

BUILDING BLOCKS FOR FUTURE HEALTH:

Physical Activity and Physical Education Policies

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JUNE 2016



An HPRC Health Policy Report
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Glossary of Acronyms

Acronyms

Non-governmental Organizations and Governmental Agencies

- American Academy of Pediatrics (AAP)
- American Heart Association (AHA)
- Centers for Disease Control and Prevention (CDC)
- Department of Health and Human Services (DHHS)
- Government Accountability Office (GAO)
- Institute of Medicine (IOM)
- National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE)
- National Association of Elementary School Principals (NAESP)
- National Association of Sport and Physical Education (NASPE)
- National Center for Education Statistics (NCES)
- Prince George’s County Public Schools (PGCPS)
- United States Department of Agriculture (USDA)

Health-related Terms

- Body Mass Index (BMI)

Study-related Terms

- Community Based Participatory Research (CBPR)
- National Survey of Children’s Health (NSCH)
- Randomized Controlled Trial (RCT)
- School Health Policies and Practices Study (SHPPS)
- Youth Risk Behavior Survey (YRBS)

Laws

- No Child Left Behind (NCLB)



Introduction

Children and adolescents spend much of their time in school, giving schools a unique opportunity to impact not only the learning and social outcomes of their students, but also their health (Trost 2009; Wechsler et al. 2004). The influence of schools on student health is particularly significant as it relates to the future health of the Nation. Ways to address the health of children and adolescents, especially with regard to overweight and obesity, have more recently gained prominence in larger discussions about school health and wellness policies. These policies have primarily focused on healthy eating and physical activity, suggesting nutrition and physical activity are the central area to affect changes in short and long term student health (Food and Nutrition Service 2015).

This report addresses physical activity and physical education policies, and a follow-up report will focus on nutrition policy. This report will: describe what physical activity and physical education are; why strong policies are needed; what strong policies include; how policies have changed over time throughout the Nation; why changes were made; and what these changes mean for the health of the Nation. The report will offer a current snapshot of physical activity and physical education policies in the Mid-Atlantic region, Maryland, and Prince George's County, Maryland; provide future, evidence-based directions for physical activity and physical education policies; and, finally, put forth ideas for how to achieve better and stronger policies. Ultimately, this report attempts to inform policymakers of what has been done, what is being done, and what can be done to improve physical activity and physical education policies. This report will also provide parents and community members a glimpse of what is or is not happening in their children's schools.

The influence of schools on student health is particularly significant as it relates to the future health of the Nation.

What is Physical Activity and Physical Education?

The World Health Organization (WHO 2015) defines physical activity “as any bodily movement produced by skeletal muscles that requires energy expenditure.” Generally, physical activity includes movement ranging from play to cleaning to exercise to manual labor (WHO 2015). What sets exercise apart from other physical activities is that fitness and health are the ultimate goals through “planned, structured, repetitive, and purposeful” movement (WHO 2015).

The Centers for Disease Control and Prevention (CDC; CDC 2015) have set guidelines for the amount of time and level of intensity for each age group to be considered physically active and leading a healthy lifestyle. For children ages six to seventeen, the CDC recommends 60 or more minutes of physical activity every day. These activities should include aerobic, bone strengthening, and muscle strengthening components.

While physical activity is just about any bodily movement, physical education “is a planned instructional program with specific objectives” (NASPE 2012:9). According to the National Association of Sport and Physical Education (NASPE 2012:3), a leading authority on physical activity and physical education, “Physical education classes focus on physical activity—running, dancing and other movement but physical education also includes health, nutrition,



social responsibility and the value of fitness throughout one's life." Physical education serves as time to teach children and adolescents how to engage in optimal and

age appropriate physical activity, but has become the method in which most children and adolescents get most of their physical activity throughout the day (Pate et al. 2006).

Why are Strong Physical Activity and Education Policies Needed?

One primary outcome of weak physical education policies and decreased physical activity in children and adolescents is overweight and obesity.

Because children and adolescents spend much of their day in school, schools are the best place to promote and provide opportunities for physical activity, such as recess and physical education classes (Trost 2009; AAP 2006). These periods of sanctioned physical activity are increasingly becoming the only time when children and adolescents have to be physically active (Pate et al. 2006). Several organizations, such as the American Heart Association (AHA; Pate et al. 2006), the American Academy of Pediatrics (AAP; AAP 2010; AAP 2006), the CDC (CDC 2011), and Institute of Medicine (IOM; IOM 2013a), recommend that schools do more to get students active, primarily through stronger physical education policies. Strong physical education policies are needed for primary, or direct health related outcomes, and secondary, or

indirect health, social, and mental health related outcomes (McCullick et al. 2012). If strong physical education policies lead to positive outcomes, then logically weak physical education policies can lead to negative primary and secondary outcomes.

Primary Outcomes

One primary outcome of weak physical education policies and decreased physical activity in children and adolescents is overweight and obesity (McCullick et al. 2012; CDC 2011; D.H.H.S. 2010). Currently, overweight and obesity is measured based on a specific formula of height and weight called the body mass index (BMI); for children and adolescents BMI is age- and sex-specific. For a child or





adolescent to be considered obese, he or she must have a BMI greater than or equal to the 95th percentile for children or adolescents of the same age and sex. Overweight is when a child or adolescent has a BMI greater than or equal to the 85th percentile, but less than the 95th percentile for children and adolescents of the same age and sex (Division of Nutrition, Physical Activity, and Obesity 2015).

Prevalence of childhood obesity has risen in recent decades. National Health and Nutrition Examination Survey (NHANES) data from 1976-1980 to 2011-2012 show a

significant increase in obesity of children ages six to seventeen (Table 1; Federal Interagency Forum on Child and Family Statistics 2015). Data for Hispanic/Latino children are not available for the periods 1976-1980 to 2005-2006; however, it is still evident that there are racial and ethnic differences in prevalence of childhood obesity. Non-Hispanic Black and Hispanic/Latino children, ages six to seventeen, have consistently had higher rates of obesity than Non-Hispanic White children (Table 1). Trends in overweight also follow an upward trajectory; though it is not as rapid as the trajectory of obesity (Anderson and Butcher 2006).

TABLE 1. Percentage of Children Aged 6-17 who are Obese by Race and Hispanic Origin, Years 1976 to 2012.

	1976-1980	1988-1994	1999-2000	2001-2002	2003-2004	2005-2006	2007-2008	2009-2010	2011-2012
All Race/Ethnic Groups	5.7%	11.2%	15.0%	16.5%	18.0%	16.5%	19.2%	18.0%	19.5%
Non-Hispanic White	4.9	10.5	11.3	14.6	17.3	13.8	17.4	14.6	17.0
Non-Hispanic Black	8.2	14.0	21.1	20.4	21.7	21.3	22.4	25.7	22.7
Hispanic/Latino	---	---	---	---	---	---	24.4	23.1	25.1

Source: Federal Interagency Forum on Child and Family Statistics. (2015). America's Children: Key National Indicators of Well-Being, 2015:179

In terms of prevalence of childhood obesity today, the numbers are troubling for the Nation. With the most recent data available, it is estimated from 2011 to 2012 NHANES data that 16.9 percent of all of the Nation's children and adolescents, defined in this case as two to nineteen year olds, are obese (Ogden et al. 2014; see Table 2 for a breakdown by age). Nationally, Non-Hispanic Black and Hispanic/Latino children and adolescents are also more likely to be obese than Non-Hispanic White

students, suggesting that there are racial disparities in childhood and adolescent obesity (Table 2). Overweight and obesity prevalence will be described at a regional-level later in this report.

There are numerous reasons for the upward trend over time and continually high rates of overweight and obesity. One of the more common arguments is the increase in caloric intake and lack of energy expenditure (Wechsler et al. 2004). Schools share some



TABLE 2. Percentage Obese for Children Aged 2-19, by Age and Race/Ethnicity, 2011-2012 estimates

	2-19 year olds	2-5 year olds	6-11 year olds	12-19 year olds
All Race/Ethnic Groups¹	16.9%	8.4%	17.7%	20.5%
Non-Hispanic White	14.1	3.5	13.1	19.6
Non-Hispanic Black	20.2	11.3	23.8	22.1
Hispanic/Latino	22.4	16.7	26.1	22.6

Source: Ogden et al. 2014:810

of the responsibility for this rise because of the cuts in physical activity time. These cuts include recess and physical education (D.H.H.S. 2010; Wechsler et al. 2004). Since children and adolescents spend much of their time in school, the cuts to physical activity time are particularly detrimental. Researchers find that physical activity time in school is where many children and adolescents get a chance to be physically active and these students generally do not make up the lost physical activity time outside of school (Alderman et al. 2012; Cawley, Frisvold, and Meyerhoefer 2013; Pate et al. 2006). Though data suggest that there are more overweight and obese non-Hispanic Black children than non-Hispanic White children, non-Hispanic Black children appear to be more physically active than non-Hispanic White children; however over time and as these children age, there do appear to be decreases across the board for non-Hispanic Black and Mexican American children, but increases for non-Hispanic White children (Gortmaker et al. 2012). Stronger physical education policies could help remedy these issues by assisting children and adolescents in understanding the importance of physical activity and achieving and maintaining better weight outcomes (D.H.H.S. 2010), as one study

found that more time in physical education classes resulted in a reduction of weight status of students who participated (Cawley, Frisvold, and Meyerhoefer 2013).

Other primary outcomes include childhood and adolescent type 2 diabetes and hypertension. Childhood and adolescent type 2 diabetes (Dabelea et al. 2014; St. Onge, Motycka, and Rose 2006; Rosenbloom et al. 1999) and hypertension (Torrance et al. 2007) have been on the rise; following and likely a result of the increasing prevalence of overweight and obesity (Pinhas-Hamiel and Zeitler 2000). Preventing poor health outcomes in children and adolescents, such as diabetes and hypertension, is likely possible through more time for physical activity (Torrance et al. 2007; St. Onge, Motycka, and Rose 2006). This is achievable with stronger physical activity and education policies and allotting more time for physical activity during school.

The adoption of stronger physical education policies and allotment of more time for physical activity during school will give children and adolescents the opportunity they otherwise would not have to expend energy during the day (Kahan and McKenzie 2015). Stronger physical activity and physical education policies in schools

¹ (including race/Hispanic origin groups not shown separately)



would aid in the national effort to prevent obesity and other poor health outcomes (Kahan and McKenzie 2015). Stronger policies would also help to address the racial/ethnic and socioeconomic disparities in overweight and obesity (Whitt-Glover et al. 2009). Physical education classes and other school-based interventions could serve as one method of primary prevention of obesity and in turn these other comorbidities (Pinhas-Hamiel and Zeitler 2000).

Secondary Outcomes

Where primary outcomes are the direct health consequences and outcomes of physical activity policies, secondary outcomes are the indirect health, social, and mental health related outcomes. These secondary outcomes include: socialization and peer relationships; impact on self-esteem and mental health; brain and cognitive development; academic achievement; and link to later adult outcomes.

When effectively built into the curriculum, physical education can lead to the adoption of positive social and life skills, including communication and respect for peers (Vidoni and Ulman 2012; Bailey 2006). A qualitative study about the perception parents have of their children's physical education experiences found that parents view their children's participation in physical education classes as critical to the development of social skills and relationships (Na 2015). Recess also serves as time to freely engage in play and social interaction with others without the structure of physical education (Murray and Ramstetter 2013; Ramstetter, Murray, and Garner 2010; Zygmunt-Fillwalk and Bilello 2005). In a review of the literature pertaining to recess and socialization, play and the development

of games leads to the utilization and development of skills including leadership, self-discipline, planning, and respect for others (Jarrett 2013).

Similar to social development, physical education and recess can impact self-esteem and mental health (Bailey 2006). In a review of the literature related to the effects of physical education on children, considerable evidence of a positive relationship between physical education participation and self-esteem, meaning more regular participation leads to greater self-esteem, was presented (Bailey 2006). There also appears to be a relationship between regular participation in physical activity and reduced negative mental health outcomes like anxiety and depression (Bailey 2006). Participation in recess is also linked to stress and anxiety reduction, as recess gives children an opportunity to decompress (Lowe 2011). Reductions in stress and anxiety are important because stress and anxiety reduction is linked to greater social functioning and better school performance and achievement of children (Wood 2006).

