



# Environmental Scan of Physical Activity Practices and Resources in Washington, DC Child Care Centers

December 2010



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# 1. Introduction



## Background

The childhood obesity epidemic is affecting millions of U.S. children; their families; the institutions that serve them; the communities in which they live; and, to an alarming degree, the overall health of our nation. Increased risks for diseases associated with pediatric obesity are predicted to negatively affect the life expectancy of the current generation of American children (Stewart et al., 2009). The unhealthy behaviors contributing to widespread obesity are now leading causes of preventable death, disease and diminished quality of life (Jia & Lubetkin, 2010).

Unhealthy eating and sedentary behaviors are extremely difficult to change, and very few interventions have proven effective (U.S. Preventive Services Task Force, 2005). Evidence-based recommendations for the treatment and prevention of obesity call for moderate- to high-intensity interventions for individuals, but sustaining intense interventions can be difficult and costly. As a result, the focus of government and philanthropic funding often supports the development of policy and environmental approaches. These approaches may have a greater chance of passively impacting the behaviors of large numbers of children and families by making healthier behaviors an easier choice (Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity and Obesity, 2009).

The trend of increasing prevalence of obesity among children in their early childhood years is particularly alarming. Between 1970 and 2000, the prevalence of obesity among 2- to 5-year-olds nearly doubled (Ogden et al., 2002). Currently, one in five (21.2%) preschool-aged children is overweight or obese (Ogden et al., 2010). Because eating and activity habits are formed during early years and because pediatric onset of obesity in childhood is a strong predictor of obesity in adolescence and adulthood (Guo et al., 1994; Nader et al., 2006), finding effective strategies to promote healthy eating and increase physical activity among young children is critical to curbing this epidemic.

In May 2010, the White House Task Force on Childhood Obesity recognized the importance of the early childhood years, particularly child care settings, in our nation's response to the epidemic of childhood obesity (White House Task Force on Childhood Obesity, 2010). In the Task Force's report to the President, early childhood prevention was one of five main strategies included in the plan to reduce the prevalence of childhood obesity to 5% by 2035. Among the Task Force's early childhood recommendations were actions to promote physical activity, better nutrition, and less screen time in child care settings. Concurrent with the release of the Task Force report, the U.S. Department of Health and Human Services (HHS) released the *National Physical Activity Plan for the United States*, recommending that "early childhood settings promote physical activity for children ages 0 to 5 years" (U.S. National Physical Activity Plan Coordinating Committee, 2010).

Child care settings offer strategic opportunities for obesity prevention. A majority of U.S. preschoolers (children 3–5 years old) and toddlers (children 1–2 years old) are enrolled in some form of nonparental care. Among these children, 78% of preschoolers and 43% of toddlers are in center-based care on a weekly basis, and spend an average of 24.8



hours per week in that setting (Iruka & Carver, 2006). Because so many young children spend much of their waking hours in child care, it is an important setting to consider when designing policies to support early health and development.

Several states and municipalities have developed child care policies intended to promote improved nutrition, increased physical activity, and limit screen time (Benjamin et al., 2008). State and local policy actions can generally be grouped into three approaches: changing child care licensure requirements; recommending stronger nutrition standards in the federally funded, state-administered Child and Adult Care Food Program (CACFP); and establishing relevant quality indicators that may be used in quality rating and improvement systems to determine reimbursement rates and drive changes in child care operations. As noted in the White House report, there are several federal programs that can be leveraged for these efforts by providing funding for the research, training, and resources needed to help states and communities implement these approaches.

## The Need for Local Data on Child Care Practices in Washington, DC

On May 6, 2010, the DC Department of Health (DCDOH) released *Working Towards a Healthy DC: The District of Columbia's Overweight and Obesity Action Plan (OOAP)*, which was developed with support from many District agencies and local nonprofit partners (DCDOH, 2010). The first goal of the plan focuses on promoting healthy eating and physical activity in child development centers, and the first objective under this goal is to adopt and implement a comprehensive wellness policy for child development centers. The DC Office of the State Superintendent for Education (OSSE), which oversees both elementary and early childhood education and child care licensing in the District, would be responsible for the development and dissemination of this early childhood wellness policy.

The need for an obesity action plan in Washington, DC, is clear, and a focus on early prevention makes sense. Among the District's preschool-aged children, the prevalence of obesity is 13.3% (Polhamus et al., 2009). DC's licensed child development centers and family daycare homes have the capacity to serve 22,551 children (DC Early Care and Education Administration, 2007). Consequently, implementing effective childhood obesity prevention policies in DC's child care settings could improve the health of thousands of young children.

At the time of this study, prior to the design or adoption of an early childhood wellness policy, the child care licensing regulations in Washington, DC included some policies governing nutrition and activity in child care and no policies to address children's exposure to screen time. Specifically, DC's current child care licensure rules require at least 120 minutes of outdoor activity per day for children in a full-day program and at least 30 minutes per day for children in a part-day program (DC Municipal Regulations). However, "activity" is

not necessarily the same as physical activity; it may include sedentary activities such as arts and crafts. Consequently, there has been no expectation of how much time children in DC child development centers should spend engaged in various kinds of physical activity. However, DC's OOAP calls for an improvement in this area and recommends 120 minutes of daily physical education in child care (DCDOH, 2010).

Existing District policy governing the nutritional content of subsidized meals served in child care settings is determined by federal standards within the CACFP. OSSE administers CACFP for the District and oversees these nutritional standards. Recommending updates to these standards is part of the OOAP.

Noteworthy early childhood obesity prevention programs are already under way in the District. The federal Head Start program has been implementing the I Am Moving, I Am Learning (IAMIAL) program across the country, and many District sites have been participating in it for the past few years (HHS Administration for Children and Families, 2006). This program goes beyond just educating the children themselves, and includes mandatory annual trainings for child care providers. Local training efforts have also been supported by the DCDOH, which provided funding to the Summit Health Institute for Research and Education, Inc. (SHIRE) to design and lead training efforts in the SHIRE Childhood Overweight and Obesity Prevention (SCOOP) program. SCOOP is based on the IAMIAL training program but adds locally relevant practical components as well as cultural competency elements. For the two years prior to this study, four SHIRE trainers, directly trained by the developers of IAMIAL, had been disseminating their SCOOP training to groups of DC child development centers and to family daycare homes.

During recent work to review, update, and strengthen District's Child Development Facility Regulations and the CACFP nutrition standards, OSSE and its partners identified the needs to

- Establish the baseline of obesity-related practices in Washington, DC's child development centers;
- Assess centers' readiness and capacity for improving nutrition, limiting screen time, and increasing structured and unstructured physical activity opportunities;
- Elicit child care provider perspectives on supports needed to successfully implement health-promoting Child Development Facilities Regulations and other child care nutrition standards; and
- Allow for the long-term evaluation of health-promoting policies in child care settings.

## Overview of This Environmental Scan and Report

During an internal planning process in early 2009, members of Altarum Institute's Childhood Obesity Prevention Mission Project (CHOMP) identified the potential to address OSSE's needs and support child care policy change efforts in Washington, DC as one of several strategic opportunities. CHOMP is an internally funded effort focused on catalyzing systems changes to prevent obesity in young children. Through CHOMP, Altarum provided funding to DC Hunger Solutions (DCHS) to partner with the Institute in this work. DCHS, an affiliate of the Food Research and Action Center, is a local nonprofit focused on advancing changes to the local food and nutrition support systems. Together, DCHS and Altarum designed and conducted environmental assessments of the food and nutrition and physical activity and screen time practices in child care centers operating in Washington, DC. The joint Altarum-DCHS community research was designed to achieve the following goals:

- Inform development of a meaningful and realistic District early childhood wellness policy,



- Inform development and provision of training to support child care providers' efforts to comply with new policies, and
- Inform efforts of other state or municipal agencies developing similar health-promoting child care policies.

DCHS analyzed the food and nutrition related results of this environmental scan. The results of this report can be found at [http://www.dchunger.org/pdf/envscan\\_nutrition\\_childdevcenters\\_promotewellness.pdf](http://www.dchunger.org/pdf/envscan_nutrition_childdevcenters_promotewellness.pdf).

This report details the methods and findings of the Altarum-led portions of the environmental assessments, which were focused on activity-related practices of DC child development centers. The Altarum-led analyses focus on factors thought to be (1) most influential in determining children's activity levels in child care settings and (2) potentially modifiable through policy or practice changes. Thus, in addition to assessing actual policies and practices, this research assessed the external environment, including the centers' physical infrastructure, neighborhood, and equipment, which all influence the activity levels of children. In addition, the scan assessed what training providers had received related to physical activity.

The current chapter provides context for the work. Chapter 2 describes the methodology that Altarum used to develop, carry out, and analyze data from its portion of the environmental scan. Chapter 3 details the characteristics of the centers included in the study. Chapter 4 summarizes provider-reported data on center-level screen time and physical activity practices, as well as provider attitudes regarding daily screen time limits and physical activity requirements. Chapter 5 summarizes data on center- and neighborhood-level environmental supports and barriers that might impact the implementation of physical activity and screen-time policies. Chapter 6 details social and classroom-level supports and barriers relevant to activity and screen-time policies, including parental and staff engagement and the availability of in-classroom resources. The same chapter summarizes the effects of staff trainings on physical activity in child care. Chapter 7 presents and discusses the main conclusions that can be drawn from this environmental scan. The final chapter presents recommendations to agencies in the District of Columbia and elsewhere that are planning and implementing new child care policies designed to improve physical activity and reduce screen time, and thereby confront the epidemic of child obesity.

## Standards and Definitions

The scan was undertaken in the context of an emerging knowledge base and literature. Considerable variability exists in recommendations for physical activity and screen time limits in child care settings. Similar variability exists in how practices are defined, monitored, and measured. Key terms that guided data collection and analysis are defined and discussed here to provide a common frame of reference.

### Key Study Definitions

**Screen time** is time spent in front of a television or computer screen.

**Structured physical activity** is developmentally appropriate physical activity that is guided by the caregiver (National Association for Sport and Physical Education [NASPE], 2002).

**Unstructured physical activity** is child-initiated physical activity that occurs as the child explores his or her environment (NASPE, 2002).

### Screen Time

For this study, screen time is defined as the amount of time spent using screen-based media such as television, videos, and computers. This definition is frequently used in recent literature on obesity prevention in the child care setting (American Academy of Pediatrics [AAP] et al., 2010; Benjamin et al., 2008). While there is some debate about the value of educational screen time, or screen time intended to promote physical activity, many child health experts believe that screen time should be limited in child care settings. Reflecting this, several evidence-based public education efforts have focused on limiting screen time to 2 hours per day (Blue Cross Blue Shield of Massachusetts, 2008; Evans et al., 2007; Gortmaker et al., 1999). However, there is more inconsistency in the limits being applied to screen time in child care policy. For example, the Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) suggests that the best practice guidelines for physical activity in child care are that television or videos be rarely or never shown and that children not be seated for periods greater than 30 minutes (McWilliams et al., 2009). Most recently, the AAP, the American Public Health Association (APHA), and the National Resource Center for Health and Safety in Child Care and Early Education (NRC) updated their recommendations for standards on screen time in child care settings. In *Preventing Childhood Obesity in Early Care and Education Programs*, these organizations recommended that, for children over age 2, “total media time should be limited to not more than thirty minutes once a week, and for educational or physical activity use only” (AAP et al., 2010).

### Structured and Unstructured Physical Activity

Physical activity in the child care setting is often categorized as either “structured” or “unstructured.” Structured physical activity is defined by NASPE as “developmentally appropriate physical activity that is guided by the caregiver.” Some examples of this type of activity are group games such as “Ring Around the Rosie”; “Follow the Leader”; “Red Light, Green Light”; and obstacle courses. Studies have shown structured activity to be associated with increased amounts and intensity of physical activity in preschoolers as well as motor skill development (Brown et al., 2009; Ward et al., 2010).

Unstructured physical activity is defined as child-initiated physical activity that occurs as the child explores his or her environment (NASPE, 2002). Some examples of unstructured physical activity are playing on slides, swings, or other play equipment; climbing through a playhouse or tube; pushing and pulling toys; and playing tag or chase. In unstructured physical activity or “free play” as defined by the AAP, the caregiver watches and encourages active play but does not lead the children (Ginsburg, 2007). Unstructured physical activity contributes to healthy child development, because in structured activities,



“children acquiesce to adult rules and concerns and lose some of the benefits play offers them, particularly in developing creativity, leadership, and group skills” (Ginsburg et al., 2007). Thus, unstructured activity should supplement, rather than be replaced by, structured physical activity time (Burdette & Whitaker, 2005; Ward et al., 2010).

