

Children's Physical Activity Mobilization Plan

Vision: Create sustainable and targeted community initiatives that increase the amount and enjoyment of daily physical activity for Madison youth and families.

Goals: By 2023

- Increase the physical activity levels of youth, as measured by the percent that get the recommended 60 minutes of physical activity per day.
- Decrease gender, race, and income disparities related to physical activity levels and barriers to physical activity.

I Introduction

In December 2012, the United Way of Dane County, with support from the Irwin A. and Robert D. Goodman Foundation, convened the Delegation to Increase Children's Physical Activity to create a common community vision and ten-year plan that will result in a measurable increase in the number of Madison children, youth and families who make engagement in physical activity a part of their daily routine.

Our focus on children and youth is intentional and goes beyond physical fitness and athletics. We want to lay the foundation in childhood for being physically active throughout life. Instilling the habit of physical activity as part of their daily routine while young leads to lifelong habits that promote health in adulthood.

Resource-rich but Inequities Exist

Madison is recognized as a city with numerous opportunities for physical activity. The city has ranked in the top five on national lists for both walkability and bikeability^{1,2} and its robust system of parks and recreation facilities ranks Madison #1 among U.S. cities in parks per capita.³ A

"Active Living"

A way of life in which people are active in their daily routines.

Robert Wood Johnson Foundation Active Living Research

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The Surgeon General's active living prevention strategy includes the following recommendations:

- Encourage community design and development that supports physical activity
- Promote and strengthen school and early learning policies and programs that increase physical activity
- 3. Facilitate access to safe, accessible, and affordable places for physical activity
- 4. Assess physical activity levels and provide education, counseling, and referrals

National Prevention Strategy: Active Living,

³ Briski, Kevin. Superintendent, Madison Parks. Presentation, March 2013





¹"Most Bikeable Cities." Walk Score. Web. 10 Sept. 2012. http://www.walkscore.com/bike.

²Madison, Wis., Named 'most Walkable'" USA Today. 11 Mar. 2007. Web. 10 Sept. 2012 http://www.usatoday.com/news/nation/2007-03-11-madison_N.htm>.

higher percentage of Dane County adults engage in some leisure time physical activity than in all but one other Wisconsin county.⁴

Numerous organizations are working to increase physical activity for children of all ages, abilities, and interests. However, despite the many and varied resources for recreation and physical activity, local research collected and examined for this project reveals that activity levels decrease as children age,⁵ and barriers prevent many Madison youth from getting enough physical activity, leading to unacceptable disparities.

The Focus of this Delegation

Diet and physical activity are building blocks of healthy living. The food side of the equation is being addressed in our community through several other community initiatives, including the Healthy Food for All Children Community Plan and the Childhood Obesity Prevention Collaborative, so was not addressed by this Delegation.

The Delegation set out to tap the community wisdom, examine the research, and consider Madison's current environment in order to answer three key questions:

- 1. What are the barriers to youth being active?
- 2. Which youth are most impacted by existing barriers (in terms of gender, race, income and where they live)?
- 3. How can we effectively address the barriers that inhibit physical activity?

Our focus is on increasing physical activity in children and youth, from early childhood through age 18. Because research tells us that children of active parents are six times more likely to be physically active themselves⁶, we also address this topic in the context of families. Since children spend on average seven hours each weekday in school, a discussion of the important role of public schools in addressing this problem is included. Finally, we have chosen to focus on programmatic and environmental strategies to increase children's physical activity, since these are areas that are most likely to be actionable within our scope of influence. While our recommendations respond directly to what we found in Madison, the themes and strategies are applicable beyond the city limits.

⁶ Moore, L.L., Et Al,1991. Influence of parents' physical activity levels on activity levels of young children. Pediatrics, 118(2), 215-



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⁴ Liebhart, J.L., Wegner, M.V., & Pesik, M.J. (2008). "Obesity, Nutrition, and Physical Activity in Wisconsin" (No. P-00008 (12/08)). Madison, WI: Wisconsin Department of Health Services, Division of Public Health and Wisconsin Partnership for Activity and Nutrition.

⁵ CDC, "Youth Risk Behavior Surveillance – United States," 2009.