Another secondary outcome is the impact physical activity has on brain and cognitive development. A meta-analysis of the literature found that there is a significant and positive relationship between physical activity and cognitive functioning in children (Sibley and Etnier 2003). In a more recent randomized controlled trial (RCT), researchers found a dose-response relationship between greater physical activity time and greater executive functioning and activity in regions of the brain related to those behaviors in the children sampled, which is consistent with findings in adults (Davis et al. 2011). The findings from this RCT suggest that physical activity is an important component of cognitive

Where primary outcomes are the direct health consequences and outcomes of physical activity policies, secondary outcomes are the indirect health, social, and mental health related outcomes.



development during childhood (Davis et al. 2011). This is important because the ability to self-regulate and effectively process information is particularly central to success in school (Duckworth and Carlson 2013).

Later adult health outcomes are often missed when educators and policy experts discuss policies related to physical education and other physical activity time in school.

Much like the connection with brain and cognitive development, research suggests that physical activity time, such as recess and physical education classes, do not have a negative impact on academic achievement of students (Simms, Bock, and Hackett 2014; Dills, Morgan, and Rotthoff 2011; Ramstetter, Murray, and Garner 2010; Trost 2009) and may actually lead to positive outcomes (Simms, Bock, and Hackett 2014; Trost 2009). In a review of the literature pertaining to physical activity and academic achievement, eleven of fourteen studies examining the relationship between physical activity and academic achievement found that consistent time spent engaging in physical activity led to greater academic gains (Trost 2009:3). The review concludes that more physical education can lead to greater academic achievement and that children and adolescents who are physically fit and active are more likely to be high academic performers and less likely to have behavioral problems (Trost 2009:6). Behavioral issues and lack of attention has also been found to be weakened with recess time (Jarrett 2013; Jarrett et al. 1998). Other researchers found, in a study

interested in determining if the duration and frequency of physical education was a predictor of academic achievement, that increased duration and frequency of physical education led to greater academic achievement of students in the sample (Simms, Bock, and Hackett 2014).

The final secondary outcome that will be covered here is not one that gets a lot of attention when physical education and recess are discussed. Later adult health outcomes are often missed when educators and policy experts discuss policies related to physical education and other physical activity time in school. As one goal of physical education is to promote physical fitness and activity throughout the life course (Bailey 2006), it has been found that participation in physical education in school as a child does have an impact on physical activity levels as an adult (Trudeau et al. 1999).

While the cuts to physical activity time in school can partially explain the poor health outcomes of children and adolescents in the United States (Cook 2005), it also may be possible that these cuts may indirectly lead to adverse health outcomes in adulthood (Bailey 2006). It has been suggested in one major review of the literature pertaining to effects of physical education “that PES [physical education and sports] programs – some of the few opportunities to promote physical activities amongst all children – have been proposed as a cost-effective way to influence the next generation of adults to lead physically active lives” (Bailey 2006:398). For example, as discussed previously, lack of physical activity and energy expenditure is implicated in childhood and adolescent obesity and in turn diabetes and hypertension. It is also understood that these risk factors, hypertension and obesity, and diseases, diabetes in particular, track into adulthood



(Nadeau et al. 2011; Lloyd, Langley-Evans, and McMullen 2010). A review of the literature also found a correlation between number of physical education days a week and overweight in adulthood (Pate, O'Neill, and McIver 2011).

There also appears to be racial/ethnic and socioeconomic disparities in these secondary outcomes. For example, one researcher notes that cuts to “non-core” class time, including physical education, to make way for “core” classes, such as reading and math, was particularly more likely in schools with a greater proportion of minority and low socioeconomic status students (Efrat 2011). With a particular focus on the academic achievement of minority and low socioeconomic status students, the review of the literature (Efrat 2011) ultimately supported other research that suggests more

physical activity time is associated with greater academic achievement (Simms, Bock, and Hackett 2014; Trost 2009). The research suggests the academic achievement gap could be partially narrowed by increasing opportunities for physical activity that have previously been cut (Efrat 2011).

Taken together, the evidence suggests that there are several benefits to physical activity in childhood and adolescence. Some researchers have argued that if this is the case, then physical education and physical activity time should be required through legislative means (McCullick et al. 2012). It has also been stated that if physical education is required, then “it should be assigned the appropriate amount of instructional time fundamentally needed to elicit the achievement of its intended outcomes” (McCullick et al. 2012:200).

The research suggests the academic achievement gap could be partially narrowed by increasing opportunities for physical activity that have previously been cut (Efrat 2011).

What Do Strong Physical Activity and Physical Education Policies Look Like?

As physical activity in schools is generally completed through physical education classes and recess, strong policies are needed to address these critical activity times during the school day (McCullick et al. 2012). For children and adolescents to achieve the amount of physical activity time suggested by the CDC and Department of Health and Human Services (DHHS) and supported by the AAP (2006), states and local school systems must draft physical activity policies that address these time requirements and curricula standards.

The guidelines that the DHHS (2008), like the CDC (2015), suggest are 60 minutes of physical activity every day, and include activities such as aerobic,

muscle-strengthening, and bone-strengthening. The DHHS (2008) notes: aerobic activities include any activities that increase cardiorespiratory fitness; muscle-strengthening activities involve activities that “overload” the muscles to strengthen them; and bone-strengthening activities involve activities that apply pressure and force on the bones to stimulate growth and strengthening. The DHHS (2008) also notes that most of this activity should fall in the moderate-to-vigorous physical activity intensity, which is activity that results in heart beating faster and breathing heavier than normal.

A range of organizations advocating for physical activity have made sweeping



Strong physical education policies include the aforementioned standards and well-constructed curriculum that focuses not just on getting children and adolescents moving, but also on development of important skills that can be maintained throughout the life course (NASPE 2012).

suggestions for states and school systems to achieve the guidelines outlined by the DHHS. The National Association of Sport and Physical Education (NASPE; NASPE 2012:4), the leading authority on standards for physical education and physical activity, along with their parent professional organization, the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD), suggest that states and local school systems adopt policies that require elementary school and middle/high school students to be engaged in 150 minutes per week and 225 minutes per week, respectively, of physical education class time. They also state that teachers should be licensed or certified to teach and that physical education classes should not be substituted with other activities (NASPE 2012). Moreover, the NASPE (2012:5) suggests that if states are to have strong policies, the policies should also have clear standards for what students need to learn in physical education classes, clear minimum standards for what students need to accomplish to be considered passing the course, and clear minimum physical education standards for high school graduation requirements.

Strong physical education policies include the aforementioned standards and well-constructed curriculum that focuses not just on getting children and adolescents moving,

but also on development of important skills that can be maintained throughout the life course (NASPE 2012). Ultimately a “nurturing environment” is needed for these skills to develop and thrive (NASPE 2012). The NASPE (2012:4) states:

This more balanced approach not only makes physical education class a better experience for the less athletic student, it dramatically expands the skills that each participant gains: social, cooperative, and problem-solving competencies and hands-on experience in making self assessments, planning personal programs, setting goals, self-monitoring (through keeping physical activity diaries or logs) and decision making

It is also suggested that strong physical activity and physical education and recess policies be clear so that there is no doubt how the law or policy should be interpreted and implemented (McCullick et al. 2012). Strong policies also start at the state-level, with state-level policies impacting all children attending public schools in that state (Ward 2011) and setting the precedent for the local school systems (Chriqui et al. 2013; Slater et al. 2012). In many cases states may not have policies or not very strong or clear policies related to physical activity, resulting in the local school systems drafting their own policies (Slater et al. 2012)



Physical Activity and Education Policies Nationally

How Have Policies and Activities Changed Over Time?

Over the past several decades, the amount of time allotted for physical activity in schools, including recess and physical education classes, has been on the decline across the Nation (Jarrett 2013; Cook 2005; Zygmunt-Fillwalk and Bilello 2005). This decline accelerated after the passage of the No Child Left Behind Act of 2001 (NCLB), which placed a greater burden on schools to increase the test scores of students by putting increased focus on core academic subjects (IOM 2013a; Sallis et al. 2012; Department of Education 2009). Under NCLB, physical education was not considered a core subject (Department of Education 2009). During this time period, schools with a large student population comprised of lower socioeconomic status and minority status students were also more likely to have experienced cuts in physical activity time (Slater et al. 2012; Johnston, Delva, and O'Malley 2007). While the relationship between physical activity and primary and secondary outcomes is known, more research is needed to address the relationship between gaps in policy and disparities in overweight and obesity.

In terms of physical education classes, from 1991 to 2003, the overall attendance of daily physical education classes decreased significantly from 1991 (41.6%) to 1995 (25.4%). From 1995 (25.4%) to 2003 (28.4%) there was not a significant change in attendance (Lowry et al. 2004). A report using School Health Policies and Programs Study (SHPPS) data completed for Congress by the Government Accountability Office (GAO) similarly found that from 2000 to 2006 the amount of time given for physical education classes in elementary, middle/junior high, and high schools decreased (see Table 3; GAO 2012). This suggests schools have made cuts in frequency and duration of physical education classes.

While this is a concerning trend, the GAO report (2012) notes that while schools offered less physical education classes a week from 2000 to 2006, the requirement that students in each grade take physical education classes increased. The report also notes that the quality of physical education curriculum has improved (GAO 2012). This suggests that while cuts in frequency and duration of classes have occurred, states

TABLE 3. Estimated Percentage of Schools that Offer Physical Education Classes for All Grades at Least Three Days a Week

	2000	2006
Elementary Schools (not including kindergarten)	24.9%	13.7%
Middle and Junior High Schools	18.0	15.2
Senior High Schools	6.9	3.0

Source: Government Accountability Office. 2012. K-12 Education: School-based Physical Education and Sports Programs. GAO-12-350.



Cuts to physical activity time are primarily the result of two major issues facing school systems nationally: budgetary concerns and the emphasis on greater academic achievement.

have simultaneously incorporated physical education into state-level laws and school systems have implemented policies requiring better curriculum (IOM 2013a). The laws that have been enacted, however, have been weak (i.e. not specifying the amount of time required for physical education classes; IOM 2013a). There is also controversy about evaluation or monitoring systems used to assess whether or not schools are properly following the policies sanctioned by the state or school system (Carlson et al. 2013; Cawley, Frisvold, and Meyerhoefer 2013). The biggest issue is that if policies are not clear and therefore not interpreted and implemented properly, than how do policymakers and evaluators know that a policy has been effective and implemented correctly (McCullick et al. 2012).

Time allotted for recess, like physical education classes, has also been cut; a

Why the Cuts in Physical Activity Time?

Cuts to physical activity time are primarily the result of two major issues facing school systems nationally: budgetary concerns and the emphasis on greater academic achievement (Wechsler et al. 2004).

According to a Brookings Institution report (Dee and Jacob 2010:149), following the passage of NCLB in 2001, “School-district expenditure[s] increased significantly in response to NCLB, and these increases were not matched by federal revenue.” The report estimates that NCLB cost school districts an average of \$600 more per student, with most of the expenses going to student instruction and additional educational services (Dee and Jacob 2010:150). Because these additional expenses were not being matched by the

trend that began in the late 1980s and picked up with the adoption of NCLB (IOM 2013; Sallis et al. 2012; Jarrett and Waite-Stupiansky 2009). The National Association of Early Childhood Specialists in State Departments of Education cited a 1989 survey conducted by the National Association of Elementary School Principals which found that 90 percent of schools had recess of some kind (NAECS/SDE 2001), but today many states do not have a recess policy, leaving the decision up to local school systems and school administrators (Jarrett 2013). Like physical education classes, schools with a student population consisting of low socioeconomic and minority students have less time for recess or are more likely to not have recess at all (Jarrett 2013; Slater et al. 2012). Again, this is a topic that should be further researched.

federal government and needed to be made up elsewhere in the budget (Dee and Jacob 2010), classes and staff considered to be “noncore,” like physical education, were cut (IOM 2013a:244; GAO 2012). Having to come up with the funding for facilities and equipment, as well as qualified and trained physical education teachers was not financially feasible (IOM 2013a:5; GAO 2012).

Additionally, not much support is coming from the States, despite the fact there may still be requirements for physical education. For example, a *New York Times* article reported that an examination of San Francisco elementary schools revealed only 20 percent of those schools were fulfilling the State of California’s requirement of 20 minutes of physical education every day (Baker 2012).



