with them to the outdoor area (McGinnis, 2000). The transition between different settings and activities can be smoothed if the outdoor setting is connected to indoor activity areas (either physically, by way of a patio, or by parallel activities). CCHCs can help child care caregivers/teachers find ways to extend indoor activities such as reading, art, dramatic play, and block areas into the outdoors (McGinnis, 2000).

The outdoor learning environment must be large enough to accommodate all the children and various types of activities. [6.1.0.1](#) CFOC provides the minimum square footage of outdoor play space that should be available for each child depending on age. [6.1.0.1](#) Furthermore, to maximize the potential of an outdoor learning environment, it is important that it frequently change. Settings that are defined or constantly the same offer less opportunity for creativity. Change might include exploring a variety of different play areas, or it might involve changes in the kind of play, focus on different aspects of the environment (such as shifting natural light, interesting colors and materials, animal life) or different levels of activity (Butin, 2000).

### ***Materials***

Each facility's outdoor space should provide developmentally appropriate materials and equipment that support play and learning.<sup>2.1.2.3, 2.1.3.3</sup> A variety of resource materials can be used for outdoor projects and activities. Outdoor materials should promote a variety of different activities including child-directed activities, inquiry-based activities, caregiver-/teacher-directed activities, moveable equipment activities (using balls, toys, etc.), and activities using stationary equipment (slides, etc.).

Simon Nicholson published his theory of "loose parts" in children's play in 1971. This theory states that the amount and type of materials in any setting determine the level of creativity and the possibilities for discovery (Nicholson, 1971). "Loose parts" can include: paper goods; tools for writing, drawing, and painting; materials for construction and collages (e.g., beads, seeds, stones); or sculpting materials (e.g., clay, mud). For more active play, larger materials may be collected as well. For example, an outdoor environment may include wheelbarrows, foam blocks, balls, tires, parachutes, etc. Children can use "loose parts" productively and creatively, especially when they are involved in the process of choosing and organizing the materials (McGinnis, 2000). Furthermore, materials used in outdoor settings do not need to be manufactured. The incorporation of natural elements such as logs, stumps, boulders, and safe plants can contribute to outdoor learning and play experiences (Munoz, 2009).

A 2007 study found that on playgrounds with more natural elements as opposed to an outdoor environment consisting only of artificial structures, children engaged in more constructive play using hypothesizing and building (Hestenes, Shim, and Debord). Children who had opportunities to interact with the natural environment were more likely to display constructive play and less likely to display functional or repetitive play.

### ***Types of Outdoor Play***

Children do not always follow the same schedule, and all the children in a group may not always be ready for high-energy active play at the same time. Thus, it is necessary to have a variety of outdoor activities available for children during scheduled time outside (McGinnis, 2000). An outdoor space should provide opportunities for both free and structured play. Outdoor space should be viewed as an extension of the indoor environment, and should include open space for active play, a quiet area, and a dramatic play area (Illinois Facilities Fund, 2004).

**Active Play:** The outdoors offers children space to move around and participate in large muscle activities such as climbing, skipping, swinging, running, crawling, and lifting. Such activities can be freeform or can be organized by a caregiver/teacher or leader (Moore & Cooper, 2008). Outdoor play structures and other equipment can also be used to stimulate active play, but should not dominate the outdoor learning environment. The outdoor environment is sometimes viewed as a space to be physically active while only the indoor classroom is for learning. The outdoor environment, however, is ideal for physically active play and is rich in learning opportunities. And best practices also suggest that the opportunity to engage in

physical activity should be provided for children throughout the day everyday both indoors and outdoors. Outdoor play for infants may include riding in a stroller; however, infants should be offered opportunities for gross motor play outdoors, as well. [3.1.3.2](#)

**Observing and Resting Outdoors:** It is important to allow children the opportunity to learn in their own manner. Children are curious and learn in many ways such as pondering, processing, and applying experiences. They may choose to watch an activity before (or instead of) participating. They should have time to sit quietly and observe nature and/or to rest from active play. According to *CFOC* (3rd ed., 2011), “play involves a balance of action and symbolization, and of feeling and thinking” (p. 58). [2.1.2.3](#)

**Quiet Play:** Children may not always want to be physically active every time the class goes outside. It is important to provide comfortable areas for reading, art projects, nature study, or other quiet activities. Outside, quiet areas can be made from various materials, allowing children to use stuffed toys/dolls, boxes, blankets, music, etc. This type of play setting supports the needs of children who do not want to, or are unable to participate in more physically active play (McGinnis, 2000). Additionally, it allows children to explore and initiate their own play and learning activities. [2.1.3.2](#)

**Dramatic Play:** Although dramatic play is often considered an indoor activity at child care settings, the outdoors can offer unique opportunities for such play. Natural elements can be incorporated into the scene and used as props. An outdoor stage can encourage children to think creatively and work cooperatively to produce a play or performance, or may inspire other imaginary play (McGinnis, 2000).