While child development and health experts agree that young children (i.e., toddlers and preschoolers) should engage in a combination of structured and unstructured physical activity, expert guidance is inconsistent on the specific amount of daily structured physical activity that is appropriate for toddlers and preschoolers. For example, NASPE recommends at least 60 minutes of unstructured physical activity per day for children aged 1–5 years, at least 30 minutes of structured physical activity for children aged 1–3 years, and at least 60 minutes of structured physical activity for children aged 3–5 years (NASPE, 2002). The model standards in *Preventing Childhood Obesity in Early Care and Education Programs* recommend 60–90 minutes of daily total active play, structured and unstructured, for toddlers and 90–120 minutes for preschoolers (AAP et al., 2010). NAP-SACC best-practice recommendations and *Preventing Childhood Obesity in Early Care and Education Programs* model standards do not specify a minimum time requirement for structured or teacher-led activity. Instead, they emphasize that structured caregiver- or teacher-led physical activity be provided to children at least twice a day, indoors or outdoors (AAP et al., 2010; McWilliams et al., 2009).

A close-up photograph of a person's hands writing on a clipboard. The person is wearing a watch and a bracelet. The background is a blurred outdoor setting with sunlight filtering through trees.

## 2. Methodology

### Design

The environmental scan was conducted from July to October 2009. The scan included data from 26 child care centers, out of the total 498 licensed child development centers in DC (personal communication with OSSE, October 1, 2009). Only centers serving toddler- and preschool-age children were included in the scan, as the objective of this study was to identify ways to help child development centers increase physical activity opportunities for children in this age group. Altarum analyzed and is reporting on the physical activity and screen time-related components of the scan. As discussed above, a companion report written by DCHS details the analysis and findings of the nutrition-related components of the environmental scan. The sampling methods, recruitment procedures, data collection instruments and procedures, and analysis process are described below.

### *Inclusion Criteria*

Child development centers were eligible to participate in the study if they

- Were licensed as a child development center in the District of Columbia that is community- rather than school-based;
- Enrolled preschool-aged children (2–5 years); and
- Had a director provide written informed consent.

### *Sampling Methods*

Based on available resources, the scan was designed to include 26 centers with variation in a number of characteristics discussed below. To ensure that centers with these characteristics were roughly equally distributed among the three reimbursement tiers, quota sampling was used during center recruitment. Quota sampling is a type of purposive sampling commonly used in exploratory studies that draw heavily on qualitative methods (Fisher et al., 2002). The characteristics of interest follow.

**CACFP participation:** CACFP is a federal nutrition program that provides funding to child care providers to offset the cost of serving meals and snacks to low-income children. A variety of nonprofit licensed child care centers are eligible to participate in CACFP. With some restrictions, for profit centers that serve lower income children may also be eligible (USDA Food and Nutrition Service, 2010). Because CACFP-participating centers serve many low-income children and this group is at great risk for obesity, the majority of centers included in the scan were CACFP-participating. The study team was also interested in learning about practices and wellness trainings at centers that were not participating in CACFP. Thus, the scan sought to include a small number of non-CACFP-participating centers.

**Proportion of children eligible for subsidy spots:** The proportion of children eligible for subsidy spots was considered to be a proxy for the general level of resources available to a center. While lower-resourced centers were the main focus of the scan, the study team wanted to have representation from more highly resourced environments as well. Thus, the scan sought to include a small number of centers that accepted few or no children using subsidies to cover part of their tuition.

**Reimbursement tier:** The DC Office of Early Childhood Development's Going for the Gold program uses a three-tiered designation to determine the level of reimbursement offered. The bronze tier is the entry-level designation for all licensed child development centers. Centers may then apply for the silver designation if they (1) meet bronze requirements, (2) complete additional hours of director and staff training, (3) provide training and meeting opportunities for parents, (4) are in the process of seeking accreditation from designated national organizations, and (5) have not received any licensing citations in the past 12 months that "jeopardize the health, safety, and well-being of children under care." Centers may also apply for the gold designation if they (1) meet the silver requirements, (2) are nationally accredited, (3) complete additional hours of director and staff training, (4) provide two additional training and meeting opportunities for parents, and (5) have no substantiated licensing citations. The study team was interested in exploring whether there was an association between quality designation and centers' capacity to meet minimum daily physical activity standards. For instance, since they meet stricter training and accreditation standards, gold-tier centers may have more capacity than bronze-tier centers to meet recommended amounts of physical activity and to encourage staff trainings and parental involvement in supporting the healthy behaviors of children. Thus, the scan sought to include an equal number of centers from each reimbursement tier.

## ***Center Recruitment and Yield***

To obtain the sample of CACFP-participating centers, a list of participating centers was provided by OSSE. Study staff called centers in a randomized order until the target quota of seven centers from each reimbursement tier agreed to participate and their eligibility was confirmed. All centers that were contacted agreed to participate in the study. One center that agreed to participate during the telephone recruitment could not be reached subsequently for data collection, so it was replaced by another CACFP-participating center from that tier.

To obtain the non-CACFP-participating centers with more than 25% subsidy spots, the list of centers participating in the child care subsidy program was obtained from OSSE. Centers that were on this list but not on the list of CACFP-participating centers were called until one center in each reimbursement tier was found. During the recruitment phone call, study staff confirmed that the center was not currently participating in CACFP and had more than 25% of enrolled children in the child care subsidy program.

To obtain the non-CACFP-participating centers with less than 5% subsidy spots, two centers known by study personnel to serve higher-income families were recruited. One of these centers was a nonprofit center with one subsidy spot; the other was a for-profit center with no subsidy spots.

The final sample totaled 26 centers, including

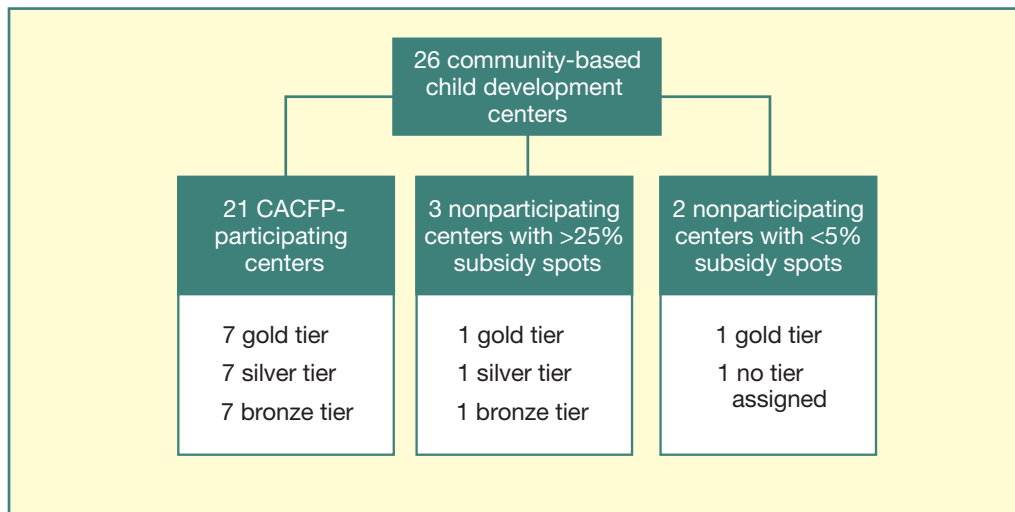
- 21 centers participating in CACFP, approximately 10% of DC's 191 CACFP-participating child care facilities;<sup>1</sup>
- 3 centers not participating in CACFP with more than 25% child care subsidy spots; and
- 2 centers not participating in CACFP with less than 5% child care subsidy spots (one of which does not serve food).

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<sup>1</sup> The 191 CACFP-participating facilities include not only centers, but also sponsors of centers and the centers they manage, family day care home sponsors and the homes they manage. Thus the 21 centers included in the study likely represent more than 10 percent of all licensed centers participating in CACFP in DC.

The distribution of centers by reimbursement tier is shown in Figure 1.

**Figure 1. Child development center sampling.**



## Data Collection Instruments

Three instruments were used to collect information on physical activity and nutrition resources and practices at all 26 centers. The instruments were adapted by Altarum, DCHS, and OSSE staff from existing tools (Ammerman et al., 2007; Ball et al., 2005; Rhee et al., 2005; Sutton et al., 2003).

The three environmental scan instruments were

- **A written, self-administered questionnaire** for center directors to complete,
- **An in-depth interview guide** tailored to the type of child development center and administered by study staff during an onsite interview with the center director, and
- **A physical infrastructure observation instrument** used by study staff to assess each center's play equipment and indoor and outdoor space available for physical activity.

More information on each of these instruments is presented below.

### Self-administered questionnaire

The child care provider questionnaire included questions on the following specific topics:

- The presence of, adherence to, and motivation to implement policies limiting screen time;
- The presence of, adherence to, and motivation to implement policies requiring a defined minimum amount of daily physical activity; and
- Provider perceptions of the general safety of the center's neighborhood.

### In-depth interview guide

The interview guide was prepared to promote consistency in semi-structured interviews conducted in-person with center directors, managers, and, in one case, a teacher. The guide was designed to elicit the following information:

- Current screen time and physical activity practices at each center (including time spent in structured, unstructured, and outdoor physical activity);



- Provider attitudes toward and beliefs about the center’s ability to meet hypothetical District-wide policies modeled on national standards, including that child care centers should
  - “Limit screen time to less than one hour per day of educational programming for children aged 2 to 5 years and not allow any screen time for infants and children less than 2 years of age,”
  - Provide “at least 30 minutes of structured physical activity for children aged 1 to 2 years and at least 60 minutes of structured physical activity for children aged 3 to 5 years,” and
  - Provide “at least 60 minutes of unstructured physical activity per day for children aged 1 to 5 years”.
- Training, if any, received by center staff in the last two years to help them promote and involve the children in structured physical activity, the director’s perspective on this training, and how it has been incorporated into center practice;
- Environmental and system barriers and supports for limiting screen time and increasing physical activity, including the accessibility of parks, center infrastructure and resources, trainings, and training gaps; and
- Providers’ ideas for how to best support centers in implementation of future wellness guidance.

### Physical infrastructure observation instrument

Adapted from the NAP SACC self-assessment instrument and the NAP SACC Environmental and Policy Assessment and Observation tool (EPAO), the observation instrument was used by study staff to assess and document

- The extent to which the center’s indoor and outdoor space supports physical activity,
- The availability of fixed and portable play equipment, and
- The types of fixed and portable play equipment available both inside and outside the center.

## Data Collection

All 26 child development centers participating in the study completed written questionnaires, participated in in-person interviews, and had observations of their physical infrastructure conducted on site. As noted above, Altarum and DCHS each visited 13 child development centers for a total of 26 completed environmental assessments.

The study team targeted directors of the child development centers to participate in the interviews. If the center director was not available, another senior staff member with intimate knowledge of the center’s nutrition and physical activity policies and practices was included. In one instance, a teacher was interviewed. For simplicity, throughout this report, the senior staff member interviewed will be referred to as “the director.”

## Informed Consent and Incentives

All participants were informed of the purpose of the environmental scan, study topics, their rights as voluntary participants, and measures taken to ensure confidentiality. All participating directors provided written informed consent. The letter of introduction detailed to participants that their center would be compensated with a nylon play tunnel after successful completion of both the questionnaire and interview.

## Data Analysis

Altarum staff analyzed data on the physical activity and screen time components of the scan while DCHS analyzed the nutrition components. The discussion below details the steps taken by the Altarum Team.

Responses to open-ended questions from the questionnaire and in-depth interview were aggregated into a text file (in Microsoft Word) with each response labeled with the center's identification number. Study staff trained in qualitative analysis techniques then identified themes and categorized responses according to these themes.

Data from closed-ended questions and quantitative information from the observational tool were entered into a Microsoft Excel spreadsheet for analysis. Centers were coded according to various characteristics identified during recruitment or through data collection. Methods of coding and classifying physical activity time, screen time, indoor and outdoor space, fixed and portable play equipment, and physical activity training are described below.

### *Center Classification*

In addition to the characteristics confirmed during recruitment (CACFP participation, percent of subsidy spots, and the center's subsidy reimbursement tier), centers were classified for analysis according to their Head Start designation. Head Start center teachers are required to attend annual training in physical activity. In the past two years, Head Start centers have also been eligible to receive grants to enhance physical activity space and equipment and receive onsite technical assistance in physical activity through the federally funded Head Start Body Start program. The study team was interested in looking at how these resources and requirements affected centers' capacity to meet increased recommended amounts of physical activity. Thus, some analyses were conducted specific to Head Start or non-Head Start centers.