The second major issue is related to emphasis on academic achievement. Student academic achievement, usually measured by standardized test scores, has increasingly become a concern for schools and school systems. With the greater scrutiny of school performance which came with the passage of NCLB in 2001 (Dee and Jacob 2010), and the pressure to increase the Nation's global standing in math, science, and reading (Chappell 2013), school administrators made cuts in physical activity time in hopes that the increased time in the classroom would lead to better standardized test scores (Dee and Jacob 2010; Trost 2009). According to an Institute of Medicine (IOM 2013a:5) report, 44 percent of school administrators stated that they had to make cuts to physical education and recess time to increase the time spent in reading and math.

While administrators have made cuts to physical education and recess time

for reasonable concerns, parents are increasingly troubled by the lack of physical activity their children have during the school day. The Robert Wood Johnson Foundation, in partnership with the Harvard School of Public Health and NPR, surveyed 1,368 adults in 2013 who were parents or guardians of a child attending kindergarten through twelfth grade in public or charter schools throughout the U.S. (NPR/RWJF/HSPH 2013). In this survey, one out of four (25%) participants stated physical education was an area of curriculum that received too little attention in their child's school, ranking second just after arts and music (with 28%) out of seven curriculum areas (NPR/RWJF/HSPH 2013:2). When compared to the CDC's guidelines for recommended amount of physical activity and education, the reported frequency and duration of physical education classes did not meet the CDC's guidelines (NPR/RWJF/HSPH 2013:8).

What Does This Mean for The Health of the Nation?

Cuts to physical activity time, among other factors, have already had an impact on health of children and adolescents in the United States. As discussed previously, the Nation is experiencing an epidemic in childhood and adolescent overweight and obesity (Johnson 2012; Cook 2005). Evaluations of NHANES data from 1999 to 2012, showed that there have not been declines in prevalence of obesity and severe obesity rates of children and adolescents despite efforts to the contrary (Skinner and Skelton 2014). Trend analyses of these NHANES datasets suggest that obesity and severe obesity for two to nineteen year olds will continue to rise.

These trends are troublesome as obese children are more likely to become obese adults (Ludwig 2007; Anderson and Butcher 2006), and with persisting obesity into adulthood comes chronic and debilitating health problems like type 2 diabetes and cardiovascular diseases (Park et al. 2012; Nadeau et al. 2011). For example, cardiovascular diseases are projected to affect 40.5 percent of the U.S. population by 2030, with health expenditures expected to triple from \$273 billion in 2010 to \$818 billion in 2030 (Heidenreich et al. 2011). For type 2 diabetes, depending on the trajectory of diabetes incidence rates, by 2050 anywhere from 14 percent to 33 percent of Americans are projected to have type 2 diabetes (Boyle et al. 2010).



A greater number of children and adolescents have already experienced these health issues as a result of their weight status, which is of particular alarm. It has also become a major concern that the life expectancy of children today will be lower than that of their parents, partially because of the persistence of obesity into adulthood and the health problems obesity brings (Ludwig 2007; Olshansky et al. 2005).

Children and adolescents who attend schools in urban, low-income settings and schools with a greater number of racial minority students are also more likely to have cuts to physical activity time in school.

As discussed in previous sections of this report, low socioeconomic status and racial and ethnic minority children and adolescents are also more likely to be overweight and obese (see Table 2). Children and adolescents who attend schools in urban, low-income settings and schools with a greater number of racial minority students are also more likely to have cuts to physical activity time in school (Johnson 2012; Cook 2005). In a study examining the differences between rural and urban students, the researchers found that while rural students were more likely to be overweight and obese, they were also more likely to be physically active than their urban counterparts (Joens-Matre et al. 2008). These findings suggest that there are racial/ethnic, socioeconomic, and location-based disparities both in school policies and in health, which can only lead to further disparities in future health outcomes, particularly in quality of life and prevalence and mortality of type 2 diabetes and cardiovascular diseases

(Bibbins-Domingo et al. 2007). The AHA report, which projected cardiovascular disease outcomes from 2010 to 2030, for example, found that current racial and ethnic disparities in cardiovascular disease outcomes will continue along the same trajectory, with Black and Hispanics/Latinos experiencing worse outcomes than Whites (Heidenreich et al. 2011).

Finally, these policies or lack thereof, also have implications for LGBT students and adults. Researchers have noted that LGBT students in particular are less likely to participate in physical activities and physical education classes primarily because they do not feel physically safe and for fear of harassment and ridicule (Kosciw et al. 2012; White, Oswalt, Wyatt, and Peterson 2010). There is evidence to suggest that LGBT students are not only receiving limited support from their peers but also their teachers, further driving LGBT students away from physical activity that could benefit them now and as adults (White, Oswalt, Wyatt, and Peterson 2010). This is particularly concerning because LGBT students could benefit from the positive mental health outcomes of physical activity, as these students are more likely to experience low self-esteem, depression, and other poor mental health outcomes that continue on into adulthood (White, Oswalt, Wyatt, and Peterson 2010).





What is the Current Snapshot of Physical Activity and Physical Education Policies Nationally?

First, it is important to understand that there are no federal laws that require physical education classes (NASPE 2012). Instead the federal government, in order to promote physical activity in schools, developed grant programs like the Carol M. White Physical Education Program (or PEP) under NCLB to provide money to support physical education programs at the local school system level (Story, Nanney, and Schwartz 2009). More recently, the federal government has required that school systems that utilize the United States Department of Agriculture's (USDA) National School Lunch Program and/or School Breakfast Program must have a school wellness policy, which includes nutrition and physical education components, on the books (Food and Nutrition Service 2015).

The National Association for Sport and Physical Education (NASPE; NASPE 2012), has released reports about the state of physical education policy in the United States on a fairly regular basis since 1987. At the time of writing, the most recent report available was in the examination of 2012 policies.

In terms of physical education classes, most states (74.5%) surveyed by the NASPE require physical education classes in some form; however, the time requirements are not clear (NASPE 2012). Specifically, 84.3 percent of states require physical education in elementary schools, 80.4 percent of states require these classes in middle school and junior high schools, and 86.3 percent of states require them in high schools (NASPE 2012:7). As it relates to time, for elementary schools and middle/junior high schools, 31.4 percent and 35.3 percent, respectively, require a "minimum" number of minutes a

week or day that should be spent in physical education classes. The NASPE (2012) does note that states will often leave it up to the local school systems to develop specific guidelines.

When it comes to standards, certifications, and assessments, 50 out of the 51 states (the District of Columbia included) had their own physical education standards at the state-level (NASPE 2012). Interestingly, in terms of compliance to those state standards, of the 46 states that responded, only 76.0 percent require and check that local school systems are in compliance with those standards. For certification of teachers, most require some kind of certification and renewal process after a certain number of years. Of the 51 states (including the District), 50.9 percent require a student assessment of some kind (i.e. physical fitness test; physical knowledge; etc.).

Further descriptive data related to physical education and recess policy at the elementary school level were found at the state-, district-, and school-levels (Slater et al. 2012). This particular study investigated a nationally representative sample of 1,761 public elementary schools within 690 districts within 47 states. The study ultimately found, of the 47 states surveyed, 83.0 percent did not have a state daily recess law, 11.0 percent had a law suggesting daily recess, and 6.0 percent had a law requiring it. With regard to physical education policy, 51.0 percent of the states included did not have a state physical education time-related law, meaning specific time requirements were not mentioned in any way. In contrast, 36.0 percent of states surveyed had a law suggesting 150 minutes a week or requiring



less than 150 minutes a week of physical education and 13.0 percent of the states had a law requiring 150 minutes a week of physical education (Slater et al. 2012).

According to Slater and colleagues (2012), at the district-level, of the 690 districts surveyed, 64.0 percent did not have a district recess policy, followed by 17.0 percent suggesting daily recess and 19.0 percent requiring daily recess. For physical education policy, 67.0 percent did not have a district physical education policy. Twenty-nine percent of the districts had policies suggesting 150 minutes a week of physical education or requiring less than 150 minutes a week of physical education and 4.0 percent had policies requiring 150 minutes a week of physical education. It is important to note that when states did not have a policy for recess or physical education, districts often made their own policies (Slater et al. 2012).

Finally, Slater et al. (2012) found at the school-level, of the 1,761 public elementary schools surveyed, 69.9 percent reported they had recess at least 20 minutes a day and 17.9 percent reported they had physical education greater than or equal to 150 minutes a week. The barriers these schools reported in implementing physical education classes were: “lack of staff” (18.6%); “lack of indoor facilities” (8.9%); “lack of outdoor facilities” (9.6%); “competing demands”

(23.4%); “physical education not a school priority” (5.7%); “no physical education policy” (2.5%); and “financial constraints” (16.6%). For recess, barriers included: “lack of resources” (1.7%) and “time demands” (8.8%) (Slater et al. 2012).

What all of this information suggests is that currently the majority of states require physical education classes, however, most of these states do not have time specifications (NASPE 2012; Slater et al. 2012). While there is an understanding that physical education should be required and is important, the states will often leave it up to the local school systems to determine on their own how much time will be dedicated to physical education classes (NASPE 2012). Local school systems often lack the resources necessary to fund and aid schools within the system in developing and holding effective physical education classes; therefore, many local school systems may require physical education classes, but they too do not specify time requirements or how the schools within the school system should go about accomplishing what is required or suggested in local school system policy. Related to recess at the elementary school-level, the majority of states do not have a law related to recess at all, with the county or district usually determining whether or not they will offer recess (Slater et al. 2012).

While there is an understanding that physical education should be required and is important, the states will often leave it up to the local school systems to determine on their own how much time will be dedicated to physical education classes.





The Mid-Atlantic, Maryland, and Prince George's County: A Case-Study

The Mid-Atlantic: School Demographics and Relevant Health Characteristics

The Mid-Atlantic region of the United States is made up of the District of Columbia and five states: Maryland, Virginia, Delaware, Pennsylvania, and West Virginia. In terms of demographics and population characteristics, the Mid-Atlantic, based on 2014 American Community Survey estimates, comprised roughly 30 million people (U.S. Census 2014). Of the roughly 30 million people in this region, about 4.8 million were between the ages of five and seventeen (U.S. Census 2014). The National Center for Education Statistics (NCES; Common Core Data 2015) reports in this region for the school year 2013-2014, there were roughly 4.4 million total students enrolled in public schools with varying racial/ethnic and socioeconomic affiliations across the states (see Table 4 and Table 5).

Health of children and adolescents in this region may be best understood by examining overweight and obesity status, two direct outcomes related to physical activity. Data related to weight status are not readily available for all age groups. However, in states of interest, there are data available for overweight and obesity of ten to seventeen year olds for all states from the 2011/2012 National Survey of Children's Health (CAHMI 2012). In the Mid-Atlantic region, the survey estimates that 29.2 percent of ten to seventeen year olds are currently overweight or obese, which is lower than the 31.3 percent of ten to seventeen year olds nationwide (CAHMI 2012). Based on the data presented in Table 6, it appears that the District of Columbia has a higher percentage (35.0%) of overweight or obese

TABLE 4. Total Students Enrolled in Public School by Race and State with Percentage, School Year 2013-2014.

	DC	MD	VA	DE	PA	WV
Total Black	57,483 (73.6%)	301,996 (34.9%)	296,347 (23.3%)	41,046 (31.2%)	264,886 (15.1%)	13,177 (4.7%)
Total White	6,910 (8.8%)	354,426 (40.9%)	664,517 (52.2%)	62,812 (47.7%)	1,213,031 (69.1%)	256,010 (91.1%)
Total Hispanic/Latino	11,215 (14.4%)	118,204 (13.6%)	166,303 (13.1%)	19,137 (14.5%)	166,332 (9.5%)	3,891 (1.4%)
Total Other	2,545 (3.3%)	91,543 (10.6%)	146,658 (11.5%)	8,692 (6.6%)	110,987 (6.3%)	7,880 (2.8%)
Total Students (Enrolled in Public School)	78,153 (100%)	866,169 (100%)	1,273,825 (100%)	131,687 (100%)	1,755,236 (100%)	280,958 (100%)

Source: National Center for Education Statistics. 2015. *Common Core Data: State Nonfiscal Public Elementary/Secondary Education Survey Data*.

TABLE 5. Percentage of Public School Students Eligible for Free or Reduced-Price Lunch by State, School Year 2011-2012.

	DC	MD	VA	DE	PA	WV
Total Students (Enrolled in Public School)	72,329	854,060	1,227,099	128,470	1,732,035	282,870
Percent Students Eligible for Free or Reduced-Price Lunch	62.5%	41.8%	39.2%	48.9%	40.2%	52.8%

Source: National Center for Education Statistics. 2013. "Public Elementary/Secondary School Universe Survey: 2011-2012."