## **Promoting and Supporting Outdoor Learning**

### ***Overcoming Obstacles to Going Outside***

All children should have the opportunity to play outdoors, when the conditions do not pose a safety risk or individual child health risk. [3.1.3.2](#) The outdoor space should be adaptable, and supportive of various types of play and various weather conditions. Facilities should develop outdoor play policies that incorporate methods for protecting children from the sun by using shade, sun-protective clothing, and, for children over 6 months of age, sunscreen with UVB-ray and UVA-ray protection of SPF-15 or higher. [3.1.3.2](#), [3.6.3.1](#) Caregivers/teachers must protect children from harm caused by adverse weather, ensuring that children wear appropriate clothing and/or that appropriate shelter is provided for the weather conditions. [3.1.3.2](#) Shading is important to avoid excessive sun for young children and allows children to play outside, even in hot summer weather (National Clearinghouse, 2000). Shading, “loose parts,” and appropriate clothing and supplies (e.g., sunscreen, mittens, etc.) can be incorporated into the outdoor environment at low financial cost (McGinnis, 2000).

### ***Program Planning***

When designing activities for outdoor learning environments at a child care facility, it is important to use developmentally-appropriate materials, considering different age

groups and sizes of children.<sup>2.1.3.3</sup> Furthermore, it is crucial to address the physical needs and abilities of all children and to include options for different levels of activity. Play structures should also be designed to allow children with physical disabilities the chance to slide, crawl, tumble, or participate in other active play behavior.<sup>6.2.1.2</sup>

Finally, participatory design is vital to the success of the outdoor learning environment. Involving children, parents/guardians, caregivers/teachers, and maintenance staff in planning the outdoor setting and play curriculum helps ensure that everyone's needs are being met. Also, it helps retain support for the outdoor setting (Munoz, 2009).

***The Preschool Outdoor Environment Measurement Scale (POEMS)***

Until recently, there was no comprehensive scale for assessing the quality of an outdoor learning environment in a child care center. The POEMS (DeBord, Hestenes, Moore, Cosco, McGinnis, 2005) was designed to fill this gap. The main objective of the scale “is to offer guidance to child care professionals and site administrators in evaluating outdoor spaces” (p.1). The scale, intended for self-study, focuses on five domains that allow the observer to measure the quality of the outdoor learning environment as a whole. These domains include:

- Physical environment
- Interactions
- Play and learning setting
- Program
- Caregiver/teacher role

The POEMS was designed for the 3-5 age group. However, many of the concepts can be applied to other age groups. An observation takes approximately 75 minutes, including an interview with a child care caregiver/teacher. The POEMS can be ordered from:

Kaplan Early Learning Company  
P.O. Box 609  
Lewisville, NC 27023  
Tel: 800/334-2014  
<http://www.kaplanco.com>  
Product Code # 39502

## **The Role of the CCHC**

The CCHC should:

- Emphasize the importance of outdoor settings as learning environments in child care settings
- Ensure that adequate space, materials, and time are devoted to outdoor learning
- Ensure that outdoor learning environments comply with *CFOC* standards related to play areas/playgrounds
- Encourage the use of a variety of outdoor projects and activities that promote social, physical, emotional, and cognitive growth
- Promote the use of a variety of outdoor activities that accommodate a variety of ages, sizes, and abilities
- Encourage the collaboration of children, parents/guardians, caregivers/teachers, and other child care center staff members to plan for and create an appropriate outdoor learning environment

## **WHERE TO FIND MORE INFORMATION**

### **Play Area/Playground Safety**

American Association for Leisure and Recreation (AALR)

<http://www.aahperd.org/>

American Society for Testing and Materials International (ASTMI)

<http://www.astm.org/index.html>

Aronson S. Model child care health policies. 2<sup>nd</sup> ed. Rosemont (PA): PAAAP, ECELS; 2002. (Please review Appendix Q.)

Centers for Disease Control and Prevention  
National Center for Injury Prevention and Control

Playground injuries: Fact sheet

<http://www.cdc.gov/HomeandRecreationalSafety/Playground-Injuries/index.html>

CSN National Injury & Violence Prevention Resource Center  
Education Development Center, Inc.