### *Outcome Variables*

**Physical activity time.** Center directors reported the amount of time (in minutes), on average, in which toddlers and preschoolers were engaged during a full day of child care. Three types of physical activity were reported: unstructured, structured, and outdoor physical activity. Minutes of activity were analyzed as a continuous variable.

**Screen time.** The amount of time (in minutes), on average, that directors reported that toddlers and preschoolers spent in front of a screen while in a full day of child care was also analyzed as a continuous variable.

**Indoor space.** The suitability of indoor space for physical activity was classified by study staff as "quiet play only"; "very limited movement"; "some active play"; or "all activities, including running". For analysis, responses were collapsed into "less suitable" (Categories 1 and 2) and "more suitable" (Categories 3 and 4).

**Outdoor space.** The suitability of onsite outdoor space for physical activity was assessed by the study team as "no open running space and no track or path for wheeled toys," "very limited running space and no track or path for wheeled toys," "plenty of open running space but no track or path for wheeled toys," and "plenty of open running space and a track or path for wheeled toys" using the modified EPAO and NAP SACC instrument. Assessments of the presence of outdoor play space at each center included an overall assessment made by members of the research team. For one center, these two assessments differed, hence this data point was not included in the analysis. For analysis, suitability categories were collapsed into "very limited running space or no running space at all" (Categories 1-3) and "plenty of open running space" (Categories 4-5).

**Fixed play equipment.** Study staff classified fixed play equipment at the center as "unavailable on site," "only one type available," "different types available that suit the



needs of most children,” and “wide variety of types available to suit the needs of all children.”

**Portable play equipment.** Study staff classified the availability of portable play equipment at the center as “only a limited variety, and children must take turns”; “some variety, but children must take turns”; “a good variety, but children must take turns”; and “a lot of variety, and children can use the equipment at the same time.”

**Other.** Information from the onsite interviews was used to classify centers according to whether staff had received any physical activity training in the past two years and what organization provided the training.

## ***Analysis***

Data were entered into an Excel database for data cleaning and analysis. STATA version 9 statistical software was used for generating descriptive statistics for each variable. Average values are reported for continuous variables such as the minutes of physical activity and minutes of screen time. Because the study is not necessarily representative of the entire group of child care centers in the District, confidence intervals have not been presented around quantitative results. Various outcomes of interest (e.g., suitability of indoor and outdoor space for physical activity, presence of onsite outdoor play space, type of physical activity training) were explored for different subgroups of centers, including reimbursement tier, Head Start status, and CACFP participation status. Findings are presented for selected subgroups where differences appeared particularly striking or worthy of further study. Statistical tests are not reported because of the small sample size. Because there were no patterns suggestive of differences in outcomes according to reimbursement tier, results for centers from all tiers have been combined.

### 3. Participating Center Characteristics



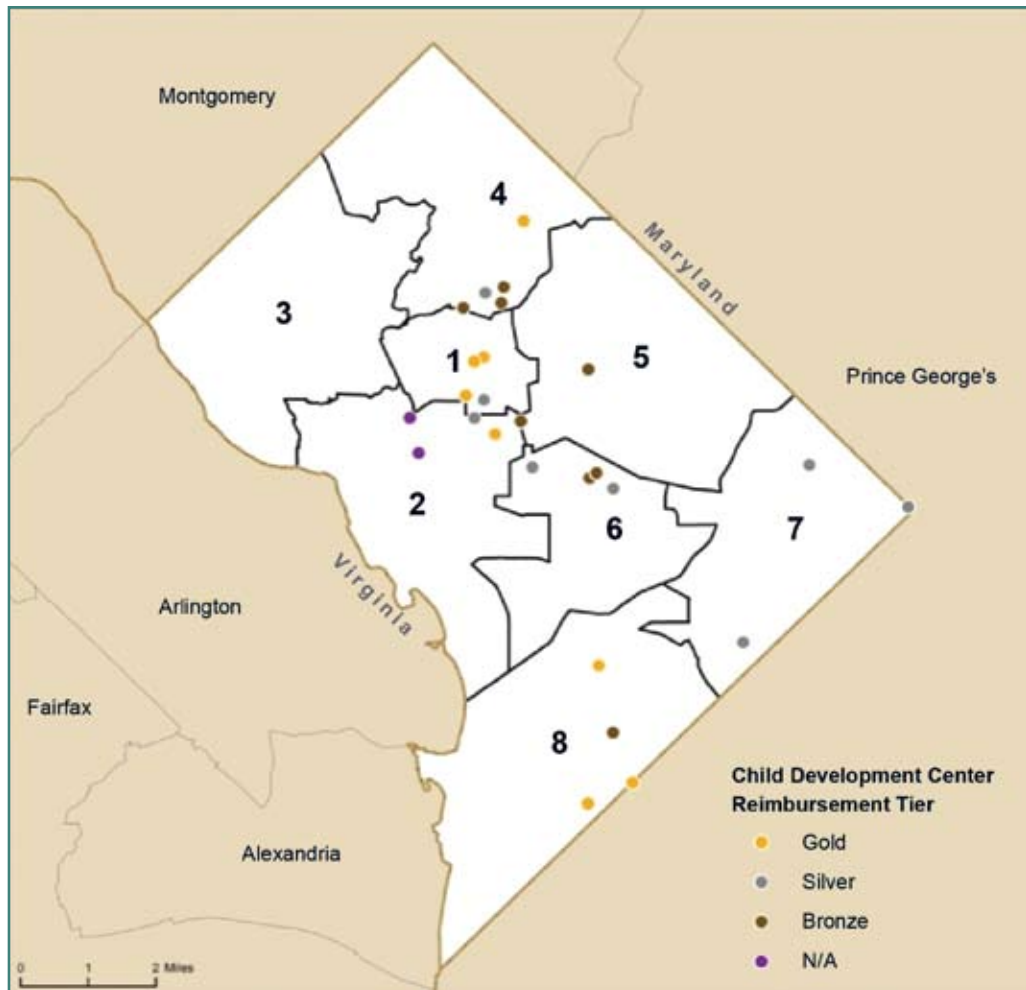
Characteristics of the child development centers participating in this study are presented in Table 1 and the geographic distribution of centers is presented in Figure 2. By design, child development centers were evenly distributed among the three quality rating tiers and most of the centers participated in CACFP and served low-income children. In addition, the sample included several Head Start centers, and centers geographically located in nearly every ward in the District.

**Table 1. Participating Child Development Center Characteristics**

Characteristic	Number of Centers
<b>CACFP Status</b>	
Participating	21
Not participating	5
<b>% Subsidized Children</b>	
>25%	24
<5%	2
<b>Head Start Status</b>	
Head Start	5
Not Head Start	21
<b>Characteristic</b>	
<b>Number of Children Enrolled</b>	
<50 children	7
51–99	14
100+	5
Median number of children enrolled (min, max)	59 (22, 280)

Centers represented every ward in the District except Ward 3. Ward 3 includes mostly higher-income neighborhoods with few CACFP-eligible child development centers.

**Figure 2. Child Development Centers in Scan, by Ward and Reimbursement Tier**





## 4. Current Center Practices and Provider Reactions to Proposed Policies

This chapter presents center screen time and physical activity practices reported by center directors during in-depth interviews. Providers' attitudes toward hypothetical policies addressing screen time and physical activity are also described.

### Screen Time

#### **Key Findings: Screen Time**

- The majority of DC child development centers in this study reported currently limiting screen time to less than half an hour a day.
- Most DC child care directors in this study believed it would be feasible to implement a policy prohibiting screen time for children under age 2 and limit it to 1 hour per day for children aged 2–5 years.

### *Current Practices*

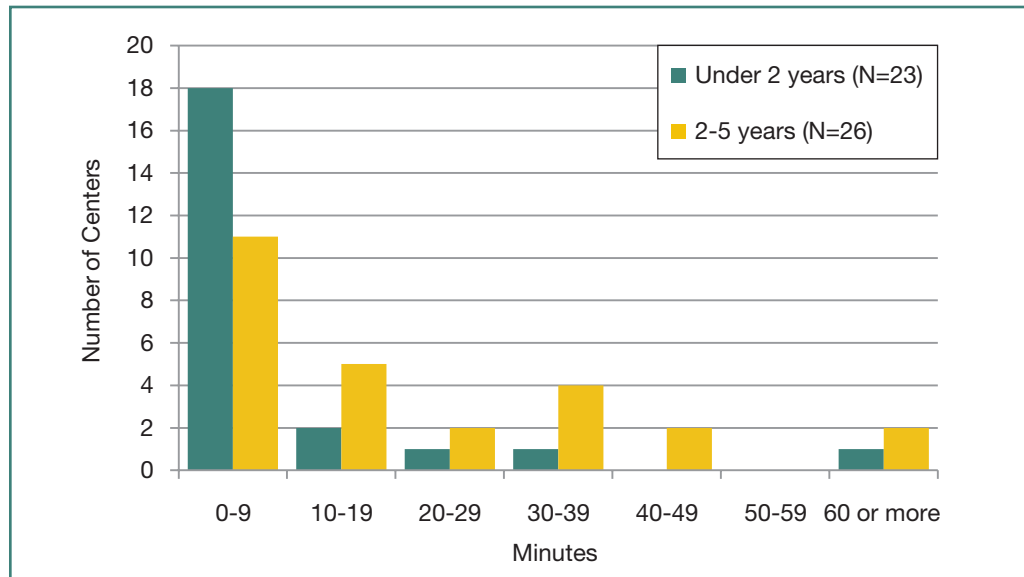
#### **Children under age 2**

Over three-quarters (78%) of centers reported that children under age 2 do not have any screen time while in care (see Figure 3). Of centers allowing screen time for this age group, the reported daily average was 27 minutes. The center with the highest reported daily screen time for this age group reported that the children watch about 60 minutes of television or videos at the end of each day while waiting to be picked up by their caregivers. No centers reported using computers with children in this age group.

#### **Children aged 2–5 years**

Screen time limits were more varied for children aged 2–5 years (Figure 3). Two-thirds (69%) of centers reported limiting screen time to less than half an hour per day, which includes 40% of sampled centers whose directors did not allow any daily screen time. Of centers allowing screen time, the reported daily average was 27 minutes. As noted in the above section, one center reported having the children watch about 60 minutes of television or videos at the end of each day while waiting to be picked up by their caregivers. One center reported allowing children to access computers as often as they desired.

**Figure 3. Reported Daily Screen Time by Age of Children**



In general, most centers used screen media only occasionally, and programming content for both TV and computers was usually reported to be educational. For example, one center reported using a video on brushing teeth, while others mentioned integrating video content into lesson plans. Several centers, however, reported occasional “movie days,” which were purely entertainment, with children bringing in their favorite titles from home or the center selecting a recent popular film. On movie days, screen time duration was estimated to be 90–120 minutes. Among centers with movie days, the frequency of these events varied from once a week to once a month.

**“I think [a screen time limit] is a great idea because you don’t know how much screen time or parent interaction they get at home. You don’t want them to lose out, even if they are watching educational programming on the TV. A lot of times, the first thing that children do when they get home is watch TV.”**

*—child development center director*

### ***Attitudes Toward Potential Screen Time Limits***

Nearly all directors reported that they supported a hypothetical policy limiting screen time to less than 1 hour per day of educational programming for children aged 2–5 years and prohibiting it entirely for younger children. Indeed, the actual screen time reported by most directors already conforms to this sample policy. All of the centers reported less than an hour of daily screen time, and most reported no screen time for children under age 2.

Many believe that children watch too much television at home and that child care should focus on other activities, such as peer socialization and interactions with adults to build language skills. Several directors also affirmed the importance of spending time on physical activities instead of screen time, because “the kids need to burn off energy.”

While providers generally supported the sample screen time policy, many also suggested modifications. Some providers said that there should be no time at all spent in front of the television. Others suggested that regulations should be flexible enough to allow providers to occasionally show movies and that educational programming such as “Sesame Street” should be permitted without a time limit. Some directors also differentiated between the use of television and computers in their centers, saying that familiarizing children with computers could be good preparation for kindergarten (provided that this screen time include only educational content).