TABLE 6. Percent Overweight or Obese (85th percentile or above) of 10 to 17 Year Olds by State, 2011/2012.

	DC	MD	VA	DE	PA	WV
Overweight or Obese 10 to 17 year olds	35.0%	31.6%	29.8%	32.0%	26.5%	33.6%

Source: CAHMI 2012. 2011/2012 National Survey of Children’s Health.

To objectively appraise state-level policies related to physical activity and physical education, researchers at the National Cancer Institute developed the Classification of Laws Associated with School Students, or C.L.A.S.S. system.

10 to 17 year olds than the other states, while Pennsylvania has the lowest percentage (26.5%) in the Mid-Atlantic region.

Based on the percentages presented in Table 6, Mid-Atlantic states have a lot to work on in terms of improving the health of children and adolescents in the region. One effective place to start is drafting strong and clear school policies, such as physical activity, physical education, and nutrition policies. These policies directly impact children and adolescents in each state because school is compulsory and requires students to participate in certain academic and non-academic activities. Since this is where children and adolescents spend most of their day, policies that are clearly spelled out and address the guidelines that many professional organizations recommend could lead to better health outcomes (McCullick et al. 2012; Trost 2009; Pate et al. 2006).

What is the Current Snapshot of Physical Activity and Physical Education Policies Regionally?

If improvements are to be made, then the current policies must be understood. Each state has their own state- and county-level boards and departments of education charged with ensuring that all schools in the state are meeting certain education standards. Because each state has their own department of education, it is possible for states in the same region to have varying policies related to physical activity and physical education.

To objectively appraise state-level policies related to physical activity and physical education, researchers at the National Cancer Institute developed the Classification of Laws Associated with School Students, or C.L.A.S.S. system (NCI 2014b). According to the researchers at NCI (2014b), “C.L.A.S.S. uses a scoring system to code state laws as they compare to national standards and recommendations for PE and nutrition.” The examined policy areas include (2014a) include:

Policy Area	Score
Physical Education Time Requirements	0-5
Physical Activity Time Requirements	0-5
Moderate to Vigorous Activity (MVPA)	0-4
Staffing Requirements	0-4
Curriculum Standards	0-4
Physical Education Proficiency	0-4
Assessment of Health-related Fitness	0-4
Recess Time	0-4
Joint Use Agreement Provisions	0-4

A final weighted summary score is also calculated as “an overall index of a state’s policy environment for physical education. The WSS [weighted summary score] combines scores across PE policy areas and across grade levels” (NCI n.d.g). The specific areas that the weight summary score combines are: physical education time requirements; staffing requirements; curriculum requirements; and assessment of health-related fitness. See Appendix A for full breakdown of each policy area.



The most recent assessment of state policies in the Mid-Atlantic region using the C.L.A.S.S. scoring system is for the year 2012 (see Appendix B for each score). The state with the highest weighted summary score of all states in the Mid-Atlantic is Maryland, receiving a score of 24 out of 36 compared to the national median of 20 (NCI n.d.c.). West Virginia follows with a score of 23.5, then a score of 21 was achieved by the following states: Virginia, Delaware, Pennsylvania, and the District of Columbia (NCI n.d.a,b,d,e,f). The scores of 21 for Virginia, Delaware, Pennsylvania, and the District of Columbia suggests these states below Maryland and West Virginia. When looking at the nation in totality, Maryland and West Virginia fall within the top 25% of all state scores, while Virginia, Delaware, Pennsylvania, and the District of Columbia fall within the middle 50% of all state scores (NCI n.d.g.). The scores of 21 achieved by Virginia, Delaware, Pennsylvania, and the District of Columbia suggest that these states and the District have adequate physical education policies relative to national standards recommended by professional organizations and health-related government agencies. Maryland and West Virginia, with scores of 24 and 23.5, respectively, are considered to have stronger physical education policies relative to other states throughout the nation and the Mid-Atlantic.

In areas related to general physical activity policies, such as physical activity time requirements, recess time, and joint use agreement provisions, some states did well to have policies in place while others did not. For physical activity time requirements, the District of Columbia, Virginia, Delaware, Pennsylvania, and West Virginia all had codified laws related to this policy area for all grade levels; suggesting that states either required a set amount of physical activity time a week or it was mandated that

there would be time for physical activity throughout the week (NCI n.d.a,b,d,e,f). Interestingly, Maryland did not have a codified law reflecting this policy area meaning this policy area is not addressed at all by the state (NCI n.d.c.). For recess time, the District of Columbia and West Virginia recommend recess time for elementary school students; Virginia requires at least 20 minutes a day; and Maryland, Delaware, and Pennsylvania have no requirement (NCI n.d.a,b,c,d,e,f). Finally, in the case of joint use agreements, which are contracts between schools and communities granting access to school facilities during non-school hours, all the Mid-Atlantic states and the District have a law either recommending or requiring a joint use agreement in some form (NCI n.d.a,b,c,d,e,f).

A Closer Look at Maryland Physical Activity and Physical Education Policies

Taking a closer look at Maryland's scores in the C.L.A.S.S. system, the State scored slightly better than the national median, though the State still has room for improvement. For example, according to the C.L.A.S.S. scorecard, physical education time requirements across all school levels (i.e. elementary, middle, and high school), are unspecified, resulting in the State receiving a score of two out of five (NCI n.d.c.; MD Code Ann., Edu. § 13A.04.13.01). The State also received a score of zero for physical activity time requirements, recess time, and fitness assessment, suggesting that there are no laws or regulations related to these categories (NCI n.d.c.). Where Maryland thrives is related to curriculum standards (see Appendix C; MD Code Ann., Edu. § 13A.04.13.01) and staffing requirements (MD Code Ann., Edu. § 13A.12.02.18), receiving

Taking a closer look at Maryland's scores in the C.L.A.S.S. system, the State scored slightly better than the national median, though the State still has room for improvement.



Generally, Maryland requires physical education classes be provided to elementary and middle school students (i.e. K-8), but only requires that the local school systems offer physical education to high school students (i.e. grades 9-12)...

the highest score possible in both categories (NCI n.d.c.), as well as requiring moderate-to-vigorous physical activity in physical education classes (Md. Code Ann., Edu. 13A.04.13.01) and proficiency with certain motor skills (Md. Code Ann., Edu. § 7-409).

Generally, Maryland requires physical education classes be provided to elementary and middle school students (i.e. K-8), but only requires that the local school systems offer physical education to high school students (i.e. grades 9-12) (MD Code Ann., Edu. § 7-409; MD Code Ann., Edu. § 13A.04.13.01). The State also requires that high school students complete at least 0.5 credits toward physical education to graduate (MD Code Ann., Edu. § 13A.03.02.03) and that staff have a certificate and formal education related to physical education and health (MD Code Ann., Edu. § 13A.12.02.18). In terms of time requirements for physical activity or physical education, no specified amount of time at the elementary, middle, and high school levels are mentioned in the Maryland Education Annotated Code or the Title 13A State Board of Education Regulations.

Prince George's County School Demographics and Population Characteristics

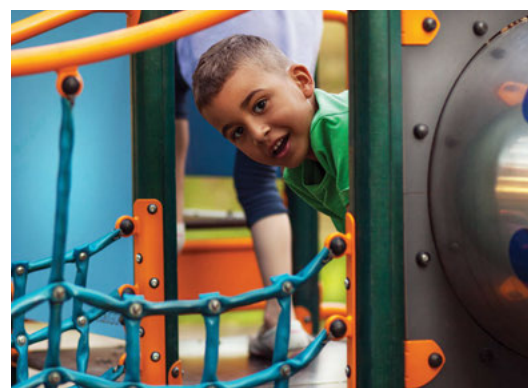
In Prince George's County, much like for the Mid-Atlantic region, childhood overweight and obesity data are not readily available for all age groups; however, there are data for middle school- and high school-age children and adolescents. Utilizing 2013 Maryland Youth Risk Behavior Survey (YRBS) data, 11.0 and 13.7 percent of high school students (around 15 to 18 year olds) in Maryland and Prince George's County reported they were obese, respectively (DHMH 2013a; DHMH

TABLE 7. Percentage Obese for High School Students Aged 15 to 18, by Location and Race/Ethnicity (YRBS 2013).

	Maryland	Prince George's County
All Race/Ethnic Groups	11.0%	13.7%
Non-Hispanic White	9.1	8.2
Non-Hispanic Black	13.5	13.2
Hispanic/Latino	12.7	16.3

Source: Youth Risk Behavior Survey (YRBS) 2013.

2013c). On the other hand, 24.5 and 26.6 percent of middle school students (around 11 to 14 year olds) in the State and the County reported they were overweight (DHMH 2013b; DHMH 2013d). Disaggregated by race and ethnicity, in Maryland, 13.5 percent of non-Hispanic Blacks, 12.7 percent of Hispanics/Latinos, 9.1 percent of non-Hispanic Whites, and 11.8 percent who considered themselves multiple races were obese (Table 2; DHMH 2013a). In Prince George's County, 13.2 percent of non-Hispanic Blacks, 16.3 percent of Hispanics/Latinos, 8.2 percent of non-Hispanic Whites, and 16.2 percent who considered themselves multiple races were obese (Table 7; DHMH 2013c). Similar to national trends, there appears to be racial disparities in obesity rates in the State and in the County. There were not enough data to disaggregate by race for middle school students.





Prince George's County Physical Activity and Physical Education Policies

Though states have a lot of power in determining what is mandated in schools, so do the county-level boards of education, which are far more involved in the day-to-day policy implementation of the schools they oversee (PGCPS 2012). The focus on Prince George's County in this section is significant because of the racial and ethnic diversity of the County, as well as the fact that the County has some of the most affluent Black communities in America (Brown 2015). For example, Blacks and Hispanics/Latinos (of any race) accounted for an estimated 62.1 percent and 16.9 percent, respectively, of the population in the County in 2014 (U.S. Census Bureau 2014). In contrast, Whites only accounted for 14.1 percent of the population (U.S. Census Bureau 2014). Researchers investigating state and county-level policies have found that more affluent counties tend to have greater opportunities for physical activity and physical education, but also found that school systems with a greater racial minority student population, which is the case with Prince George's County, had less opportunities primarily because of availability of resources and funding (Slater et al. 2012; Johnston, Delva, and O'Malley 2007). Also of note is that researchers have found that when state policies do not spell out the specifics or have clear policies, local school systems and counties will develop and implement their own. This section of the report intends to determine if the latter point is true: does the County expand on physical activity and physical education policies beyond the State, or does the County default to State policies? And are the County's adopted policies and procedures

in line with what organizations like NASPE recommend?

To find the County-level policies, all board policies and administrative procedures listed on the Prince George's County Public Schools website were reviewed to determine if they addressed physical activity and/or physical education. Policies and procedures that did not directly relate to physical activity and physical education, such as uniform codes and coach behavior, were not included as these policies and procedures do not necessarily have any bearing on health-related fitness. Upon completing the initial search, contact was made with Prince George's County Public Schools with varying levels of success to determine if the policies found related to physical activity and physical education were the only policies. The specific policies and procedures found are: "Wellness, Nutrition, and Physical Activity" (PGCBE 2011b, Policy No. 0116; PGCBE 2011c, Administrative Procedure 0116) and "Guidelines for Elementary Playground and Indoor Recess Supervision Grades Pre-K – 6 Physical Education for Grades 6 – 12" (PGCBE 2011a, Administrative Procedure 6130).

"Wellness, Nutrition, and Physical Activity" Policy

The first policy, the "Wellness, Nutrition, and Physical Activity" policy (PGCBE 2011b, Policy No. 0116; PGCBE 2011c, Administrative Procedure 0116), is considered an overall wellness policy that many local and county-level school systems have recently implemented. As mentioned previously, these wellness policies are required to be adopted by local and county-level school systems that utilize one or both of the USDA's National School Lunch

*Researchers
investigating state
and county-level
policies have
found that more
affluent counties
tend to have greater
opportunities for
physical activity and
physical education,
but also found that
school systems with
a greater racial
minority student
population, which
is the case with
Prince George's
County, had less
opportunities
primarily because
of availability
of resources and
funding.*



It is important to note that the Maryland State Department of Education does have a very clear set of standards for curriculum, but it is not evident that there are time requirements.

and School Breakfast programs (Food and Nutrition Service 2015). The policy more generally addresses physical activity, nutrition education, and nutrition standards for students of the Prince George's County Public School system. The policy ultimately tasks the Superintendent of Schools with developing an administrative procedure that includes "nutrition education goals, physical activity goals, nutrition standards, other schools based activities, and evaluation" and that the Superintendent, related to physical activity and physical education, "enforce[s] the current health education and physical education requirements mandated by the Maryland State Department of Education" (PGCBE 2011b, Policy No. 0116). It is important to note that the Maryland State Department of Education does have a very clear set of standards for curriculum, but it is not evident that there are time requirements (MSDE 2014).