Why It Matters

- Children's physical activity habits predict their behavior for the rest of their lives⁷
- Physical activity positively increases academic performance and classroom behavior⁸
- Physical activity is correlated with improved mood, reduced anxiety and greater sense of well being9
- Regular physical activity can increase life-long health and decrease risk of obesity and a myriad of obesity-related diseases9
- Physical activity strengthens bones and muscles, and improves endurance⁹
- Inactive children are more likely to earn less and spend more on healthcare as adults¹⁰

Ш The National Problem of Inactivity

National Trends

While the importance of physical activity is well established, the reality is that American adults and youth have become less active over the past two generations, contributing to the dramatic increase in obesity in the United States. The U.S. Department of Health and Human Services' Physical Activity Guidelines for Americans¹¹ recommends that children and adolescents should get 60 minutes or more of physical activity daily.

- *Aerobic* physical activity of moderate or high intensity should be the primary focus and occur every day. Vigorous-intensity physical activity should occur at least 3 days a week.
- Muscle-strengthening physical activities should be included at least 3 days a week.
- Bone-strengthening physical activities should be included at least 3 days of the week.

The Centers for Disease Control's (CDC) 2011 National Youth Risk Behavior Survey found that

The rise of obesity among children

Over the past 30 years, the prevalence of obesity has doubled for children ages 6-11 and more than tripled in adolescents ages 12-19. Now, an alarming 18 out of every 100 children and adolescents are obese. Approximately 17% (or 12.5 million) of children and adolescents aged 2-19 years and more than one-third of U.S. adults (35.7%) are obese

- **Overweight** is defined as having excess body weight for a particular height from fat, muscle, bone, water, or a combination of these factors. **Obesity** is defined as having excess body fat.
- ▲ A child's weight status is determined using an age- and sex-specific percentile for Body Mass Index (BMI). Overweight = BMI at or above the 85th percentile and lower than the 95th percentile; obese = BMI at or above the 95th percentile for children of the same age and sex.

From the www.cdc.gov website

¹¹ U.S. Department of Health and Human Services – www.health.gov/paguidelines





⁷ Telama, R., and Et Al. "Physical Activity from Childhood to Adulthood: A 21-year Tracking Study." Am J Prev Med 3rd ser. April.28 (2005): 267-73. <u>Http://www.ncbi.nlm.nih.gov/pubmed/15766614</u> Web.

Trost, Stewart G., Ph.D. Physical Education, Physical Activity and Academic Performance. Issue brief Summer 2009. Robert Wood Johnson Foundation Active Living Research, Http://w ww.activelivingresearch.org Web. Report

U.S. Department of Health and Human Services. Physical activity guidelines advisory committee report. Washington, DC: U.S. Department of Health and Human Services; 2008

NIKE, Inc. Designed to Move A Physical Activity Action Agenda. NIKE, 2012. Print.

only 29% of high school students participated in the recommended 60 minutes per day of moderate to vigorous activity in each of the 7 days prior to the survey, and 14% didn't get the recommended 60 minutes in *any* of the previous 7 days.¹²

Driving Factors

The complex societal factors that have contributed to physical inactivity over the past 30 years are well-documented in national reports. Activity levels have declined steadily over time. The explosion of technology has led to more hours spent sitting in front of a screen. Community design and parental safety concerns have contributed to fewer youth walking or biking to school and other destinations. Parental safety concerns have also led to less unsupervised outdoor play. Other demands on parents, youth, and children also make it hard to find time for exercise or play. Ultimately, for most people, getting 60 minutes of physical activity each day is not easy to accomplish.

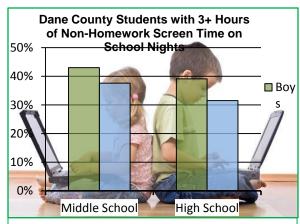


Figure 1: Middle school boys are most likely to have 3+ hours of non-homework screen

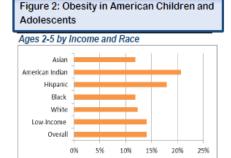
Disparities Exist

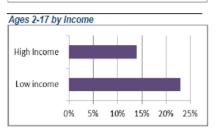
The numbers that reflect racial disparities in physical activity are nuanced. According to an Active Living Research review of national data, self-reported physical activity is lower among Hispanic and African American youth compared to White youth, but this difference is not present when objective data gathering techniques, such as accelerometers, were used. It could be that non-White youth are more likely to underreport their levels of physical activity, perhaps because they are less likely to engage in structured physical activity such as sport teams than their White peers.