# Physical Activity

## Key Findings: Physical Activity

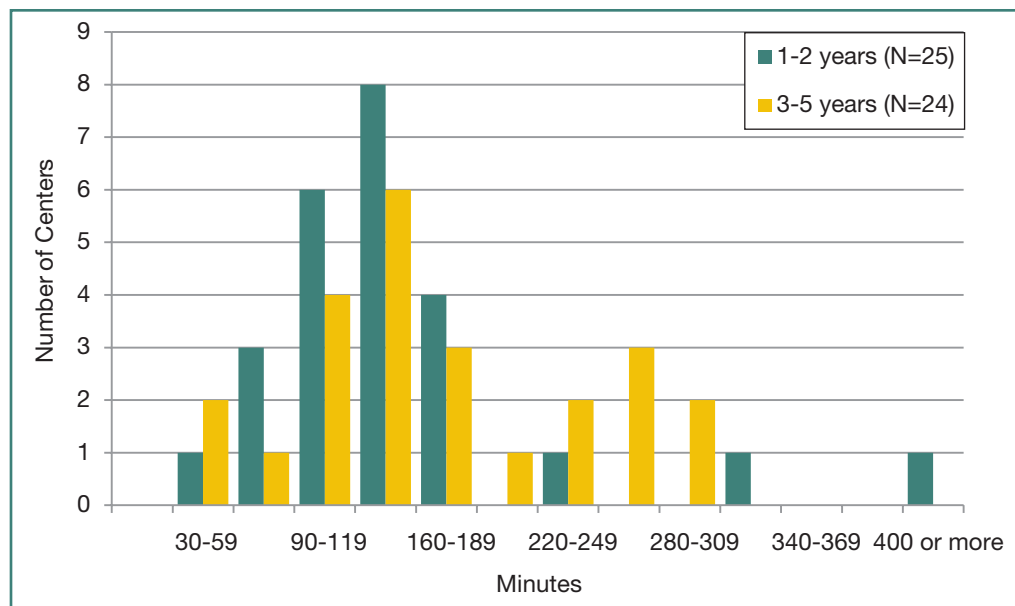
- Nearly three-quarters (71%) of center directors in this study reported that preschoolers aged 3-5 years at their centers engaged in at least 120 minutes of physical activity per day, including both structured and unstructured physical activity.
- A large majority (86%) of center directors in this study reported already meeting NASPE guidance on the amount of daily unstructured physical activity (60 minutes/day). Most center directors reported that children aged 1-5 years spend more than 1½ hours in unstructured physical activity each day.
- Slightly fewer than half (44%) of child center directors in this study reported already meeting NASPE guidance on the amounts of daily structured physical activity for preschoolers. Most center directors reported that children aged 1-2 years spend 30 minutes or less in structured physical activity each day and children aged 3-5 years spend 45 minutes or less in structured physical activity each day.
- Some directors have concerns about a policy requiring minimum amounts of structured physical activity, feeling that such a policy may “stifle [children’s] creativity” and place burdens on the staff.

## Current Practices

### Total physical activity

Nearly all (84%) centers reported that children aged 1-2 years had at least 90 minutes of total physical activity per day, thus meeting NASPE guidance for this age group. The majority reported more than 2 hours of daily physical activity for toddlers. About three-quarters (71%) of centers reported that children aged 3-5 years got at least 120 minutes of physical activity per day (see Figure 4).

Figure 4. Reported Total Daily Physical Activity by Age of Children

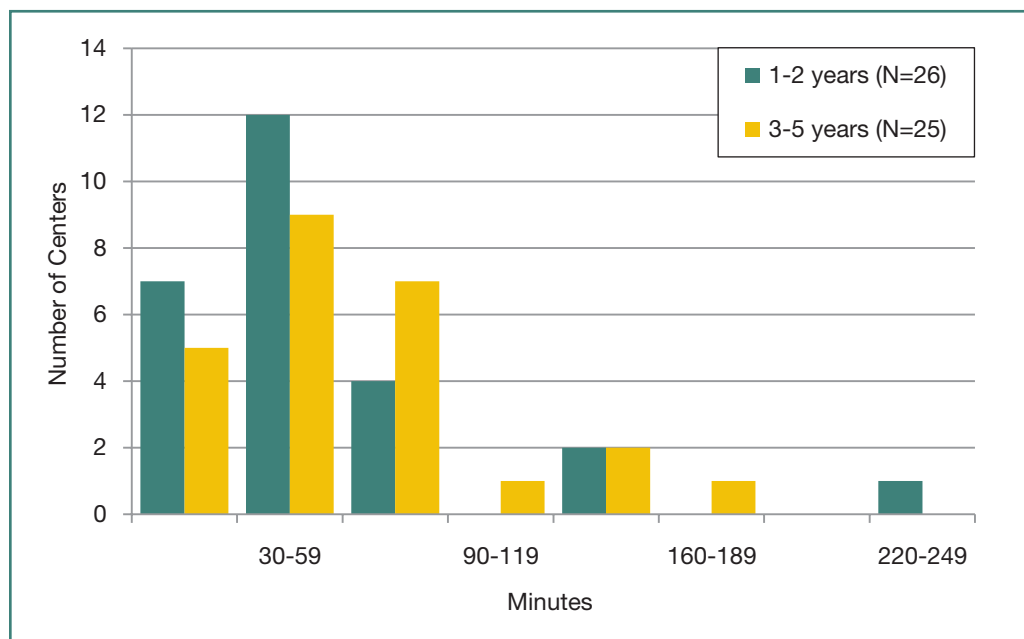


## Structured physical activity

Overall, the reported amounts of structured daily physical activity varied greatly across centers. On average, children aged 1–2 years spent about the same amount of time as children aged 3–5 years engaged in daily structured physical activity (an average of 47 minutes for those 1–2 years and 52 minutes for those 3–5 years; see Figure 5). While 73% of centers reported meeting NASPE’s recommendation of at least 30 minutes of structured physical activity for toddlers, only 44% of centers met the 60 minutes NASPE recommends for preschoolers.

Some commonly reported methods for engaging younger children in structured physical activity included activities designed to develop the children’s gross motor skills (e.g., “Simon says”; “follow the leader”; “duck, duck, goose”; “leapfrog”) and dancing or moving to music. Sixty-five percent of centers reported using lessons to build gross motor skills, and nearly all centers reported using movement with music activities with the children. Additionally, several centers reported bringing in external instructors to facilitate structured activity each week. For example, one center holds a weekly dance class where an instructor does creative movement with the children.

**Figure 5. Reported Daily Structured Physical Activity by Age of Children**



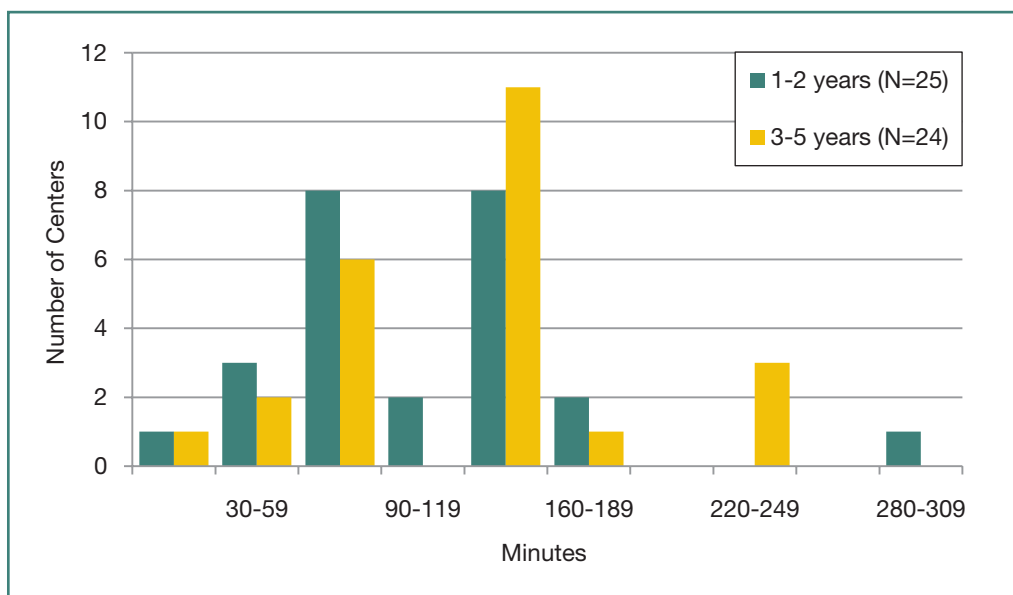
**“[In] unstructured play, [children] freely choose their games. It allows them to be creative, because they come up with games that we don’t even know about.”**

*—child development center director*

## Unstructured physical activity

Directors generally reported that children aged 1–5 years engaged in more unstructured physical activity than structured physical activity. Toddlers spent an average of 96 minutes a day in unstructured physical activity while preschoolers spent an average of 113 minutes (see Figure 6). Eighty-six percent of directors reported meeting NASPE’s recommendation of at least 60 minutes of unstructured physical activity for toddlers and preschoolers.

**Figure 6. Reported Daily Unstructured Physical Activity by Age of Children**



### Outdoor physical activity

Child care center directors reported that children aged 1–2 years typically spent an average of 77 minutes in outdoor physical activity each day. In comparison, children aged 3–5 years spent an average of 93 minutes in outdoor physical activity each day. Center directors often cited their commitment to ensuring the children have daily outdoor play as one of the things they were most proud of related to physical activity. When outdoors, the directors reported that children most commonly rode tricycles, played chase, jumped rope, and played hopscotch. Centers with limited outdoor play space and playgrounds found creative ways to engage children outdoors, including “[taking] the children on day trips to explore different outside environments” and “[using] the public spaces, such as area parks and recreation centers.”

## Attitudes Toward Potential Physical Activity Requirements

### Structured physical activity

The majority of center directors said that they would support a policy requiring 30 minutes of daily structured physical activity for children aged 1–2 and 60 minutes for older children. This would reflect the policy guidelines of NASPE. Many directors reported believing that structured teacher-led physical activity was important for proper child development and that children needed “an outlet for their energy.” Directors also expressed support for this policy, because they felt it would encourage teachers to be more engaged with the children during activity periods.

Despite believing that children needed some structured activity, many expressed concern that the 60-minute minimum would be too much for preschoolers. They felt it might stifle the children’s creativity and not leave them with enough time in the day to have free active play. Several directors also reported feeling that such a policy would impose an added burden on staff to create a curriculum for this time as well as a back-up plan if the children got bored. Those expressing reservations about a requirement for 60 minutes of structured physical activity felt that 30 minutes was more realistic and feasible to implement with preschoolers. In addition to having reservations about the minimum time for preschoolers, some directors felt that having a 30-minute structured physical activity policy for toddlers (aged 1–2) was not reasonable; one called it “outrageously high.” Although several directors voiced concerns about a policy requiring minimum times for structured physical activity, the majority thought that they could easily implement such a

**“I like the idea of making a requirement, because it ensures that it happens.... But 60 minutes would be challenging; that’s a lot of time. Thirty minutes is doable, even for the little ones...especially because it would not have to be done all at once.”**

—child development center director



**“We are meeting [NASPE’s guidance] now. It is important to get the passive children to actually move.”**

*—child development center director*

policy. Indeed, 44% of center directors reported already meeting or exceeding the time amounts specified in NASPE’s guidance for preschoolers.

### **Unstructured physical activity**

Nearly all of the directors supported a policy that would require at least 60 minutes of unstructured physical activity daily for children aged 1–5 years. Many expressed firm beliefs that unstructured time is important for exploration or that children learn through play. Several also affirmed the utility of an unstructured physical activity policy for improving staff engagement in incorporating physical activity into the children’s routine each day. The vast majority was already meeting or exceeding the 60-minute minimum sample policy (86%) and reported that this policy could be easily implemented in their centers. Only a few directors cited concerns that the 60-minute minimum policy would be too long.



## 5. Physical Space and Equipment Capacity

The findings in this section are based on information collected by study staff using the Physical Infrastructure Observation tool and from the in-depth interviews with the child care providers at these centers.