The administrative procedure (PGCBE 2011c, Administrative Procedure 0116) developed as a result of this overall wellness policy (PGCBE 2011b, Policy No. 0116) outlines specific procedures related to physical activity and education, which can be found in Appendix D of this report. A summary of what is required of schools within the Prince George's County Public School system is as follows: there will be a "comprehensive, sequential physical education program" in schools, and allotted time that is based on sound research and standards of the State; physical activity should be a part of not just physical education curriculum, but in other curricula as well, with teachers trained to do this; all physical education teachers are well trained and qualified for the position; physical education classes should be held in a gym, if possible; elementary school students are to have chances for physical

activity throughout their day that amount to 15 minutes or more; elementary school students will also have recess before lunch, if possible; all amenities and locations utilized for physical activity are safe; the school environment is safe and promotes fun in physical activity; and physical activity resources are available to parents/guardians and the community to promote good health (PGCBE 2011c, Administrative Procedure 0116, V.A.). Prince George's County Public Schools also notes that physical education classes and recess are not to be used as a reward or punishment (PGCBE 2011c, Administrative Procedure 0116, V.G.5). The policy and administrative procedures also call for an evaluation to ensure proper implementation and effectiveness in the schools (PGCBE 2011c, Administrative Procedure 0116, V.H.).

Again, the National Association of Sport and Physical Education (NASPE; NASPE 2012:4), the leading authority on standards for physical education and physical activity, have suggested that states and local school systems adopt policies that require elementary school and middle/high school students to be engaged in 150 minutes per week and 225 minutes per week, respectively, of physical education class time. They also state that teachers should be licensed or certified to teach and that physical education classes should not be substituted with other activities (NASPE 2012). Moreover, the NASPE (2012:5) suggests that if states are to have strong policies, the policies should also have clear standards for what students need to learn in physical education classes, clear minimum standards for what students need to accomplish to be considered passing the course, and clear minimum physical education standards for high school graduation requirements.



Based on these recommendations and defaulting to State law, the curriculum standards (see Appendix C; MD Code Ann., Edu. § 13A.04.13.01), staffing requirements (MD Code Ann., Edu. § 13A.12.02.18), and high school graduation requirements (MD Code Ann., Edu. § 13A.03.02.03) are already in line with what the NASPE (2012) recommends. By default, the County should be thriving in these areas. One component of the procedure that is quite innovative is the incorporation of physical activity into other curricula (PGCBE 2011c, Administrative Procedure 0116). Where it is ambiguous if NASPE (2012) standards are being met, though, is related to adequate time provided for physical education classes (i.e., 150 minutes/week for elementary students and 225 minutes/week for middle and high school students). The only policy provision that makes any mention of time related to physical activity or physical education is the component addressing recess and additional physical activity time lasting 15 minutes or more for elementary students (PGCBE 2011c, Administrative Procedure 0116).

While it is not clearly spelled out in Administrative Procedure 0116 (PGCBE 2011c) what the time allotment for physical education is and how physical activity will be integrated throughout the day and in other curricula, the procedure does, however, assign duties to key administrators of Prince George's County Public Schools. For example, the assurance "that a comprehensive, sequential physical education program will be taught at each school, and that the time allotted for physical education is consistent with current research, and national and state standards" is

assigned to the Director of Curriculum and Instruction (PGCBE 2011c, Administrative Procedure 0116, V.A.1). Related to evaluation, the Office of Research and Evaluation with the County Health Council's Wellness Work Group and the Deputy Superintendent are to develop an evaluation method to ensure that the policy is effective and being implemented properly (PGCBE 2011c, Administrative Procedure 0116). The evaluation method is to be used and reported on every year to review the implementation and effectiveness of the policy to the County Board of Education (PGCBE 2011c, Administrative Procedure 0116, V.H.1-3).

By design, this policy creates some level of transparency and accountability, and gives administrators more control over what goes into the physical education program, including time allotted. In practice, it is not abundantly clear that the proper implementation and evaluation of this policy and administrative procedure is happening. It is not clear through the policy and procedure alone how decisions are to be made in determining time requirements for physical education. By not specifically including a set time requirement for physical education, it decreases the likelihood that "schools will provide 'meaningful content' and 'appropriate instruction'" (McCullick et al. 2012). Without a mandate for set amounts of physical education time it is easier for administrators to make decisions in favor of addressing budgetary, resource, and testing concerns that many school districts face (Wechsler et al. 2004), rather than accounting for the standards presented by NASPE (2012) and other health-related agencies (CDC 2015; D.H.H.S. 2008).



“Guidelines for Elementary Playground and Indoor Recess Supervision Grades Pre-K – 6 Physical Education for Grades 6-12”

Ultimately, the policies and procedures of the County are slightly closer in line to what professional organizations recommend in terms of physical activity and physical education, and the County’s policies and procedures do a great deal more than the State’s policies and procedures.

The second policy and procedure related to physical activity and/or physical education is the “Guidelines for Elementary Playground and Indoor Recess Supervision Grades Pre-K – 6 Physical Education for Grades 6-12” (PGCBE 2011a, Administrative Procedure 6130). The purpose of the procedure as stated by the document is “To provide guidelines for indoor and outdoor recess and playground activities in all elementary schools and physical education for grades 6-12” (PGCBE 2011a, Administrative Procedure 6130).

While the purpose of the procedure is stated, physical education is not mentioned any further than the title and the previously quoted line. The entire procedure is focused on recess, spelling out the guidelines for outdoor recess and playground activities, indoor recess, and proper supervision. See Appendix E for the specific provisions. The general guidelines related to physical activity note that recess “should”: “be provided each day in every elementary student’s schedule”; “not be based on whether the student has or has not had physical education during a particular day”; “be scheduled 30 minutes after lunch or before lunch”; “be given for no less than 15 minutes per day and for no more than 30 minutes per day”; and be held indoors if certain conditions are met (PGCBE 2011a, Administrative Procedure 6130). In terms of time allotted for recess, the provision of “should be given for no less than 15 minutes per day and for no more than 30 minutes per day” falls in line with what NASPE suggests is a sufficient amount of time for recess every day: 20 minutes (PGCBE

2011a, Administrative Procedure 6130; NASPE 2006). This procedure also takes into consideration what the NASPE (2006) recommends regarding recess not falling before or after a physical education class.

With this procedure, the County on the surface has a recess policy for elementary school students that does fairly well in incorporating what the NASPE (2006) recommends and the CDC (2011) endorses, including allotment of time and proximity of recess time to physical education class. Taken together, this suggests Prince George’s County has an appropriate recess policy that does more than just stating recess is required.

Ultimately, the policies and procedures of the County are slightly closer in line to what professional organizations recommend in terms of physical activity and physical education, and the County’s policies and procedures do a great deal more than the State’s policies and procedures. The County has shown through its adoption of policies and procedures that it is taking seriously the threat of childhood and adolescent overweight and obesity. These are all very positive steps in the right direction to address the direct health of children and adolescents; however, the design and adoption of policies and procedures are very different than the implementation and application of them.

A well-defined and conceptualized method of evaluation and transparency for key stakeholders, most notably the school system’s students and their parents, is essential (IOM 2013b), but it is not abundantly clear that this is happening in the County. It is both valuable and problematic that responsibilities are being assigned to key administrators in the County, as is the case with Administrative Procedure 0116 (PGCBE 2011c), such as developing an appropriate, research-based curriculum and an allotted amount of time



for physical education classes. It is valuable that there is a key individual who can be held accountable for the provisions in the administrative procedure; however, by not spelling out exactly what is required

in the procedures and leaving it up to an administrator, there is ambiguity in what is being accomplished throughout the school system as it relates to physical activity and physical education.

Future, Evidence-based Directions for Physical Activity Policies

As mentioned previously, Prince George's County has taken steps in the right direction to address the health of their students, though more can be done. However, this burden does not and should not fall on the County school system alone. The State of Maryland can also make informed policy decisions based on the research-driven recommendations provided by professional organizations, such as NASPE, and innovative techniques tested around the country and internationally.

Examples of New Policy Directions and Initiatives in Action

There appear to be two policy directions related to increasing physical activity time in school. One method is the inclusion of physical activity in other academic curricula, which is a policy innovation that is slowly taking off, and is an innovation Prince George's County Public Schools have included in their wellness policy. The Charleston County School District in South Carolina has been at the forefront of including physical activity in other curricula. Specifically, some schools in the district have kinesthetic desks, or desks that include exercise equipment, such as treadmills and stationary bikes, and intensive labs called "Brain Rooms" that merge physical

education with core curriculum (Maese 2015). Students stay in motion, with the teacher also in motion using his or her own kinesthetic desk while teaching (Maese 2015); however, it is not reported what this innovation has cost the school district. This practice is based on the findings that "children who are more active show greater attention, have faster cognitive processing speed, and perform better on standardized academic tests than children who are less active" (IOM 2013b:2). The impact of being physically active in the classroom while learning has been shown in a randomized controlled trial that incorporated physical activity in the lesson plans of elementary school children (Donnelly et al. 2009). The researchers found that combining physical activity and learning led to a decrease in weight status of the children receiving both activities combined. They also found an increase in academic achievement, specifically in reading, writing, and math. Since the initiative in Charleston County schools is relatively new, little research has been conducted on the success of the program itself; however, anecdotally, teachers and parents of the students in these Charleston County schools have noticed a difference behaviorally and academically.

The second approach is the inclusion of other curricula in physical education, or cross-curricular activities, and is another

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relatively new concept to the United States; one that Prince George's County notes as a provision in their wellness policy. This model has been attempted in places like Canada (Ontario Ministry of Education 2005), where the Ontario Ministry of Education has had a cross-curricular component of their physical education plan since at least 1998 (Ontario Ministry of Education 2005). School systems within Ontario must follow these procedures, with some municipalities offering their own cross-curricular ideas, such as the Region of Peel (Region of Peel n.d.). The Region of Peel has sample instructional plans for a number of grade levels, including other curriculum in art, language, math, science, social science, history, and geography (Region of Peel n.d.).

While the policy directions mentioned previously are great ways to increase physical activity in schools, the Mid-Atlantic region does not need to look far for policy success stories. In 2006, the School District of Philadelphia drafted and passed an all-encompassing wellness policy that set "guidelines for school meals, snacks, and drinks, physical activity, and nutrition education" (RWJF 2015). Some important components of the physical activity and physical education part of the policy includes requirements for: certified instructors; a fitness assessment for grades 3 to 12; half of the class time or more will require the students to be engaged in moderate-to-vigorous physical activity (MVPA); not allowing physical education classes to be withheld as punishment; not allowing physical activity to be used as punishment; time for recess for elementary school students; "Movement Breaks" after every 90 minutes of seated time; and for the standards to be in line with those at the local, state, and federal level (SDP 2011:7-8). The policy also has a provision that requests

teachers include physical activity in non-physical education classes; much like the provision Prince George's County has (SDP 2011:7; PGCBE 2011c). These provisions are very much in line with what authorities on physical activity and physical education, such as the NASPE (2012), recommend.

The previously mentioned aspects of Philadelphia's policy are notable, however, the most critical features of the policy relate to recognizing physical education as a core subject, including culturally competent and socially nurturing components throughout the class, and encouraging parent and community advocacy (SDP 2011). Recognizing physical education as a core subject is the second provision listed under the "Physical Education" section of the policy, where it calls for physical education to "[b]e recognized as an integral part of the core curriculum" (SDP 2011:7). Curriculum that is culturally competent and socially nurturing are also called for, including the acknowledgment that there are students who have cultural, gender, and physical-based differences and that the class curriculum and teacher's guidance should reflect that (SDP 2011). Finally, there is a provision that encourages parents and the community to be included and engaged in the discussion about the health of their children. By encouraging parents and the community to be involved in advocating for better physical education in schools, the school district is accepting that all stakeholders should be at the table. These provisions are what organizations such as the IOM (2013a) and NASPE (2012) highly encourage.