<http://www.childrensafetynetwork.org/>

Gunatilaka AH, Sherker S, Ozanne-Smith J. Comparative performance of playground surfacing materials including conditions of extreme non-compliance. *Inj Prev* 2004;10:174-79.

International Playground Equipment Manufacturers Association (IPEMA)

[www.ipema.org](http://www.ipema.org)

KaBoom!

[www.kaboom.org](http://www.kaboom.org)

Kid Source Online

Playground surfacing materials

[http://www.kidsource.com/CPSC/playground\\_surface.html](http://www.kidsource.com/CPSC/playground_surface.html)

McGovern J. Playgrounds and play areas-application of the ADA. 2002.

<http://www.adagreatlakes.org/ProgramsAndServices/AudioConferencing/Archives/FY2002/default.asp?Year=2002&Session=6>

Miller KD, Schleien SJ. A community for all children: A guide to inclusion for out-of-school time.

<http://www.ces.ncsu.edu/depts/fourh/old/afterschool/communityforall1.pdf>

National Recreation and Parks Association (NRPA)

<http://www.nrpa.org/playgroundsafety/>

National Program for Playground Safety  
School of Health, Physical Education and Leisure Services  
<http://www.uni.edu/playground>

National Program for Playground Safety  
Publications, including: S.A.F.E. Play Areas: Creation, Maintenance, and Renovation  
<http://www.playgroundsafety.org/products/educational/books.htm>

Payne S. Inventory, audit and inspection: A layered approach to playground safety. North Carolina State University; Recreation Resources Services, 1999.  
[http://www.cfr.ncsu.edu/rrs/RRS\\_PlaysafeAudit.pdf](http://www.cfr.ncsu.edu/rrs/RRS_PlaysafeAudit.pdf)

Playworld Systems, Inc.  
Playground planning checklist.  
<http://www.playworldsystems.com/files/downloads/PlaygroundPlanningChecklist.pdf>

Recreation Resources Services  
<http://www.cfr.ncsu.edu/rrs/>

Schappet J, Malkusak A, Bruya LD. High expectations: Playgrounds for children of all abilities. 1<sup>st</sup> ed. Bloomfield (CT): The National Center for Boundless Playgrounds; 2003.

The U.S. Access Board  
<http://www.access-board.gov>

U.S. Consumer Product Safety Commission (CPSC)  
Is your home playground a safe place to play?  
<http://www.cpsc.gov/cpscpub/pubs/pg1.pdf>

U.S. Consumer Product Safety Commission (CPSC)  
Handbook for public playground safety  
<http://www.cpsc.gov/cpscpub/pubs/325.pdf>

U.S. Consumer Product Safety Commission (CPSC).  
Public playground safety checklist.  
<https://www.cpsc.gov/Regulations-Laws--Standards/Voluntary-Standards/Voluntary-Standards-Topics/Public-Playground-Safety-Checklist/>

U.S. Consumer Product Safety Commission (CPSC).  
Special study: Injuries and deaths associated with children's playground equipment.  
<http://www.cpsc.gov/library/playgrnd.pdf>

U.S. Department of Justice. (DOJ)  
Commonly asked questions about child care centers and the Americans with disabilities act.  
<http://www.usdoj.gov/crt/ada/childq&a.htm>

U.S. Department of Justice. (DOJ) (Spanish version of previous resource)  
Preguntas comunes de la ley para personas con discapacidades y centros de cuidar de niños.

[http://www.ada.gov/child26a\\_spanish.htm](http://www.ada.gov/child26a_spanish.htm)

## **Outdoor Learning Environment**

Children & Nature Network

<http://www.childrenandnature.org>

Frost, J. L., Wortham, S. C., & Reifel, S. (2005). Play and child development. Columbus, OH: Merrill Prentice Hall.

Frost, J.L., Brown, S The Consequences of Play Deprivation, Playground Magazine, Vo. 8, Issue 3, pp27-30, July 2008

Louv, Richard. Last Child in the Woods: Saving Our Children From Nature-Deficit Disorder, Algonquin Books, Chapel Hill, NC. 2008.