### Physical Space

#### Key Findings: Physical Space

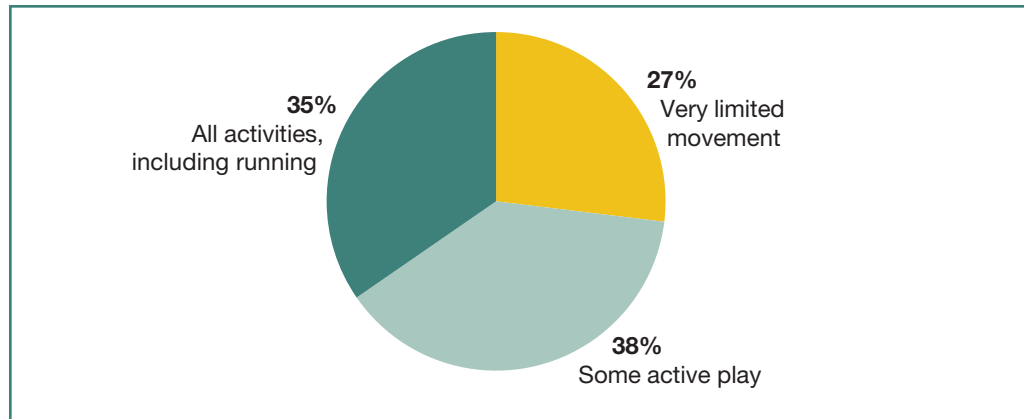
- Lack of physical space was the most common barrier to providing young children with physical activity opportunities.
- More than one in four sampled child development centers have indoor space that precludes most gross motor activity.
- Directors at centers with very limited indoor space reported less daily unstructured physical activity time, on average, than centers with more indoor space.
- More than one-third of centers do not have an onsite outdoor play space.
- Directors at centers that do not have an onsite outdoor play space reported less outdoor physical activity time, on average, than those at centers that do have this space.
- Most centers are within walking distance to a park and report regularly using it. However, some directors expressed concerns about park safety.

### Indoor Space

District policies and federal Head Start regulations state that each center must provide at least 35 square feet of usable indoor play space (which excludes storage space, kitchens, halls, bathrooms, and staff areas) per child (DC Municipal Regulations [DCMR]; Code of Federal Regulations [CFR], 2005). Many center directors interviewed cited inadequate amounts of indoor play space as a barrier to children's activity levels, specifically gross motor activities. Several reported that their classrooms were small and that the centers lacked a gym or multipurpose area.

As seen in Figure 7, only about one-third (35%) of the child development centers visited for this study were observed to have indoor spaces rated as adequate to support vigorous physical activities. About one-quarter of the visited centers had indoor space that was so limited most gross motor activity was precluded.

**Figure 7. Suitability of Indoor Play Space for Physical Activity (N = 26)**



**“During the course of the day, especially if it’s a rainy day, we may push the tables to the side and do different exercises like ‘Hop Like the Bunny.’”**

*—child development center director*

We examined the reported unstructured physical activity time by the suitability of centers’ indoor play space for physical activity. Directors at centers with the most restrictive space—space that allowed for very limited movement—reported an average of 86 minutes of unstructured daily activity, compared with an average of 117 minutes of unstructured physical activity at centers with indoor space that could support at least some active play. On the other hand, there was no difference in the average amount of structured daily physical activity based on the suitability of indoor play space for physical activity.

Most of the child development centers in this study had indoor space that placed at least some limitations on physical activity (65%). During interviews, several directors described ways in which they worked within the parameters of their physical space to ensure that the children remained active. For example, one center director reported using the hallways for running and riding bikes during inclement weather. Another director described moving furniture to create a larger space for active play. A third described a shared use agreement between the center and a recreation facility across the street to use the facility’s gym when the weather prevented outdoor play. Not surprisingly, many center directors reported a desire to have an indoor gym to allow the children to run around.

## ***Outdoor Space***

Center directors were asked about the adequacy of their outdoor space. Spaces were also categorized by study staff using the observational tool. Center directors cited several issues with accessing appropriate outdoor play space.

More than a third of centers in this study (34%) lacked onsite outdoor space and had to rely on nearby parks and playgrounds as their outdoor space. Two of these centers reported having plans and contracts to build a playground but lacked funding to complete construction.

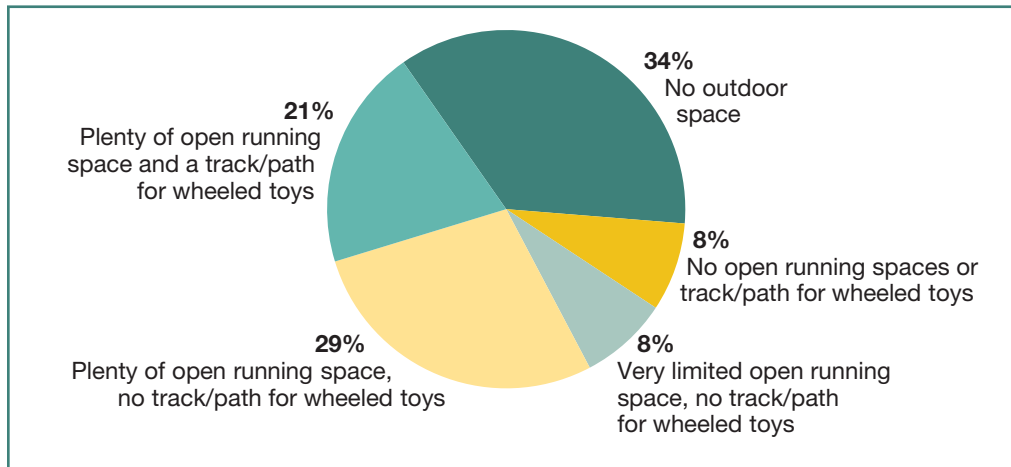
Centers with onsite outdoor play space reported 98 minutes of daily outdoor physical activity time for preschoolers; centers lacking onsite outdoor space reported only 84 minutes. Nevertheless, several directors reported that their outdoor play area was too small to allow for all enrolled classes to fit on the playground at the same time, requiring groups to take turns. In addition to space limitations, a few of the center directors reported their playgrounds to be in disrepair: two playgrounds needed to be resurfaced, and another playground had been rendered inoperable by vandalism. Other issues cited as problems for onsite playground locations were related to traffic safety concerns: one was located across a parking lot, which presented safety concerns due to traffic. Another center had play space that sometimes doubled as a parking lot, and so could not always be used.

**“We have one playground that we share, and every class has a time period that they can be out. That’s the biggest barrier: They have to take turns going on the playground.”**

*—child development center director*

Many of the centers' onsite outdoor play areas lacked the space needed to ride bikes or permit running games or sports. Only 21% of child development centers visited for this study had plenty of open running space and a track or path for wheeled toys (see Figure 8). Nevertheless, the reported amounts of total physical activity (structured plus unstructured) were similar for centers with adequate and inadequate outdoor open space.

**Figure 8. Suitability of Outdoor Play Space for Physical Activity (N = 24)**



Because many of DC's child development centers lack an outdoor playground or one that meets their needs, they turn to public parks and schools to support outdoor physical activity. Most child development centers (81%) reported having at least one park within walking distance.

### Safety

Center directors noted multiple barriers to using parks, even if they were in close proximity to one. The most prevalent of these barriers was reported to be safety. Among those centers that depended on parks because they lacked onsite play space of their own, more than half (56%) reported that the center's neighborhood was unsafe, and park safety was a central concern for these centers. About one-third of study participants felt that the neighborhoods in which their centers were located were not safe (35%) and that crime was a problem in the neighborhood (31%). Consequently, these center directors did not feel comfortable walking to these parks with the children. In interviews, child care directors reported perceiving the parks themselves to be unsafe. Directors reported seeing drug and alcohol use in the parks, fights between middle and high school students, unleashed dogs, and homeless individuals frequenting the parks. Other safety concerns included finding dirty needles and broken glass in the parks as well as rusted or otherwise unsafe play equipment.

### Distance and crowds

In addition to safety concerns, center directors reported other barriers to park use. Nineteen percent of centers reported not having a park within a 1-mile walking distance. One director explained that even though the closest park is less than a mile away, it was still far enough that children would have only a few minutes left to play before needing to turn around to walk back. Directors also noted that parks were often crowded with children from other schools, community-based child development centers, summer camps, and after school programs. In addition, several centers commented that they needed permission to use the park closest to them and were allotted certain times for its use, which sometimes led to scheduling challenges. For example, if a center is allotted 2 hours for park use between 3:00 and 5:00 p.m., they may not be able to take full advantage of it, because this same time is when most parents pick up their children.

**"We've found needles and seen [people] playing with knives."**

—child development center director

**"On a couple of occasions in the summer, I had to call because the playground wasn't clean. There was lots of trash—lots of inappropriate items that we didn't want the kids playing with."**

—child development center director



**“There’s a great green space that we have access to just up the street. We’re there a couple times a week. It’s like a garden. We do water play up there in summer. The gatekeeper gets the sprinkler out and the kids bring their bathing suits and go crazy... It’s a real treasure... The gatekeeper is like one of our teachers.”**

*—child development center director*

### Strategies to promote use of available parks

Center directors detailed several strategies for mitigating issues with park use. Most commonly, directors reported sending center staff to the park to ensure a safe environment before bringing the children. For example, staff would make sure that the park was free of homeless individuals, visible hazardous materials, illegal activities, and fights. One director reported that the District government cleaned and improved maintenance at a nearby park after she called to report the problems.

Several centers reported gaining permission to use certain parks or school playgrounds and negotiating use times. Directors also commonly reported scheduling park time early in the day to avoid crowds. Lastly, one director at a high-income, CACFP-ineligible center without an on-site playground reported that her staff members walked the children to public spaces every day—even those that are a considerable distance. For example, the preschool-aged class of this Farragut North center regularly walks to the Smithsonian, just over one mile away.

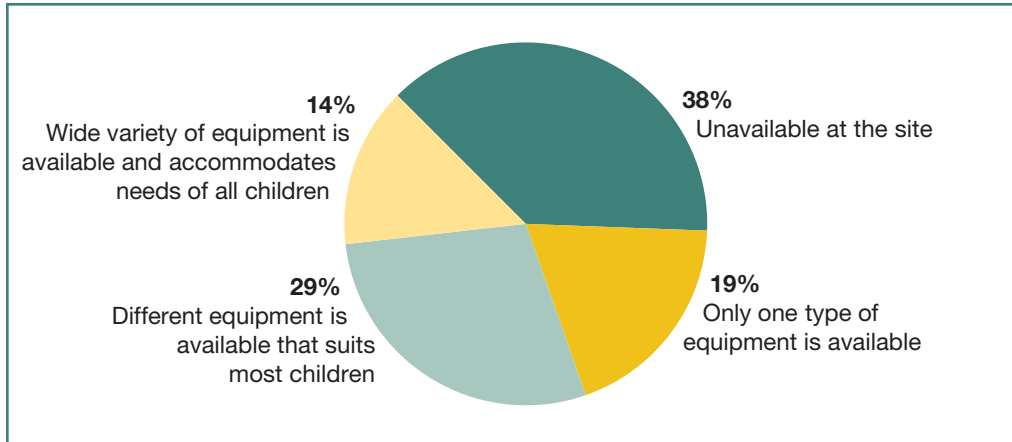
## Availability of Fixed and Portable Play Equipment

### Key Findings: Fixed and Portable Play Equipment

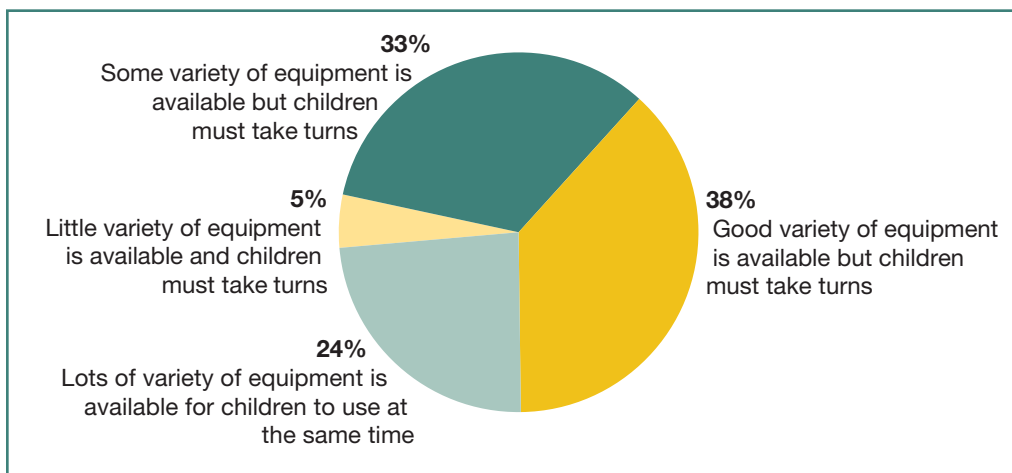
- The majority (57%) of non-Head Start child development centers had no fixed play equipment, or only equipment of one type.
- Thirty-eight percent of non-Head Start child development centers in the study lacked any form of fixed play equipment.
- Thirty-eight percent of non-Head Start child development centers lacked a good variety of portable play equipment.
- Center directors expressed a need for additional portable play equipment to better support physical activity in their child development center.