The "Student and Staff Wellness" policy is just one major step Philadelphia has taken to address the health of students, and it appears that policies like the "Student and Staff Wellness" policy are paying off



(SDP 2011). Most notably childhood and adolescent obesity in Philadelphia has gone down (RWJF 2015a,b). Based on a CDC report (Robbins et al. 2012) and reported by the Robert Wood Johnson Foundation (RWJF 2015a,b), Philadelphia has experienced a 4.7 percent decrease in obesity of children and adolescents in grades K through 12 from the 2006-2007 to 2009-2010 school years. More recent findings have shown a decline of 6.3 percent and 13.9 percent in childhood obesity and severe obesity, respectively, from the 2006-2007 to 2012-2013 school years (Robbins et al. 2015). In both cases, the decline in obesity and severe obesity was greatest for racial/ethnic minority students (Robbins et al. 2015; RWJF 2015a,b; Robbins et al. 2012), which suggests that these policies have been effective in addressing health disparities to some degree.

It should be noted again that Philadelphia's "Student and Staff Wellness" policy (SDP 2011) includes provisions related to nutrition as well, so it is not advised to assume that the reason for the decrease in obesity over the years is just because of the physical activity and physical education components (Robbins et al 2012). But the all-encompassing and synergistic approach that Philadelphia took is exactly what organizations such as the IOM (2013a), AAP (2006), and NASPE (2012) recommend to address childhood and adolescent obesity and other poor health outcomes. The decline in childhood obesity in Philadelphia, especially for racial/ethnic minority students, lends further support for policies like those Philadelphia have implemented. These policies have great implications for eliminating health disparities.

Another success story in the Mid-Atlantic is Washington, D.C. In 2010, the D.C. City Council passed the "Healthy Schools

Act", a school wellness policy that addresses nutrition, physical activity, physical education, and overall health and wellness in the District's school system (OSSE 2012). This policy does fairly well to: define how often children in D.C. public schools should be engaged in physical activity (60 minutes every day); promote physical activity before, during, and after school (including "integrating movement into classroom instruction"); and provide general guidelines in line with the NASPE (2012) recommendations for how much time should be dedicated to physical education classes from K-12 (OSSE 2012). While these are important provisions, the most novel piece of the "Healthy Schools Act" is the creation of a fund to reimburse and provide grants to schools for the nutrition, physical activity, physical education, and other health-related programs as outlined in the law (OSSE 2012). This is an innovative approach that addresses a concern school systems have related to physical education: not having enough funds and resources to finance physical activity and education programs (Slater et al. 2012).

Much like Philadelphia's "Student and Staff Wellness" policy, the District's "Healthy Schools Act" also appears to be paying off. While Philadelphia's "Student and Staff Wellness" policy led to a positive primary outcome, such as a reduction in childhood overweight and obesity (Robbins et al. 2015; RWJF 2015a,b; Robbins et al. 2012), D.C.'s "Healthy Schools Act" has led to a positive secondary outcome, specifically in relation to academic achievement or performance. Researchers at American University (Snelling, Irvine Belson, Watts, George, Van Dyke, Malloy, and Kalicki 2015) evaluated the relationship between overall compliance to the "Healthy Schools Act," including physical education, and math proficiency



Additionally, the researchers found that schools that complied with the “Healthy Schools Act” had higher math proficiency scores than schools that did not fully comply (Snelling et al. 2015).

scores. The study utilized data from D.C. public schools for the 2012-2013 academic year, which follows the 2010 adoption of D.C.’s “Healthy Schools Act” (Snelling et al. 2015). The researchers (Snelling et al. 2015) scored and grouped the schools based on their level of compliance with the “Healthy Schools Act,” and also grouped the schools into average number of minutes given for physical education. Snelling et al. (2015) found that schools with a higher number of minutes for physical education time generally had higher math proficiency scores than those with a lower number of minutes. However, these differences were not statistically significant, which means the differences in math proficiency scores between the groups of schools could be a result of chance rather than the result of differences in physical education time. The researchers and others note elsewhere that D.C. schools have had a difficult time implementing the increase in physical education (Stein 2015; Snelling and Belson 2013), which suggests that it is possible not enough time has passed since the implementation of the policy for a real difference to be found. Other research studies have found a relationship between physical education time and academic achievement (Simms, Bock, and Hackett 2014; Trost 2009), so this study’s finding does not completely negate what has generally been found about this relationship. Additionally, the researchers found that schools that complied with the “Healthy Schools Act” had higher math proficiency scores than schools that did not fully comply (Snelling et al. 2015). These differences were statistically significant, suggesting that the differences in math proficiency scores between the groups of schools are real and that differing levels of compliance to the wellness policy can explain the differences

between the groups. These findings suggest that while greater time given to physical education may amount to some increase in math proficiency scores, the real impact and difference in math proficiency score, or academic achievement, comes from greater compliance to the “Healthy Schools Act.”

Ultimately, Snelling et al. (2015) conclude their findings imply there may be a relationship between physical education and academic achievement, but the holistic approach to children’s health in the form of an all-encompassing wellness policy may be where real effects are encountered. These findings about the “Healthy Schools Act,” like that of Philadelphia’s “Student and Staff Wellness” policy, again supports the IOM’s (2013a), AAP’s (2006), and NASPE’s (2012) position that greater adoption and implementation of comprehensive wellness policies are key to seeing real impacts on primary and secondary health outcomes. This point does not take away from the need for greater physical activity and physical education time in schools, but does indicate that the physical activity and education components are just two pieces to the complicated puzzle of childhood and adolescent health.





How Can We Bring About Better Policies?

Better policies, like the policies implemented in Charleston County, Philadelphia, and Washington, D.C., can be brought about through four important players: researchers, policymakers, school administrators and teachers, and community members. First, researchers can provide the empirical evidence to support many newly developed programs and practices not yet widely adopted. More research is also needed regarding the impact of physical education, generally, and new directions and innovations in physical education that specifically impact health and academic achievement. More importantly, research is needed to address the mechanisms in which childhood physical activity and participation in physical education are linked to later adult health outcomes. Sound research making these connections can be used to support the creation of better policies that focus on the future health of children well into adulthood.

Second, policymakers play a major role in the process of drafting, implementing, and evaluating policy. Policymakers can do three things: stay informed with up-to-date research and best practices; adopt and implement the recommendations of authorities on physical activity and physical education; and use clear and unambiguous language when drafting policies and procedures. When it comes to physical activity and physical education policies, researchers have noted that policymakers are not as informed as they should be on the issues of physical activity, academic achievement, and health (Belansky et al. 2009). Policymakers, along with being informed on the issues, need to take seriously the recommendations

presented by the authorities on physical activity, physical education, and health. The recommendations presented by organizations like NASPE are clear and spell out exactly what children and adolescents should be doing and how much time should be devoted to physical activity and physical education in school. Too few states and county-level school systems include these specific recommendations, and overall, the language used in policies and procedures is ambiguous and not implemented in a way that benefits students and their health (Carlson et al. 2013; McCullick et al. 2012).

Third, school administrators and teachers can help bring about better policies (Wechsler et al. 2004). School administrators and teachers are in a unique position to see how policies with the best intentions may or may not work, and may have more opportunities to approach the school board policymakers and school district administrators. One researcher (Freer 2012:30) notes, “Many teachers find the dominant models of education to be outdated and restrictive.” Physical education may be viewed this way because of the past emphasis on “technical skills” related to particular sports rather than skills related to a healthy life now and into adulthood (Freer 2012). School administrators and teachers can engage with parents and the community about what is happening in their children’s schools related to physical activity and physical education, which is something Philadelphia’s wellness policy (SDP 2011) requires.

Finally, community members can help bring about better policies or halt the passage of undesirable legislation through involvement in the policymaking process (Belansky et al. 2009). Community members, concerned about their own children’s health, can stand up and engage policymakers about

More research is also needed regarding the impact of physical education, generally, and new directions and innovations in physical education that specifically impact health and academic achievement.



the policies that impact their children. Actions, such as petitions, writing to one's representative, and participating in school board meetings, can and do lead to policy changes (Jarrett 2013). These tactics were used with great effect in 2011 when Miami-Dade public schools were attempting to cut physical education classes in the school system's middle schools (Baker 2012). The proposed legislation failed because of a concerted effort by community members and parents to prevent the legislation from passing (Baker 2012). Other evidence for the success of community advocacy comes from community-based participatory research (CBPR). For example, a CBPR project in Quebec designed "to develop, implement, and evaluate the physical activity component of a school-based wellness policy" found that the approach utilized in the study could effectively serve as a model for how to develop wellness policies and other related school policies in the future (Hogan et al. 2014).

Having policies that reflect the research, are drafted and implemented properly, and are supported by the community can lead to major improvements in health outcomes of children and adolescents. Some of the potential health benefits of

better policies include: the childhood and adolescent obesity epidemic can be better addressed and halted, the increased trend of type 2 diabetes and poor cardiovascular outcomes of children can be reversed, and projected financial burden of childhood and adolescent obesity and its impact across the life course of an individual can decrease (Wechsler et al. 2004).

Conclusion

Schools are uniquely positioned to combat childhood and adolescent overweight and obesity and to influence the short and long term health of their pupils (Wechsler et al. 2004). By adopting evidence-based policies recommended by authorities on physical activity and physical education, the health outcomes of students can be improved. This is especially possible for racial/ethnic minority students and students from a low socioeconomic status background, which is evident from the findings in Philadelphia (Robbins et al. 2015; RWJF 2015a,b; Robbins et al. 2012). It is not yet clear how policies could impact the health of LGBT students, but a better school environment



brought on by better policies could promote better health outcomes for them as well (White, Oswalt, Wyatt, and Peterson 2010). Unfortunately, with temporal and budgetary constraints, as well as testing requirements, schools across the nation are not offering the level of physical activity and physical education required to live a healthy life, and health outcomes of children and adolescents are not improving. This problem is partially exacerbated by policy, but can also be fixed by policy. Examples of promising physical activity and physical education policies and programs, such as the policies adopted in Charleston County, Philadelphia, and Washington, D.C., are important steps in the right direction. Clear-cut policies that include the recommendations of authorities in physical activity and physical education are possible. States, according to some researchers and advocates (McCullick et al. 2012), need to do more to draft statewide policies that are explicit, as well as provide the resources necessary to achieve them. Until then, county-level school districts should take up this task with the support of parents and community members.

It is encouraging, however, that states, particularly Maryland and West Virginia, and cities, such as Philadelphia and Washington, D.C., in the Mid-Atlantic region, have been moving in the right direction to strengthen physical activity and physical education policies. Prince George's County has also shown promise by taking Maryland policies a step forward. While it is encouraging, there is more work that needs to be done to build on the policies that have promoted better health. More attention needs to be given to nutrition policy, as well, and when possible, policies that include both physical activity and nutrition components should be produced to create greater synergy in schools to tackle obesity and other health problems that track well into adulthood. It is evident in Philadelphia and Washington, D.C. that these comprehensive policies, when implemented correctly and complied with fully, can lead to better primary and secondary health outcomes in children. It will take greater research efforts, the political will of policymakers, and community involvement to get these policies moving in the right direction.

This problem is partially exacerbated by policy, but can also be fixed by policy.