NC Partnership for Children (NCPC)

<http://www.smartstart-nc.org>

The Natural Learning Initiative

<http://www.naturalearning.org/>

Playground Magazine

[www.playgroundmag.com](http://www.playgroundmag.com)

Preschool Outdoor Learning Environment (POEMS)

<http://www.poemsn.org/>

White Hutchinson Leisure & Learning Group

<http://www.whitehutchinson.com>

## REFERENCES

- American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. (2011). *Caring for our children: National health and safety performance standards; Guidelines for early care and education programs*. 3rd Edition. Elk Grove Village, IL: American Academy of Pediatrics; Washington, DC: American Public Health Association. Also available at <http://nrckids.org>.
- Aronson SS. American Academy of Pediatrics, Pennsylvania Chapter, Healthy Child Care Pennsylvania, The Early Childhood Education Linkage System. (2002). *Model child care health policies*. 4th ed. Rosemont, (PA).
- Butin D, National Clearinghouse for Educational Facilities. (2000). Early childhood centers. Available at: <http://www.ncef.org/pubs/earlychild.pdf>. Accessed September 23, 2011.
- California Childcare Health Program. (2006). Injury prevention. Available from: [http://www.ucsfchildcarehealth.org/pdfs/Curricula/CCHC/10\\_CCHC\\_Inj\\_Prev\\_0506.pdf](http://www.ucsfchildcarehealth.org/pdfs/Curricula/CCHC/10_CCHC_Inj_Prev_0506.pdf) Accessed June 4, 2013.
- Centers for Disease Control and Prevention; National Center for Injury Prevention and Control. (2006). Injury fact book 2006: Playground safety. Available at: [http://www.cdc.gov/ncipc/fact\\_book/20\\_Playground\\_Safety.htm](http://www.cdc.gov/ncipc/fact_book/20_Playground_Safety.htm). Accessed Sept. 19, 2011.
- Centers for Disease Control and Prevention; National Center for Injury Prevention and Control. (2004). Playground injuries: fact sheet. Available at: <http://www.cdc.gov/HomeandRecreationalSafety/Playground-Injuries/> Accessed September 23, 2011.
- Cradock AL, O'Donnell EM, Benjamin SE, Walker E and Slining M. (2010). A review of state regulations to promote physical activity and safety on playgrounds in child care centers and family child care homes. *Journal of Physical Activity and Health*, 7(1): 108-119.
- DeBord, K, Hestenes, L, Moore, R., Cosco, N. and McGinnis, J. (2005). POEMS: Preschool outdoor environment measurement scale. Lewisville (NC): Kaplan Early Learning Company.
- Fromberg DP and Bergen D. (2006). *Play from birth to twelve: Contexts, perspectives and meanings*. 2<sup>nd</sup> ed. New York (NY): Taylor & Francis Group.
- Hestenes L, Shim J, DeBord, K. (2007). The measurement and influence of outdoor child care quality on preschool children's experiences. Presentation given at the Biennial Conference for the Society for Research in Child Development.

Illinois Facilities Fund. (2004). The building blocks of design: A handbook for early childhood development facilities. Available from:

<http://www.iff.org/resources/content/3/4/documents/bbdesignmanual.pdf>

Accessed June 4, 2013.

Kern P and Wakeford L. (2007). Supporting outdoor play for young children: The zone model of playground supervision. *Young Children*, 62 (5): 12-18.

McGinnis J. (2000). Children's outdoor environments: a guide to play and learning. North Carolina Partnership for Children.

Moore, R. C., & Cooper Marcus, C. (2008). "Healthy planet, healthy children: Designing nature into the daily spaces of childhood." In S. Kellert, J. Heerwagen & M. Mador (Eds.), *Biophilic design: Theory, science and practice*. Hoboken, NJ: John Wiley & Sons, Inc.

Muñoz, S. A. (2009). Children in the outdoors: a literature review. Sustainable Development Research Centre. Available at:

<http://www.countrysiderecreation.org.uk/Children%20Outdoors.pdf>

Accessed June 4, 2013.

National Association for Sport and Physical Education (NASPE). (2009). Active start: a statement of physical activity guidelines for children birth to five years. Available at:

<http://www.aahperd.org/naspe/standards/nationalGuidelines/ActiveStart.cfm>. Accessed

September 23, 2011.

National Association for Sport and Physical Education (NASPE). (2004). Physical activity for children: a statement of guidelines for children ages 5-12, 2nd edition.

Available at: <http://www.aahperd.org/naspe/standards/nationalGuidelines/PA-Children-5-12.cfm>. Accessed September 23, 2011. Link no longer available.

Nicholson S. (1971). How not to cheat children: the theory of loose parts. *Landscape Architecture*; 62: 30-35.

North Carolina Department of Public Instruction. (2005). Foundations: Early learning standards for North Carolina preschoolers and strategies for guiding their success.

Available at: [http://www.earlylearning.nc.gov/Foundations/pdf/BW\\_condensed.pdf](http://www.earlylearning.nc.gov/Foundations/pdf/BW_condensed.pdf)

Accessed September 23, 2011.

Peaceful Playgrounds. (2002). Playground supervisor training. Available at:

<http://www.peacefulplaygrounds.com/pdf/training.pdf>. Accessed September 23, 2011.