In addition to assessing space adequacy and proximity, staff observed the availability of play equipment at centers. Data from Head Start centers were removed prior to any analysis because of the extra funding and supports they have received from the federal level to purchase play equipment. Figures 9 and 10 present the findings of the analyses of fixed and portable play equipment at non-Head Start centers. The majority (57%) of these non-Head Start child development centers in the study did not have enough fixed play equipment (no equipment or only one type) to adequately support physical activity. In fact, more than one-third (38%) of the non-Head Start centers in this study lacked any form of fixed play equipment.

**Figure 9.**  
**Availability of Fixed Play Equipment at Non-Head Start Centers (N = 21)**



**Figure 10.**  
**Availability of Portable Play Equipment at Non-Head Start Centers (N = 21)**



Among non-Head Start centers, 38% were observed to lack a “good variety” of portable toys and equipment. When center directors were interviewed, several expressed a desire for additional equipment to better support physical activity in their child care center. The most commonly desired equipment was wheeled toys such as tricycles. Other types of desired equipment included portable climbing equipment that could be easily moved or collapsed for small spaces and toys such as hula hoops. While inexpensive, center directors noted that such toys were easily damaged, requiring frequent replacement.





## 6. Parental and Staff Engagement, Training, and Classroom Resources

The findings in this chapter are based on information collected from child care providers in interviews and written questionnaires concerning

- Ways in which child development centers have engaged parents in supporting physical activity for their children and the perceived effectiveness of these methods;
- Staff engagement of children in active play, including supports and barriers to engagement;
- Availability of trainings and feedback on these trainings; and
- Access to media and print resources that can support centers in providing physical activity opportunities, including examples of resources that staff members find useful as well as remaining needs.

### Parental Engagement

#### Key Findings: Parental Engagement

- Nearly two-thirds (65%) of child development centers in this study reported engaging parents and caregivers in physical activity promotion in the past year.
- Hands-on activities were perceived by child care directors to have been more effective in engaging parents than passive efforts such as literature distribution.

Some interviewees believed that parents would not have time to do much physical activity at home with their children, citing that most of them are single parents with limited time. Despite this, several maintained that it is beneficial to directly educate parents about ways to provide their children with increased opportunities for physical activity. These providers hypothesized that children may be more interested in engaging in physical activity while in child care if they were used to it at home.

In general, center directors believed that hands-on parental engagement activities were more effective than more passive forms of engagement such as distributing literature. Nearly half (46%) of center directors reported that they had at some time engaged the children's parents or caregivers in supporting increased physical activity for their children. Examples included providing information on physical activity events in the community for families, distributing calendars with different family-friendly physical activity ideas each month; and assigning physical activity homework such as picking up leaves or going to a playground. Two centers reported having provided SHIRE's hands-on SCOOP training for parents, and one other center reported plans to do this in the next year. One child development center engaged parents by organizing families to

**“Parents loved the SHIRE training. They begged for us to do it...[and] they incorporated the activities at home. The training showed them things they could do at no extra cost to help their kids.”**

*—child development center director*

participate in the St. Jude Children’s Hospital Bike-a-Thon. Several other center directors reported having one-on-one conversations with parents to stress the importance of physical activity, outdoor time, and dressing their children appropriately so that they can participate in outdoor play.

## Staff Engagement

### Key Findings: Staff Engagement

- Many center directors would like staff to be more engaged in physical activity with the children, and thought practical and specific physical activity training would help engage staff.

Many child care directors interviewed in this study felt that their staff could be more fully engaged in physical activity promotion. Several directors said that staff typically needed encouragement to go outside or initiate physical activity. One director speculated that staff members were reluctant to engage in physical activity with children because many of the staff members are not physically active themselves.

Several center directors encouraged their staff to be more physically active. One encouraged staff members to participate on the center’s kickball team. At another center, teachers brainstormed physical activities to do with the children each day.

Several child care directors sidestepped low staff engagement by having outside groups or consultants lead the children in various physical activities. One brought in a franchised program called Funtastic, with a program representative who brought in equipment and led various physical activities. Another center worked with a consultant who led activities with different movement CDs that were left for the staff to use throughout the remainder of the week. Several other interviewees, who did not have physical activity consultants, either reported a desire for them or for someone to be responsible for all physical activity at their center. Interestingly, one child development center took children to join members of a nearby senior center for a weekly exercise class.

A couple of directors thought that staff engagement could also be improved if there was a requirement for a certain amount of physical activity each day. And many of the center directors thought that staff would be more engaged if they received practical and specific physical activity training that they could use with their preschool children as well as resources that provided simple, low-resource physical activity ideas.



**“A lot of the time, staff are congregating and [conversing] instead of spending time with the children.”**

*—child development center director*

# Training

## Key Findings: Training

- Fewer than half (43%) of non-Head Start centers in this study reported receiving some physical activity training in the past year.
- All Head Start centers in this study received physical activity training in the past year.
- Directors of centers that received SHIRE's SCOOP training reported positive impressions of the training and technical assistance provided.
- Centers that received SHIRE's SCOOP training reported more daily structured physical activity time on average than centers that received no physical activity training or that received other physical activity training.

Center directors reported that few staff members were trained in physical education or had background information on how to incorporate physical activity into everyday activities. Several felt that the staff would be more engaged if given ideas of specific activities to do with the children. Many center directors expressed the belief that high quality physical activity training could increase the motivation and skill of center staff to make a real difference in activity levels at the center.

As detailed in Table 2, half the child development centers in the study had a staff member who attended at least one physical activity training in the past year. All five Head Start centers in this study reported having participated in SCOOP training. Of the 21 non-Head Start centers in this study, 9 (43%) received some physical activity training in the past year, of which four received SCOOP training.

**Table 2. Number of Centers Receiving Physical Activity Training in the Last Year, by Type and Minutes of Reported Daily Structured Physical Activity for Preschoolers**

Type of Physical Activity Training	Number of Centers Receiving Training	Average Minutes of Structured Physical Activity
Any physical activity training	14 (5 Head Start and 9 non-Head Start)	63.2
SCOOP	9 (5 Head Start and 4 non-Head Start)	78.3
Physical activity training other than SCOOP	5 (all non-Head Start)	36.0
No physical activity training	12 (all non-Head Start)	37.9

Centers with SCOOP-trained staff reported more than double the amount of daily structured physical activity time for the preschoolers at their centers (78 minutes) compared to centers that received physical activity training other than SCOOP (36 minutes). The latter centers reported amounts of daily structured physical activity similar to those of centers receiving no physical activity training at all.

Since all Head Start centers in the study sample received SCOOP training, it is possible that differences in physical activity minutes were associated with Head Start status rather than whether training occurred or who provided it. Nevertheless, the four non-Head Start centers trained by SCOOP reported an average of 20 more minutes of daily structured physical activity (56 minutes) than the five non-Head Start centers trained by other programs (36 minutes).

**“Yes, [a training would be useful]—a curriculum or a practical training that gives you specific activities that you can do with the children regularly, and the requirement that it needs to be done on a regular basis, every day or three times a week, etc.”**

—*child development center director*

**“The person who did the training was really engaging...culturally sensitive. She knows what the issues are, and she addressed them in a way that was non-threatening. We use [the CDs] most days.”**

—*child development center director*

## SCOOP

When asked specifically about their SCOOP training experiences, center directors were overwhelmingly positive. In fact, almost every interviewee who discussed this training used the word “love.” When asked what they specifically liked about the training, the most common answer was the high level of engagement. Center directors described SCOOP as “hands-on” and interactive, effectively capturing the attention and enthusiasm of the staff. They also appreciated the upbeat music and felt that it helped foster engagement with both the staff and the children. Several other directors were impressed with the level of follow-up that SHIRE staff provided. For these centers, a SHIRE representative returned to the center repeatedly to reengage the staff, provide technical assistance, and even conduct a SCOOP session for parents. One director said, “They don’t just give us the training and drop us.” Several more directors commented that they appreciated how the training was delivered. They felt that it was culturally sensitive, addressed potentially sensitive issues such as obesity in a nonthreatening way, and explained the rationale behind the initiative by discussing the importance of physical activity in early childhood for brain development and overall health.

**“It was very effective, because it was tied up to all areas of the curriculum: cognitive, psychomotor, social. They had very nice resources for that. The trainer also did a follow-up.... It was not just a lecture.”**

*—child development center director*

When asked how they would improve the SCOOP training, a few center directors stated that they would have preferred having a SHIRE representative come to them for the initial training instead of having staff travel to the training site. Another director desired enough CDs to stock each of her classrooms.

Not only did the child care providers enjoy attending the SCOOP training, but they believed that it was effective in increasing the amount of structured physical activity at their centers. Several directors reported that teachers incorporated the CDs and lesson plans received through SCOOP into their daily routines and curricula. For example, one center reported using a My Little World song to transition the children between one activity and the next (e.g., moving from circle time to snack). One interviewee said that the training not only helped the children become more physically active but was also a great help to the teachers; the interviewee said with a smile, “Sometimes we get lazy.”

## Other Physical Activity Training

The research team was aware of SCOOP trainings prior to the conduct of the environmental scan, so specific questions had been designed to explore directors’ perceptions of that training effort. However, during the onsite interviews, five center directors identified physical activity trainings that they had received other than SCOOP. Questions exploring their perceptions of these other trainings were adapted from the SCOOP questions. Data on the directors’ experiences with these trainings are presented below:

**“We’ve had training from Wolf Trap. It was dramatic play and movement. It was more intensive. The artist was in the classroom every day for 3 weeks. It was more effective in changing those two classrooms’ approach to movement.”**

*—child development center director*

- **Joy of Sports.** One director reported providing her staff with the multiweek Joy of Sports program. In this program, a physical education (PE) teacher began by leading a classroom of children in physical activities while the child care staff took notes. Afterward, the PE teacher met with the staff outside of the classroom to reflect on their observations. Then, the PE teacher worked one-on-one with the child care teacher in his or her classroom to incorporate lessons. The training concluded with the PE instructor observing the center teachers and providing feedback.
- **Head Start, Body Start.** This program provided training, technical assistance, and resources to Head Start and Early Head Start centers on activities to increase physical activity. Two teachers from one of the interviewed non-Head Start centers attended this training at the George Washington University and learned active games to play with the kids. The center director laughingly remembered watching the teachers involve the children in one of the games that they learned, called the “flyswatter game,” in which kids used foam noodles to bat at a Frisbee (Craft & Smith, 2008).
- **Wolf Trap Foundation.** Another center director raved about a training done by an artist from the DC-based Wolf Trap Foundation for the Performing Arts. Through this program, an artist came into a couple of the classrooms every day for 3 weeks

to teach dramatic movement to the children and mentor the teachers in doing the same. The center director thought that this training was especially effective at changing teacher behavior because of its intensity (daily) and duration.

## Media and Print Resources

### Key Findings: Media and Print Resources

- Most center directors reported using music to engage the children in structured physical activity.
- Center directors reported a need for more physical activity training and resources that give ideas for specific, low-cost activities to do with the children and instructions for how to do them.

### Current Resources

When asked to describe media and other non-infrastructure-related resources used to support physical activity in child care centers, most child care directors reported using music and instructional movement audio (such as CDs or records) for indoor structured physical activity. Interviewees were emphatic about how well the children respond to music. They felt that CDs or videos that provide movement instruction with the music were effective at getting both teachers and children moving while keeping the children under control. Examples of these resources cited by staff included the My Little World CDs, Greg and Steve CDs, preschool aerobics, and Silly Willy. In addition to being given music and motion CDs through programs such as SCOOP, one center director reported checking out these types of CDs from the local library.

Other resources reported by center directors included instructional exercise videos and a resource book of structured physical activity ideas.

### Resource Needs

When child care providers were asked what types of resources they would need to support increased physical activity in their centers, most responded that they sought training and instruction for specific activities. One requested a curriculum with daily activities. Several other center directors noted that these activity ideas should be age specific, be tailored to varying availability of infrastructure and physical space, and include both indoor and outdoor activities. This desired resource could take the form of a training accompanied by CDs and/or a resource guide.

**“We have CDs and records. A few of them have exercise or activity songs that the kids can listen to and follow along with the music.”**

*—child development  
center director*





## 7. Conclusions and Discussion

Subsequent to collection of data for this scan, the DC Overweight and Obesity Action Plan was released with calls for policy changes to encourage healthy behaviors in child care (DCDOH, 2010). Expected policy changes include the establishment of limits on screen time and a requirement for minimum amounts of daily physical activity.