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Appendices

Appendix A: National Cancer Institute’s C.L.A.S.S. System Policy Areas and Policy Scores

Appendix B: National Cancer Institute’s C.L.A.S.S. System Scores for the Mid-Atlantic States

Appendix C: Maryland State Physical Education Curriculum Standards (MD Code Ann., Edu. § 13A.04.13.01)

Appendix D: PGCPs Administrative Procedure 0116 – “Wellness, Nutrition, and Physical Activity”

Appendix E: PGCPs Administrative Procedure 6130 – “Guidelines for Elementary Playground and Indoor Recess Supervision Grades Pre-K – 6 Physical Education for Grades 6-12”

APPENDIX A – National Cancer Institute’s C.L.A.S.S. System Policy Areas and Policy Scores

Policy Areas and Policy Scores (NCI 2014a)

<p>1. Physical education time requirements (0-5):</p> <ul style="list-style-type: none"> a. 0 = no codified law b. 1 = recommend PE only c. 2 = require < 60 min/week or time unspecified (elementary school); require < 90 min/week or time unspecified (middle school and high school) d. 3 = require 60-89 min/week (elementary school); 90-149 min/week (middle school and high school) e. 4 = require 90-149 min/week
<p>2. Physical activity time requirements (0-5):</p> <ul style="list-style-type: none"> a. 0 = no codified law b. 1 = recommend PA only c. 2 = require < 60 min/week or time unspecified (elementary school); require < 90 min/week or time unspecified (middle school and high school) d. 3 = requires 60-89 min/week (elementary school); 90-149 min/week (middle school and high school) e. 4 = requires 90-149 min/week (elementary school); 150-224 min/week (middle school and high school) f. 5 = law require recommended standards; requires ≥ 150 min/week (elementary school); ≥ 225 min/week (middle school and high school)
<p>3. Moderate-to-vigorous activity (MVPA; 0-4):</p> <ul style="list-style-type: none"> a. 0 = no codified law b. 1 = recommends MVPA only c. 2 = requires MVPA <50% of PE class, or percentage unspecified d. 3 = requires MVPA ≥50% of PE class and PE is <150 min/week (elementary school) and < 225-150 min/week (middle school and high school) e. 4 = requires MVPA ≥50% of PE class and PE is at least 150 min/week (elementary school) and 225-150 min/week (middle school and high school)
<p>4. Staffing requirements (0-4):</p> <ul style="list-style-type: none"> a. 0 = no requirement b. 1 = only recommend qualifications c. 2 = require PE certification and less than college minor in PE d. 3 = require PE certification and college minor in PE e. 4 = require recommended standard; PE certification and college major in PE
<p>5. Curriculum standards (0-4):</p> <ul style="list-style-type: none"> a. 0 = no requirement b. 1 = only recommend curriculum standards c. 2 = required, but only by framework reference d. 3 = required for some areas e. 4 = law requires recommended standards; standard for all PE areas
<p>6. Physical education proficiency (0-4):</p> <ul style="list-style-type: none"> a. 0 = no codified law b. 1 = recommends PE proficiency only c. 2 = requires PE proficiency with unspecified mandate d. 3 = requires PE proficiency with specific objectives e. 4 = requires PE proficiency with specific objectives and diagnostic components
<p>7. Assessment of health-related fitness (0-4):</p> <ul style="list-style-type: none"> a. 0 = no requirement b. 1 = recommended c. 2 = at least once d. 3 = biennial test e. 4 = law requires recommended standards; annual test
<p>8. Recess time (0-4):</p> <ul style="list-style-type: none"> a. 0 = no requirement b. 1 = recommended c. 2 = <20 minutes d. 3 = 20-30 minutes e. 4 = law requires recommended standards; >30 minutes
<p>9. Joint use agreement provisions (0-4):</p> <ul style="list-style-type: none"> a. 0 = no codified law b. 1 = recommends joint use c. 2 = requires joint use but not written agreement d. 3 = requires joint use agreement e. 4 = requires written joint use agreement with specific provisions

APPENDIX B – National Cancer Institute’s C.L.A.S.S. System Scores for the Mid-Atlantic States

Policy Area	DC			MD			VA			DE			PA			WV		
School Level ²	E	M	H	E	M	H	E	M	H	E	M	H	E	M	H	E	M	H
Physical Education Time Requirements (0-5)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	2	2
Physical Activity Time Requirements (0-5)	2	2	1	0	0	0	2	2	2	1	1	1	1	1	1	2	2	2
Moderate to Vigorous Activity (MVPA; 0-4)	2	2	2	2	2	2	0	0	0	0	0	0	1	1	1	1	0	0
Staffing Requirements (0-4)	4	4	4	4	4	4	4	4	4	3	3	3	2	2	2	0	2	2
Curriculum Standards (0-4)	2	2	2	4	4	4	2	2	2	2	2	2	4	4	4	3	4	4
Physical Education Proficiency (0-4)	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4
Assessment of Health-related Fitness (0-4)	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	4	4	4
Recess Time (0-4)	1	N/A	N/A	0	N/A	N/A	2	N/A	N/A	0	N/A	N/A	0	N/A	N/A	1	N/A	N/A
Joint Use Agreement Provisions (0-4)	1	1	1	3	3	3	0	0	0	1	1	1	1	1	1	1	1	1
Weighted Summary Score ³	21			24			21			21			21			23.5		

Source: NCI n.d.,a,b,c,d,e,f

² E = Elementary School; M = Middle School; H = High School

³ Calculated by adding “across grade levels for: Time Requirements, Staffing Requirements, Curriculum Requirements, and Assessment of Health-related Fitness. The score is weighted to count Time Requirements and Staffing Requirement at their full value and scores in the other areas at their half values” (NCI n.d.a,b,c,d,e,f).



APPENDIX C – Maryland State Physical Education Curriculum Standards (MD Code Ann., Edu. § 13A.04.13.01)

Skillfulness	Students will demonstrate the ability to enhance their performance of a variety of physical skills by developing fundamental movement skills, creating original skill combinations, combining skills effectively in skill themes, and applying skills.
Biomechanical Principles	Students will demonstrate an ability to use the principles of biomechanics to generate and control force to improve their movement effectiveness and safety.
Motor Learning Principles	Students will demonstrate the ability to use motor skill principles to learn and develop proficiency through frequent practice opportunities in which skills are repeatedly performed correctly in a variety of situations.
Exercise Physiology	Students will demonstrate the ability to use scientific principles to design and participate in a regular, moderate to vigorous physical activity program that contributes to personal health and enhances cognitive and physical performance on a variety of academic, recreational, and life tasks.
Physical Activity	Students will demonstrate the ability to use the principles of exercise physiology, social psychology, and biomechanics to design and adhere to a regular, personalized, purposeful program of physical activity consistent with their health, performance, and fitness goals in order to gain health and cognitive/academic benefits.
Social Psychological Principles	Students will demonstrate the ability to use skills essential for developing self-efficacy, fostering a sense of community, and working effectively with others in physical activity settings.

APPENDIX D – PGCPs Administrative Procedure 0116 – “Wellness, Nutrition, and Physical Activity”



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WELLNESS, NUTRITION, AND PHYSICAL ACTIVITY

0116

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- I. **PURPOSE:** To provide procedures to ensure that students receive consistent information and education regarding proper nutrition increased physical activity, and the benefits of healthy lifestyle choices throughout the school, classroom, and cafeteria.
- II. **POLICY:** Prince George’s County Public Schools is committed to healthy schools and lifestyles, providing a total learning environment that enhances the development of lifelong healthy habits in wellness, nutrition, and regular physical activity. (Board Policy 0116)
- III. **DEFINITIONS:**
 - A. Comprehensive Health Education – A planned sequential curriculum that addresses the physical, emotional, and social dimensions of health; develops health knowledge, attitudes, and skills; and is tailored to the developmental level of children.
 - B. Coordinated School Health Program – A Coordinated School Health Program consists of eight interactive components. The components are Health Education, Physical Education, Health Services, Nutrition Services, Mental Health Services, Healthy School Environment, Health Promotion for Staff, and Family/Community Involvement.
 - C. Curriculum – The prescribed programs and courses which state what students should know and be able to do, how they will meet learning objectives, and how they will be assessed.
 - D. Foods of Minimal Nutritional Value (FMNV) – Specified foods identified by the secretary of the USDA: soda water (carbonated beverage); fruit drinks and water ices (with less than 10 percent fruit or fruit juices); chewing gum; jellies, marshmallow, licorice, spun candy, hard candies, and candy-coated popcorn.
 - E. Healthful and Safe Environment – A physically and psychologically safe school climate with a positive culture that is designed to promote the maximum health and safety of all students.
 - F. Nutrition Education – A component of the comprehensive school health education program which teaches knowledge and skills related to nutrition and physical activity.
 - G. Obesity – Body Mass Index (BMI) in excess of 30 percent acceptable body weight.



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- H. Physical Education – A planned sequential curriculum that teaches skills, knowledge, and attitudes which are needed to establish and lead a physically active life.
 - I. Physical Activity – Any bodily movement produced by skeletal muscles that results in an expenditure of energy.
 - J. School Health Council – A group of individuals who represent segments of the community and the eight components of the coordinated school health program model. The local school health council is mandated by Maryland law to provide advice and recommendations to the School Superintendent and County Health Officer in matters related to the health, safety, and wellness of students and staff.
 - K. School Health Services – Services provided for students to appraise, protect, and promote health. These services include, but are not limited to, prevention and control of communicable disease; provision of emergency care for illness and injury; administration of medication; and the evaluation of the school facility/environment for safe and sanitary conditions. Health services are provided by professional nurses.
 - L. Recess – Regularly scheduled periods within the school day for physical activity and play.
 - M. USDA - United States Department of Agriculture.
 - N. Wellness – An intentional choice of lifestyle characterized by personal responsibility, balance, and maximum personal enhancement which leads to the goal of attaining the state of physical, mental, social, intellectual, and spiritual well-being. It is a process of being aware of and altering unhealthy behaviors to those which will bring about a more healthful existence. Wellness is not just the absence of disease.
- IV. **BACKGROUND:** To help combat childhood obesity, Congress passed a law requiring each Local Education Agency (LEA) participating in USDA's School Meal's Programs to establish a local wellness policy. In response, the Board of Education of Prince George's County approved Policy No. 0116, Wellness, Nutrition, and Physical Activity. The Board of Education directs the Superintendent and appointed designees to ensure students receive consistent information and education regarding proper nutrition, increased physical activity, and the benefits of healthy lifestyle choices throughout the school, classroom, and cafeteria. The Board of Education



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will ensure the Board Policy and Administrative Procedure are widely distributed and that an annual mechanism for evaluation is in place. Overweight children and the growing risk of obesity are serious concerns. Time allocated nationwide for physical education has been reduced. This has contributed to a significant decrease in the physical fitness and an increase in overweight and obesity in our youth. It also has contributed to an increase in Type 2 Diabetes in school age youth, a disease that previously was found primarily in older adults. The USDA believes that schools should take a leadership role in helping students learn to make healthy lifestyle choices.

V. PROCEDURES:

A. Physical Activity

1. The Director of Curriculum and Instruction, in conjunction with Area Assistant Superintendents, will ensure that a comprehensive, sequential physical education program will be taught at each school, and that the time allotted for physical education is consistent with current research, and national and state standards. -
2. The Director of the Department of Curriculum and Instruction, in conjunction with the Area Assistant Superintendents shall ensure physical activity is integrated across curricula and throughout the school day, and that teachers are trained to accomplish this goal.
3. The Supervisor of Teacher staffing and Certification of Human Resources, in conjunction with the Supervisors of Physical Education and Adapted Physical education, will ensure that physical education and adapted physical education teachers are highly qualified.
4. Principals shall ensure physical education classes are taught in a separate space, preferably a gymnasium.
5. The Area Assistant Superintendents in conjunction with each elementary principal will ensure that all elementary children will have multiple opportunities daily for physical activity lasting 15 minutes or more, in addition to a daily recess period, preferably before lunch.



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6. Principals shall ensure that physical activity facilities on school grounds are safe and that the school provides a physical and social environment that encourages safe and enjoyable activity for all students, including offering opportunities for non competitive physical activity.
 7. The Supervisors of Physical Education and Health Education shall collaborate in providing a bank of physical activity resources for sharing information with families and community to positively impact health.
- B. Nutrition Education
1. The Director of the Department of Curriculum and Instruction, in conjunction with Area Assistant Superintendents shall ensure that Comprehensive Health Education, with its mandatory nutrition education component, will be taught PreK-8 and as part of the Health Education requirement for graduation.
 2. The Director of the Department of Curriculum and Instruction, in conjunction with the Area Assistant Superintendents shall ensure that nutrition education will be integrated across curricula and throughout the school day.
 3. To ensure the effective delivery of an accurate nutrition education program, the Chief Academic Officer will ensure that the school-based staff responsible for nutrition education are highly qualified and given the opportunity to participate regularly in professional development activities.
 4. The Director of Food and Nutrition Services shall provide guidelines to ensure that the school cafeteria serves as an opportunity for nutrition education.
 5. The Food and Nutrition Services Dietitian and the Supervisors of Health Services, Health Education, and Family and Consumer Science shall collaborate in providing a bank of nutrition education resources for sharing information with families and community that encourage them to teach their children about health and nutrition and to provide nutritious meals for their families that will positively impact health.