Playworld Systems, Inc. (2002). Playground planning checklist. Available at:

<http://playworldsystems.com/files/downloads/PlaygroundPlanningChecklist.pdf> Accessed

September 23, 2011.

Stenz B. (1997). Audit and inspection criteria.

Taylor AF and Frances EK. (2006). Is contact with nature important for healthy child development? State of the evidence. In Spencer, C. & Blades, M. (Eds.), *Children and Their Environments: Learning, Using and Designing Spaces*. Cambridge, UK: Cambridge University Press.

The National Program for Playground Safety. (2004). Supervision guidelines for playgrounds. Available at: <http://www.playgroundsafety.org/safe/supervision>. Accessed September 23, 2011.

The National Program for Playground Safety. (2004). Tips for limiting sun exposure. Available at: <http://www.playgroundsafety.org/safety-tips/sun-exposure>. Accessed September 23, 2011.

Thompson D, Hudson SD, Mack M. (1999). Matching children and play equipment: a developmental approach. *Early Childhood NEWS*. Available at: [http://www.earlychildhoodnews.com/earlychildhood/article\\_view.aspx?ArticleID=463](http://www.earlychildhoodnews.com/earlychildhood/article_view.aspx?ArticleID=463) Accessed September 23, 2011.

Tinsworth D, McDonald J. (2001). *Special Study: Injuries and Deaths Associated with Children's Playground Equipment*. Washington (DC): U.S. Consumer Product Safety Commission.

U.S. Consumer Product Safety Commission (CPSC). (1995). Child safety protection act fact sheet. CPSC document #282. Available at: <http://www.cpsc.gov/cpsc/pub/pubs/282.pdf>. Accessed September 23, 2011.

U.S. Consumer Product Safety Commission (CPSC). (2001). Home playground equipment-related deaths and injuries. Available at: <http://www.cpsc.gov/library/playground.pdf> Accessed September 23, 2011.

U.S. Consumer Product Safety Commission (CPSC). (2001). Is your home playground a safe place to play? Available at: <https://www.cpsc.gov//PageFiles/122140/pg1.pdf> Accessed February 6, 2013.

U.S. Consumer Product Safety Commission (CPSC). (2010). Public playground safety handbook. Available at: <http://www.cpsc.gov/cpsc/pub/pubs/325.pdf>. Accessed January 3, 2012.

U.S. Consumer Product Safety Commission (CPSC). (2001). Special study: injuries and deaths associated with children's playground equipment. Executive summary and background. Available at: <http://www.cpsc.gov/library/playgrnd.pdf> Accessed September 23, 2011.

U.S. Consumer Product Safety Commission (CPSC). (2002). Tips for public playground safety. CPSC document #324. Available at: <http://www.cpsc.gov/CPSCPUB/PUBS/playfct.pdf> Accessed September 23, 2011.

U.S. Consumer Product Safety Commission (CPSC). (2005). Outdoor home playground safety handbook. CPSC document #324. Available at: <http://www.cpsc.gov/PageFiles/117306/324.pdf>. Accessed June 4, 2013.

U.S. PIRG Reports. (2002). Playing it safe: the sixth nationwide safety survey of public playgrounds. Executive summary. Available at: <http://www.consumerfed.org/elements/www.consumerfed.org/file/health/PlayingItSafeJune2002.pdf> Accessed February 6, 2013.

## **APPENDIXES – Updated August 2011**

### **Appendix A: PowerPoint Slides and Playground Safety Checklist**

The Sensible Safe Play Powerpoint Presentation and the Playground Safety Checklist are provided for use during the NTI on-site training and are also available on the Resources site. In addition, the slides for Appendix A are available online at <http://www.ces.ncsu.edu/depts/fcs/human/playsafe/slides.html>.

### **Appendix B: Miscellaneous Materials**

The following are available online on NTI's Sakai site:

- Audit and Inspection Criteria: Access/Egress Climber
- Audit and Inspection Criteria: Balance Beam
- Audit and Inspection Criteria: Critical Heights of Tested Materials
- Audit and Inspection Criteria: Platform Guardrail and Barrier
- Audit and Inspection Criteria: Free Standing Climber
- Audit and Inspection Criteria: Rotating Swing
- Audit and Inspection Criteria: Spring Rider
- Audit and Inspection Criteria: Surfacing and Use Zone Guidelines
- Audit and Inspection Criteria: To/Fro Swings
- Audit and Inspection Criteria: Upper Body Equipment
- Matching Children and Play Equipment: A Developmental Approach