The results of this environmental scan suggest that the District could successfully implement an early childhood wellness policy that includes strengthened child care regulations for physical activity and screen time. However, the findings also indicate that providers may require significant support to implement these measures in the face of limited space and equipment to promote physical activity; unsafe, crowded, or too-distant parks; and low levels of teacher engagement and knowledge of how to incorporate physical activity into early learning and care practices. Policy and programmatic supports based on current research from the fields of obesity prevention and child development can help providers overcome these potential barriers. Such measures would help ensure that the District is positioned for success in supporting the health and wellness of its youngest children.

### Key Findings

- Broad support exists among child care providers for physical activity and screen time policy changes.
  - Some centers will have less difficulty implementing new policies to promote physical activity and limit screen time.
- Many centers face community and environmental barriers to physical activity, including
  - Limited indoor and outdoor play space,
  - Unsafe, crowded, or too-distant parks,
  - Inadequate and insufficient portable play equipment, and
  - Limited health-related knowledge or motivation among child care teachers.
- There is a need for ongoing professional development and training of child care providers.
  - There is enthusiasm for continuing or building upon recent training efforts.
  - Training programs need to be evaluated to determine their effectiveness.
- Ongoing evaluation should be undertaken to assess the implementation and impact of policy changes.

## Broad Support Exists Among Child Care Providers for Activity and Screen Time Policy Changes

Many of the child care directors interviewed in our study supported a District wellness policy for child development centers that would limit screen time and set minimum time requirements for daily physical activity. In fact, the majority of child care providers reported that the young children at their centers already receive fewer than 60 minutes of daily screen time and engage in at least 60 minutes of daily unstructured physical activity time.

The documented level of support for minimum limited screen time and physical activity in child care is consistent with anecdotal evidence from other states and cities that have developed or implemented health-promoting child care policies. For example, a study by this same research team showed similar support of Delaware child care providers for enhanced physical activity and screen time limits (Gabor et al., 2010). Similarly, new licensure regulations in Chicago were passed in mid-2009, and there are no known reports of concerns emanating from child care providers (personal communication with the Chicago Department of Public Health). Whether it is due to a “children first” mindset of child care providers or because the health and wellness of young children has become an established part of child care practice, it appears that child care providers currently believe that they have an important role to play in promoting the development of healthy behaviors among young children (AAP et al., 2010).

At the same time, maintaining support for child care providers will be important to successful policy implementation. The nature and timing of communications with providers about the development and implementation of these policies could affect provider support for new policies. The findings from this environmental scan warrant consideration in planning for policy change and implementation.

### ***Some Centers Will Have Less Difficulty Implementing New Policies to Promote Physical Activity and Limit Screen Time***

Proposed screen time limits and physical activity standards that resemble those presented for consideration by participants in this scan would likely not be difficult for some centers to implement. This does not mean that there are not concerns among providers, however, and several important caveats apply.

#### **Screen time**

Most DC child care providers reported that they already limit screen time to less than 30 minutes a day (86% of centers for children under 2 years old and 69% of centers for 2- to 5-year-olds). Nearly all said that a policy prohibiting any screen time for children under age 2 and limiting it to less than 60 minutes of educational programming for those aged 2–5 was both a good idea and feasible to implement. However, some directors felt that computer time should receive different consideration as they believed it to be educational and useful for preparing children for school. The current literature regarding limits on screen time for young children does not differentiate computers from other forms of screen time, as children remain sedentary in front of any type of screen instead of engaging in physical activity (Benjamin et al., 2008). If the District government implements a child care standard to limit screen time in child development centers, it will be important to highlight that computer usage is screen time and explain the rationale behind a daily limit on the amount of time that young children spend viewing computer screens.



## Physical activity

In this study, child care directors were asked whether they thought it would be a good idea or feasible to implement a policy requiring 30 minutes of structured daily physical activity for toddlers and 60 minutes of structured daily physical activity for preschoolers. Although most of the directors agreed that it was a good idea to have some structured physical activity scheduled into a young child's day, they voiced misgivings about the time requirement. They thought that it was unrealistic to expect teachers to lead a minimum of 60 minutes of structured physical activity for preschoolers. Furthermore, they did not want structured time to be a substitution for unstructured activity, because this could hamper children's creative development.

While recognizing that structured physical activity is important to help get many children active, several providers suggested that it would be better to not have a minimum amount of time for structured physical activity for toddlers. For preschoolers, these same providers suggested a minimum expected amount of daily structured physical activity of 30 minutes, not 60 minutes as was recommended in 2002 by NASPE.

In contrast to the varied opinions about time specifications for structured activity in early childhood, child care directors were near unanimous in their support of a policy requiring a minimum amount of daily unstructured physical activity. Many providers reported that 60 minutes of unstructured daily physical activity for 1- to 5-year-olds would be both a good idea and easy to implement. In fact, most (86%) of the directors participating in this study reported already meeting this NASPE recommendation.

The Head Start centers in this study were found to have fewer barriers to physical activity than non-Head Start centers. These centers reported greater access to play spaces, play equipment, and had more consistently trained staff members, possibly because of increased funding and grant opportunities for Head Start centers, such as the Head Start Body Start grant, that can be used to build or improve playgrounds at the centers. The IAMIAL program also certainly contributes to the increased level of training of staff working in these centers (US DHHS 2006).

It should be noted, however, that there was a relatively small sample size of Head Start centers in this study and results may not be easily generalizable. For example, findings from this study contrast with the findings from a national survey of Head Start centers which found that 11% lacked onsite outdoor space (Whitaker et al., 2009).

## Many Centers Face Community and Environmental Barriers to Physical Activity

Complex factors at the individual, family, institutional, community and societal levels contribute to the development of obesity in young children. The concerns of child care directors assessing barriers to the implementation of physical activity policies reflect this complexity. Directors recognize that they have a strategic and important role to play, but they also realize that, from the need for parental engagement to the need for environmental changes, they must work within their limitations and context.

Many studies have now documented aspects of the indoor and outdoor environments (i.e., the center and the neighborhood surrounding the center) that affect children's physical activity levels (Kerr & Active Living Research, 2007). Public-private partnerships and financial, technical, and human resources will be required to overcome them. The four primary barriers to physical activity identified in this study were

- Limited indoor and outdoor play space,
- Unsafe, crowded, or too-distant parks,
- Inadequate and insufficient portable play equipment, and
- Limited health-related knowledge or motivation among child care teachers.

## Limited Indoor and Outdoor Play Space

Having sufficient open space to support running and active games is important, as recent research has associated this physical characteristic of child care centers with more moderate-to-vigorous physical activity (MVPA) in preschoolers (Baranowski et al., 1993; Boldemann et al., 2006; Brown et al., 2009; Cardon et al., 2008; Dowda et al., 2009; Hinkley, et al., 2008; Klesges et al., 1990; Louie & Chan, 2003). Other studies have shown that outdoor time is particularly important for young children, because those who spend more time outdoors are more active (Baranowski et al., 1993; Brown et al., 2009; Hinkley et al., 2008; Klesges et al., 1990).

Limited space was the most frequently reported challenge in this study, particularly among non-Head Start centers. Twenty-seven percent of child development center directors said that they lacked adequate open indoor space to support running and active games, and 34% of centers did not have an onsite outdoor play space. Centers with indoor space that allowed for at least some active play reported more unstructured daily physical activity time (117 minutes) on average than those centers with more restrictive indoor space (86 minutes). This study also found that centers with an onsite, outdoor playground reported more time spent in daily outdoor physical activity (98 minutes) than centers without one (84 minutes).

*DC Child Development Facility Regulations state that each center needs to provide at least 60 square feet per child of safe outdoor play space, which can be an on-site enclosed space, rooftop space, or a nearby park or playground (DCMR). Head Start regulations require slightly more outdoor space: 75 square feet of usable outdoor play space per child (CFR, 2005). NASPE recommends that child care centers provide 75 square feet of playground space per child (NASPE, 2002).*

This study did not assess whether centers met their legal requirements for space. However, assessments of the adequacy of space and the concerns expressed by child care staff both suggest that the majority of centers did not have space adequate for children to meet recommended levels of activity. Further study should be undertaken to determine whether centers are in compliance with legal requirements and whether space requirements should be increased through policy changes.

In some cases, center and neighborhood improvements may be required to address limitations to needed play space. To increase children's physical activity levels, the resources required to make these improvements will have to be secured and allocated effectively. In the absence of such infrastructure improvements, center staff could benefit from training in how to adapt physical activity plans to suboptimal play spaces. Additionally, partnerships among centers, the DC Department of Parks and Recreation, and DC Public Schools could result in joint use agreements to offer additional play space for young children.

## Unsafe, Crowded, or Too-Distant Parks

Another commonly reported barrier to physical activity, especially among those centers without an onsite outdoor play space, was concern about using nearby parks. Concerns about park safety, crowding, and distance are not unique to Washington, DC; they have been the focus of research and interventions in many communities. However, these concerns were expressed from the perspective of child care directors with young children in mind—a perspective that has not been well documented. Community policing and traffic calming strategies could be modified to meet the needs of young children and their child care providers. Fortunately, the needs of young children might be a cause that others in the community can rally behind: resources that might otherwise not be available could be leveraged to protect and serve this vulnerable population.

## ***Inadequate and Insufficient Portable Play Equipment***

Many child development centers were in need of additional portable play equipment, according to the Physical Infrastructure Observation Instrument and interviews with directors. Thirty-eight percent of non-Head Start centers lacked a good variety of portable play equipment to support physical activity. A wide variety of play equipment is needed to ensure that children with differing needs and abilities are able to engage in active play. Sufficient play equipment is required to let children play freely without having to wait long periods to take turns.

Evidence from the limited literature in this area is mixed on whether fixed play equipment (e.g., slides, swings, jungle gyms) is associated with increased MVPA in young children (Ward et al., 2010). The evidence for portable play equipment is stronger; several studies have shown a statistically significant association between portable play equipment and MVPA (Bower et al., 2008; Cardon et al., 2008; Dowda et al., 2009; Hannon & Brown et al., 2008; Ward et al., 2010). In fact, portable play equipment has been found to be associated with twice as much MVPA as fixed play equipment, possibly because children tend to stand or sit on or under fixed play equipment, while they tend to use portable play equipment for active games (Brown et al., 2009).

## ***Limited Health-Related Knowledge or Motivation Among Child Care Teachers***

Finally, child care center directors were uniformly concerned that the teachers and teachers' assistants who conduct the children's daily lessons and activities lacked the motivation and/or knowledge needed to encourage and lead the children in structured physical activity, especially in the face of space and equipment constraints.



## **There Is a Need for Ongoing Professional Development and Training of Child Care Providers**

Key to increasing physical activity as part of the daily child care routine will be directly engaging center teachers, not just directors and program administrators, in practical, hands-on training. Regardless of their existing capacity to provide physical activity opportunities to the children in their care, and regardless of a center's environmental factors, the need for ongoing training should be expected. Training opportunities will need to be provided regularly to ensure that all teachers know how to incorporate structured and unstructured physical activity into their lesson plans and classroom routines. The SCOOP trainings, which have been embraced by many providers in the DC area, provide a potential model for how providers' continuing education needs could be met.

This study found that the center directors whose staff had received SHIRE's SCOOP training reported more daily structured physical activity time (78 minutes on average) than both centers that received no physical activity training at all (38 minutes on average) and those that received physical activity training that was not conducted by SHIRE (36 minutes on average). It is possible that characteristics of SCOOP training—such as the level of follow-up, level of comprehensiveness, and cultural adaptations—make this worth evaluating as a model for future physical activity training for teachers in DC's child care development centers. As noted above, the majority of sites that had received SCOOP training were also Head Start centers. It is very possible that other aspects of Head Start administration led to the findings of this report. In the absence of pre-post training assessments, conclusions about the effectiveness of training should not be made at this point in time.

## Ongoing Evaluation Should Be Undertaken to Assess Implementation and the Impact of Policy Changes

Further research or evaluations would help the District assess the impact of any early childhood wellness policies and regulatory changes that are implemented. These efforts could also assist the centers by identifying best practices and additional needed supports. Children and families would be served by ensuring that the anticipated health, development, and behavioral benefits of increased physical activity are realized. Future research and evaluation might also address one of this study's limitations by including direct observation of children's physical activity levels by using accelerometry or other validated tools to measure young children's actual level of physical activity. Ideally, these studies would be conducted with DC child development centers before and after implementation of a new wellness policy, be structured to objectively measure the amount of physical activity and screen time among young children, and supplement these measurements with data on facilitators and barriers to the centers' ability to implement the policies.