APPENDIX D – Cont'd



ADMINISTRATIVE PROCEDURE

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6. Principals will allocate adequate time for students to participate in the school breakfast program and shall encourage all students to start each day with a healthy meal.
- C. Nutrition Standards
1. Principals will ensure the eating environment will be pleasant and conducive to appropriate food consumption and socialization.
 2. Principals will ensure that students have a minimum of 30 minutes for lunch with at least 20 minutes to consume meals.
 3. The Director of Food and Nutrition Services will ensure that meals will contain less than 30 percent calories from total fat, as a weekly average.
 4. The Director of Food and Nutrition Services will ensure that meals will contain 10 percent or less, calories from saturated fat, as a weekly average.
 5. The Director of Food and Nutrition Services will ensure that breakfast will provide at least one-fourth of the daily Recommended Dietary Allowances (RDA) and lunch will provide one-third of the RDA for protein, iron, calcium, and vitamins A and C.
 6. The Director of Food and Nutrition Services will ensure that meals will meet State and Federal Guidelines and commonly with the dietary guidelines for Americans.
 7. The Director of Food and Nutrition Services and staff are responsible for deciding what foods to serve and how they are prepared in Prince Georges County Public Schools, ensuring high quality.
 8. The Director of Food and Nutrition Services in conjunction with the Alliance for a Healthier Generation's Healthy School Program will provide necessary adjustments to menus so that schools can meet recognition criteria.

Nutrition standards will be met for specific age/grade groupings when averaged over a school week. A school week is defined as a minimum of three consecutive days and a maximum of seven consecutive days.



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- D. Guidelines for Food and Beverages Sold in Vending Machines, Snack Bars, School Stores, and Concession Stands on School Campuses
1. Food sales by school-related groups and the use of vending machines are in compliance with state and federal law and do not impair student participation in the county's food and nutrition services program.
 2. School vending machines will be on a timer and turned off from 12:01 a.m. until the end of the last lunch period.
 3. School vending machines, snack bars, stores, and concession stands meet the same standards as the standards for school meals in the previous section of this administrative procedure.
 4. Schools will ensure a Certified Food Handler is in attendance at all functions where potentially hazardous foods are sold.
 5. Principals will be responsible to monitor, control, and educate school groups on the merits of offering food and beverages that are predominately sound nutritional choices.
- E. Guidelines for Food and Beverages Sold as Part of School-Sponsored Fundraising Activities
1. Fundraisers of foods will meet the Alliance for a Healthier Generation's Healthy School Program guidelines.
 2. All foods served in Prince George's County Public Schools by entities other than Food and Nutrition Services are of high quality and meet all applicable safety, sanitation, and health laws and regulations.
 3. Food from licensed commercial vendors and sources is sold.
 4. Food will not be sold until after the end of the last lunch period.
 5. Emphasis and promotion of fundraisers that have a physical activity component is strongly encouraged.
 6. Principals and their site-based school wellness councils/teams will monitor fundraisers to ensure compliance with the Wellness,



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Nutrition, and Physical Activity procedure and the Alliance for a Healthier Generation's Healthy School Program.

F. Guidelines for Food and Beverages Served at Parties, Celebrations, and Meetings

1. To reduce the risk of food borne illness and allergic reactions, food served in schools must be from licensed commercial vendors and sources.
2. Use of pre- packaged foods that meet policy standards will be allowed such as celery or carrot sticks, raisins and packaged sliced fruit.

G. Other School-Based Activities

1. The Office of Employee Wellness will provide information on opportunities for staff to engage in physical fitness and wellness activities.
2. The Director of School Leadership will ensure comprehensive annual training of principals in all curricular areas addressed by this administrative procedure, preferably during the annual summer retreat.
3. Principals will ensure that school-based activities are consistent with Prince George's County Wellness, Nutrition, and Physical Activity Policy and Administrative Procedure including school events, field trips, dances, and assemblies.
4. Use of food as a reward or as a punishment is prohibited.
5. Use of Physical Education, Physical Activity, and/or Recess as a reward or punishment is prohibited.
6. The Office of Health Services will Support the health of all students by providing health screenings and hosting health clinics.
7. The staff in the Office of Employee Wellness will support the health of staff by providing health screening and clinics.
8. Principals will ensure opportunities for parents, teachers, administrators, students, and community partners to plan, implement, and improve health education, physical activity, and



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wellness in their schools.

9. The School Health Council and Food and Nutrition Services will work with the Office of Communications to promote the Wellness, Nutrition, and Physical Activity Policy to district staff, students, parents, and the public.

H. Evaluation

1. The Superintendent or Deputy Superintendent will provide management and oversight of the implementation of the Wellness Policy and the Healthy Schools Program with support from the Wellness Work Group of the Prince George's County Health Council. The Office of Research and Evaluation in conjunction with the Wellness Work group and the Deputy Superintendent will design an evaluation model to monitor the implementation and effectiveness of the Board Policy and Administrative Procedure.
2. The Superintendent or Deputy Superintendent in conjunction with the Wellness Work Group will implement the evaluation model and review annually.
3. The Superintendent or Deputy Superintendent will provide an annual report on the progress of the implementation of this policy and procedure to be presented to the Board on an annual basis
4. The school system will partner with community organizations and governmental agencies serving children to support programming that enhances student and family wellness.

VI. **RELATED PROCEDURES AND REGULATIONS:** Administrative Procedure 3542.44; Administrative Procedure 6130, Guidelines for Elementary Playground and Indoor Recess Supervision Grades Pre-K – 5; The Access and Sale of Competitive Foods and Foods of Minimal Nutritional Value in Schools Outside of the Department of Food and Nutrition Services Program; Bulletin B-13-01, Disciplinary Action and Food Rewards at Meal Times; Public Law 108-265, Section 204, June 30, 2004; and Child Nutrition and Women and Infant Care (WIC) Reauthorization Act of 2004.

VII. **MAINTENANCE AND UPDATE OF THESE PROCEDURES:** These procedures originate with the Office of the Superintendent, and will be reviewed annually and updated as needed.

APPENDIX D – Cont'd



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VIII. **CANCELLATIONS AND SUPERSEDURES:** This Administrative Procedure cancels and supersedes Administrative Procedure 0116, dated August 21, 2006.

IX. **EFFECTIVE DATE:** April 1, 2011.

Approved by:
William R. Hite
Superintendent of Schools

Distribution: Lists 1, 2, 3, 4, 5, 6, 10, and 11

APPENDIX E – PGCPs Administrative Procedure 6130 – “Guidelines for Elementary Playground and Indoor Recess Supervision Grades Pre-K – 6 Physical Education for Grades 6-12”



ADMINISTRATIVE PROCEDURE

GUIDELINES FOR ELEMENTARY PLAYGROUND AND INDOOR RECESS SUPERVISION GRADES PRE-K – 6 PHYSICAL EDUCATION FOR GRADES 6 –12

6130

Procedure No.

July 15, 2011

Date

- I. **PURPOSE:** To provide guidelines for indoor and outdoor recess and playground activities in all elementary schools and physical education for grades 6-12.
- II. **BACKGROUND:** Elementary school principals and classrooms have the obligation to provide the proper supervision of students during regularly scheduled recess and playground activities during the school day. This procedure sets forth the rules and regulations concerning such supervision. Elementary schools containing grade six follow the middle school schedule for the sixth grade students. There is no recess in middle school for grades 6-8 and the elementary school is not required to offer recess in the schedule.
- III. **DEFINITION:** Qualified Adult – a classroom teacher, lunch/recess monitor, long-term substitute, or regularly scheduled aide (exclusive of Head Start and O:MA aides) or a non-classroom based teacher.
- IV. **PROCEDURES:**
 - A. Outdoor Recess and Playground Activities
 1. General Guidelines for Elementary Recess:
 - a. Recess should be provided each day in every elementary student's schedule.
 - b. Recess should not be based on whether the student has or has not had physical education during a particular day.
 - c. Each school should be able to work out its own schedule as to when the recess time will be provided and for how long the recess time will be scheduled. It is recommended in accordance with the National Association for Sport and Physical Education that recess not be held before or after Physical Education. Recess can be scheduled 30 minutes after lunch or before lunch.
 - d. Recess should be given for no less than 15 minutes per day and for no more than 30 minutes per day.
 - e. Recess must be supervised by qualified adults as defined in this procedure.



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GUIDELINES FOR ELEMENTARY PLAYGROUND
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- f. Weather permitting, the principal should schedule recess outside and designate the areas to be utilized.
 - g. Recess should be considered for an inside activity if the following conditions exist:
 - (1) Temperature with or without a wind chill factor is below 32 degrees.
 - (2) Definite rain, sleet or snow with accumulation.
 - (3) Soggy, wet conditions.
 - (4) Heat temperatures that fall within the categories for a Code Orange or higher designation. A chart of temperatures is attached.
 - h. A system of supervision must be established to cover any student not participating in recess.
 - i. Each school must make certain that qualified adults are fully knowledgeable of recess policies and practices.
2. Guidelines for Proper Supervision:
- a. At the beginning of each school year and again after February 1st but in no event later than March 31st of each year, the principal of each elementary school shall review with staff proper methods of supervision of playground activities, expectations for student behavior and, in conjunction with the physical education, the proper use of equipment. At these meetings the principal shall review with staff a list of all activities specifically prohibited on the playground including, but not limited to any tackle activities or games. Each teacher shall then be responsible for reviewing with students expectations for proper playground behavior and use of equipment.
 - b. Principal's Responsibilities:
 - (1) The principal shall be responsible for developing a schedule for playground supervision using the following guidelines for each area to be supervised:
 - (a) The principal, being knowledgeable of the student and the playground area and



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configuration, is given discretion as to whether there shall be:

- (i) one qualified adult for every class, or
 - (ii) two qualified adults for every three classes on the playground.
- (b) In each major or distinct area of the playground the qualified adult/class ratio shall be maintained.
- (c) Except in instances where the principal determines that there are no viable alternatives, a short-term substitute or para-professional should not be allowed to supervise playground activities alone. In such event, where a short-term substitute or para-professional is used, they must be accompanied by a staff member. The principal shall fully brief the short-term substitute teacher, or para-professional on the procedures to be followed.
- (2) In addition to the twice yearly formalized instructions to staff on proper supervision, expectations for student behavior and use of equipment, the principal shall:
- (a) Prior to the school year and from time to time thereafter if deemed necessary, provide each qualified adult with a written list of all activities specifically prohibited on the playground including, but not limited to dodge ball, football or any tackle activities or games.
 - (b) Personally observe, at least several times a month, the manner of supervision for each recess period.

c. Qualified Adult's Responsibilities:

In addition to the twice-yearly formalized classroom instruction on behavior and use of equipment, the qualified adult, shall:



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- (1) Continuously monitor and supervise the students by walking around in the area to be supervised. When more than one is on duty, each should assume supervision of separate sections of the playground.
- (2) Prevent those activities specifically enumerated by the principal as being prohibited playground activities.
- (3) Stop any activities which, in the judgment of the qualified adult, can lead to an accident.
- (4) Use the walkie-talkie as a part of safety and monitoring for quick access to the office or nurse's office for emergencies.
- (5) Qualified adults must not participate in playground activities, e.g. kick ball, pushing students on a swing, which will distract them from their primary duty of supervising.

d. Accident Procedure:

In the event that an accident occurs, such that the attention of the qualified adults on duty are absorbed by the accident, all playground activities must stop and the remaining students should be lined up while the student(s) involved in the accident is (are) attended to. Staff should complete an incident accident report using the Report of Student Injury form. Refer to Administrative Procedure 2805.2. Principal will provide access to training for all staff as needed.

B. Indoor Recess

1. A minimum of one qualified adult per room, leaving no student unsupervised at any time.
2. Students should be assigned to their regular classroom and the classrooms involved should be juxtaposed.
3. Quiet games and activities are to be provided. Ball playing and other vigorous activities are not permitted.
4. Principals and staffs should develop a plan of appropriate activities to be conducted during indoor recess.



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C. Special Note

At the beginning of each year, the principal and the special education teacher of self-contained classes shall jointly develop recess and playground activity procedures involving the special education students.

V. **RELATED PROCEDURES:** None.

VI. **CANCELLATIONS AND SUPERSEDURES:** This Administrative Procedure cancels and supersedes Administrative Procedure 6130, dated February 1, 2009.

VII. **MAINTENANCE AND UPDATE OF THESE PROCEDURES:** These procedures originate with the Division of Academics. Regular updating will be accomplished as changes are required.

VIII. **EFFECTIVE DATE:** July 15, 2011.

Approved by:
William R. Hite
Superintendent of Schools

Attachment: Chart for Heat Designations

Distribution: Lists 1, 2, 3, 4, 5, 6, 10, and 11

NOTES

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Research reported in this publication was supported by the National Institute on Minority Health and Health Disparities of the National Institutes of Health under award number 5U54MD00860802.

The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.