## Study Limitations

This study was designed to explore the potential for community-based child development centers in the District of Columbia to implement new physical activity regulations. The small sample size of 26 child development centers precludes generalizing findings to all centers in the District. Although the CACFP-participating centers in this study were randomly sampled from all DC centers in this category, the five nonparticipating centers were selected for convenience purposes. In light of these limitations—small sample size and nonrandom sampling of CACFP nonparticipating centers—these data cannot be used to draw definitive conclusions about the entire population of DC community-based child development centers or about differences by center characteristic. Rather, the study findings presented in this report are best used to generate ideas for how OSSE can best support the centers in implementing future guidance on physical activity and screen time practices in child care.

Another limitation of this study is potential for social desirability bias in responses provided by center staff. Information reported on questionnaires or disclosed in interviews may have reflected attitudes or practices that they believed were expected or desired in centers and classrooms, rather than actual attitudes and center practices. Thus, the capacity of centers to adopt stricter policies, and current physical activity practices could be overstated while screen time was understated. Additionally, some interviewees had difficulty differentiating between physical activity and play, resulting in some uncertainty around the precision of physical activity levels.

The study was also limited by time and available resources. Study staff did not attempt to validate self reports of practices with onsite observations of children's activities or a review of center-level policy documents. Future research and evaluation might address this limitation by including direct observation of children's physical activity levels using accelerometry or other validated tools to measure young children's actual level of physical activity.



## 8. Recommendations

This environmental scan was conducted to assist policymakers and program administrators in Washington, DC, as they advance policies to promote physical activity and limit screen time in child care settings. Many of the recommendations reinforce strategies specified in the District's recent 5-year DC Overweight and Obesity Action Plan (DCDOH, 2010). It is hoped that leaders in other communities will be also able to apply the lessons learned from this work:

- Continue to advance requirements for community-based child development centers by implementing screen time limits and enhanced physical activity requirements through child care licensing standards.
- Support child care providers as they implement obesity prevention policies by addressing barriers to increasing children's physical activity and organizing efforts to improve or sustain training opportunities.
  - Establish a public-private partnership to support centers in building outdoor playgrounds to support physical activity, and give priority to non-Head Start centers.
  - Increase access to safe play space through joint use agreements and informal partnerships with community organizations.
  - Seek and make grant money available for purchasing portable play equipment.
  - Target park maintenance and police presence to District parks most often used by child care centers.
  - Expand physical activity training to reach all CACFP-participating child development centers in all wards and eventually all child development centers in the District.
- Commit to ongoing communications with providers and evaluation of policy implementation and trainings.

### **Continue to Advance Screen Time and Physical Activity Requirements for Child Development Centers**

There is sufficient cause to advance activity and screen time policies, sufficient evidence to suggest that effective policy will be meaningful, and general support for these types of policies among the group that would be charged to implement them.



### ***Screen Time Limits***

Policies should be advanced to prohibit screen time for children under age 2 and limit screen time to 60 minutes a day for children aged 2–5 years. These limits are consistent with the available evidence and were generally supported when proposed to center directors. If the District government implements a child care standard that limits screen time in child development centers, it will be important to highlight that computer usage is screen time and explain the rationale behind a daily limit on the amount of time that young children spend viewing computer screens.

### ***Minimum Physical Activity Requirements***

Taking into consideration the provider feedback; current literature; and new model standards released by the AAP, APHA, and NRC, the District’s wellness policy and revised regulations should include a requirement of 120 minutes total of daily indoor and outdoor physical activity for preschoolers and 60 or 90 minutes for toddlers. The standards should also specify that the activity time include at least two periods of structured physical activity daily.

## **Support Providers as They Implement Obesity Prevention Policies**

The environmental scan identified four main barriers that many child care providers face in providing physical activity opportunities for young children in DC:

- Limited indoor and outdoor play space,
- Unsafe, crowded, or too-distant parks,
- Inadequate and insufficient portable play equipment, and
- Limited health-related knowledge or motivation among child care teachers.

Each of these barriers should be addressed as part of policy development and implementation. These barriers often reside outside of the sphere of control of center directors, so it is not surprising that the directors feel like they have limited ability to address such challenges. However, environmental supports, resources to expand centers’ capacity, and training strategies implemented at the District level could help alleviate these barriers. Below, we outline four specific policy supports that could help child care providers overcome barriers to increasing physical activity. Table 3 matches these recommended policy supports to the barriers that they are designed to address. The text below the table more fully describes each of these supports.

**Table 3. Policy Supports Recommended to Address Activity Barriers**

Key Barriers	Recommended Policy Supports
Lack of indoor and outdoor play space	<p>Make grant money available for constructing onsite outdoor playgrounds, similar to Head Start Body Start grants. Citywide initiatives in Boston and Denver have had success in forming public-private partnerships that extend grants to child care centers and schools to build comprehensive outdoor play spaces (KaBOOM, 2010).</p> <p>Increase access to school playgrounds, parks, and recreational facilities through joint use agreements and informal partnerships with DC Department of Parks and Recreation, DC Public Schools and other community organizations (see Strategy 1.C.5 in DCDOH, 2010).</p>
Parks that are unsafe, crowded, or inconvenient to access	<p>Target park maintenance and increased police presence to District parks most often used by child care centers (DCDOH, 2010).</p>
Lack of portable play equipment	<p>Make grant money available for the purchase of portable play equipment, as has been done for Head Start centers.</p>
Teachers who lack knowledge or motivation or both to engage children in physical activity	<p>Expand physical activity training (SCOOP training or similar) to reach all CACFP-participating child development centers in all Wards, and eventually, all child development centers in the District (see Strategy 1.C.2 in DCDOH, 2010).</p>

***Establish a Public-Private Partnership to Support Centers In Building Outdoor Playgrounds to Support Physical Activity, and Give Priority to Non-Head Start Centers***

Research has found that preschoolers are most active when outdoors (Baranowski et al., 1993; Brown et al., 2009; Hinkley, 2008; Klesges et al., 1990). However, 34% of child development centers in this study lacked an outdoor playground, several because they lacked the funds to construct these playgrounds. Some had even secured the necessary permits and building plans but lacked the funding to move forward.

Several U.S. cities have addressed this challenge by using public and private funds to give grants to child care centers and schools to build comprehensive outdoor play spaces. For example, Boston’s Schoolyard Initiative and Denver’s Learning Landscapes partnership have constructed new and refurbished aging playgrounds for public schools and child care centers (KaBOOM, 2010). We recognize that public funds are extremely limited. With that in mind, we recommend that DC government create a public-private partnership to build comprehensive outdoor playgrounds for child care centers—either in the form of playgrounds at the centers or in nearby public parks.

***Increase Access to Safe Play Space Through Joint Use Agreements and Informal Partnerships with Community Organizations***

Joint use agreements have gained recent popularity as a low-cost strategy to expand community access to play space, typically by opening public school playgrounds and gymnasias to the community outside of school hours and opening community recreational facilities, such as swimming pools, to schools and child care centers (Centers for Disease Control and Prevention, 2009). In fact, the use of joint use agreements is one of the

identified strategies in DC's OOAP to support the physical activity of children in child care facilities (see Strategy 1.C.5 in DCDOH, 2010). Under joint use agreements, schools or private organizations and local governments typically share costs, maintenance services, and liability responsibility. Joint use agreements can make financial sense in cases where they eliminate the duplication of costs that would result by constructing and maintaining separate recreation facilities in the same community (Centers for Disease Control and Prevention, 2009; National Policy and Legal Analysis Network [NPLAN], 2009).

Playground-building initiatives, such as Boston's Schoolyard Initiative and Denver's Learning Landscapes, have incorporated joint use agreements into the playgrounds that they fund, stipulating that the grounds be open to the public during nonschool hours (KaBOOM, 2010). San Francisco entered into a joint use agreement with its school districts to open school playgrounds to the community on weekends, and Seattle established a similar joint use agreement and created a scheduling site for the community to reserve all school and city recreation facilities (NPLAN, 2009).

St. Petersburg, Florida, and New York City have used joint use agreements in combination with new construction to ensure that every child in their cities has access to an outdoor play space. Specifically, the mayor of St. Petersburg committed to ensuring that there is a playground within half a mile of every child and backed this commitment with \$500,000 per year in public funding (KaBOOM, 2010). In New York City, the Office of the Mayor has also committed to ensuring that there is a park or playground within a 10-minute walk of every New Yorker and has supported this commitment with \$95 million in city funds (New York City Office of the Mayor, 2009).

Implementing similar joint use agreements in DC would be a low-cost strategy to increase outdoor playground and indoor gymnasium access for toddlers and preschoolers. The benefits would be far-reaching, as both child development centers and parents would have more places to take their children to play.

The principle behind joint use agreements could also be extended to include informal partnerships. For example, one child development center described partnering with a nearby senior center once a week so that the children could join the seniors' morning exercise class. Partnerships such as this one are advantageous because they are no- or low-cost, provide the children with structured physical activity, offer a change in scenery, and allow for interaction with older members of their community. The District government could aid in brokering partnerships between child development centers and community organizations, such as senior centers. The District government could also consider offering an incentive to child development centers who regularly participate in these partnerships.

### ***Seek and Make Grant Money Available for Purchasing Portable Play Equipment***

A small amount of funds could be earmarked to help child development centers purchase portable play equipment. Several studies have shown a statistically significant association between portable play equipment and MVPA (Bower et al., 2008; Cardon et al., 2008; Dowda et al., 2009; Hannon & Brown et al., 2009; Ward et al., 2010). In fact, Hannon and Brown evaluated an initiative in which \$1,000 worth of portable play equipment (e.g., balls, hoops, crawl tunnels) was purchased and resulted in increased physical activity (Hannon & Brown, 2008). In this intervention, teachers were not given any training; the new equipment was simply added to the play space. The researchers found that after introducing the equipment, the preschoolers spent significantly less time being sedentary and significantly more time engaging in light, moderate, and vigorous physical activity. This example coupled with the current research on portable play equipment supports the recommendation that small grants for portable play equipment can have outsized effects on young children's physical activity.



## ***Target Park Maintenance and Police Presence to District Parks Used Most Often by Child Care Centers***

Eighty-one percent of child development centers in this study reported being located within 1 mile from a public park. However, many of the providers interviewed were concerned about park safety, citing loitering, drug use, and fights among teenagers. Parks with a disproportionate number of concerns could be targeted for frequent maintenance and police presence. While not a specified strategy in the District's OOAP, this recommendation is consistent with the concerns and recommendations in the plan.

## ***Expand Physical Activity Training to Reach all CACPF-Participating Child Development Centers***

Research has shown an association between observed MVPA among preschoolers in child care centers and high-quality teacher physical activity training (Bower et al., 2008; Dowda et al., 2009; Trost, Fees, & Dziewaltowski, 2008). Indeed, the environmental scan's findings suggest that the SCOOP training might be an effective model to build upon, pending a more formal evaluation or the identification of any pre-post assessment data that would help determine its effectiveness. The District government should build on the encouraging SCOOP findings in this report, conduct evaluated training pilots, and support the improvement or expansion of this type of training to all non-Head Start centers. This recommendation is also a key strategy in the District's OOAP (see Strategy 1.C.2 in DCDOH, 2010).

## **Commit to Ongoing Communications with Providers and Evaluation of Policy Implementation and Trainings**

The existing support among providers for physical activity and screen time policies should not be taken for granted. To maintain or increase the support of providers for the policies recommended above, District agencies should be identified that will coordinate communications and development of the policies and supporting programs. Setting up regular and trusted communication channels (e.g., website, listserv, newsletter) for child care providers to turn to when they have questions will help keep this constituency engaged in the implementation of the new policies, help identify areas of needed technical and other assistance, and inform strategies for the development and sustainability of the policies and system supports recommended above. In coordinating the implementation of these policies and supports, District agencies that administer Head Start, CACFP, Child Care and Development Fund, Community Development Block Grants, child care workforce training programs, and other relevant programs should be briefed on child care providers' needs.

Future research and evaluation efforts are also needed and should also be coordinated by the District. Ideally, these studies would be conducted with DC's community-based child care centers before and after implementation of the District's new early childhood wellness policy, structured to objectively measure the amount of physical activity among young children, and supplement these measurements with qualitative data on facilitators and barriers to centers' ability to implement the policies.

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