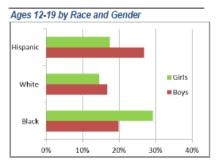
In Wisconsin, White adults are significantly more likely to engage in both moderate and vigorous physical activity than African American adults according to the Wisconsin Physical Activity and Nutrition Report.¹³

The reality is that children from lower income families and certain racial and ethnic groups are at even greater risk of being overweight or obese raises serious concerns. Figure 2 shows the percent of youth in different population groups that are obese. At young ages, Hispanic and American Indian youth have the highest prevalence of obesity. In adolescence, African American girls and Hispanic boys are most

likely to be obese.







Sources: CDC; Active Living Research

¹³ Wisconsin Physical Activity and Nutrition Report



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of Dane County

http://www.health.gov/paguidelines/midcourse/pag-mid-course-report-final.pdf

A significant gender disparity in physical activity also exists. Men are more likely to engage in vigorous and moderate physical activity than women (35% vs. 26% for both levels of intensity). African American high school girls in particular are significantly more likely to be inactive compared to both White girls and all boys. The Dane County Youth Assessment analysis found that a wide disparity also exists between African American 7th-12th grade females and African American male counterparts.

Solutions

Fortunately a breadth of research by federal government agencies and private research foundations has increased our understanding of the contributors to inactivity and obesity, and identified evidence-based strategies to help people become more physically active. We know what works, and there is national evidence that strategies put in place over the past few years are starting to have a positive effect.

The Robert Wood Johnson Foundation's Active Living Research initiative has identified four key areas of influence:

- Transportation: Initiatives and infrastructure that encourage walking, biking, and use of public transit can go a long way in increasing physical activity. People who live in neighborhoods with sidewalks on most streets are 47% more likely to be active for at least 30 minutes per day and public transit users take 30% more steps per day than people who use cars for transportation.
- Parks and (public) recreation: Creating safe parks with activity-encouraging infrastructure such as trails, lights, basketball courts, sport fields, and playgrounds can increase physical activity by an average of 12 minutes per day. Participation in after school programs adds another 10 minutes of daily activity.
- Schools play an extremely important role in helping children and youth establish regular and healthy patterns of physical activity. The combination of classroom activity breaks, daily physical education (PE), and walking or biking to school can account for 58 minutes of daily physical activity.
- The community: Living in walkable, mixed use (with a variety of residences, schools, and commercial development), and dense neighborhoods all increase daily physical activity levels. People who live near walking/biking trails are 50% more likely to meet activity guidelines.

NIKE, Inc.'s Designed to Move framework for increasing physical activity is divided into two simple "asks":

¹⁴ Obesity, Nutrition, and Physical Activity in Wisconsin. Department of Health Services, Division of Public Health, Nutrition, Physical Activity, and Obesity Program and Wisconsin Partnership for Activity and Nutrition 2008. Print.



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- Create early positive experiences for children. Place emphasis on children 10 and under and design programs with a focus on universal access, age appropriateness, dosage/duration of the activity, and fun. Schools should be emphasized as an access point for increasing physical activity.
- 2. *Integrate physical activity into everyday life.* Echoing the Active Living Research, activity should be designed into the built environment by providing safe public and active transportation options, access to sport programs and parks, cities designed in a way that encourages activity, and improved school and community environments.

III Sample Innovative Solutions across the Country

Project SPARK (Sports, Play, and Active Recreation for Kids) is an evidence based program based in San Diego which aims to increase physical activity in children and youth pre-Kindergarten-12th grade through PE, after school, early childhood and preschool, and coordinated school health programs. SPARK provides a number of services such as project coordination, a written curriculum, in-person training of physical activity leaders, equipment, needs assessment and project evaluation, and follow-up support. SPARK has been shown through numerous studies to increase student's activity levels, fitness, sport skills, enjoyment of physical activity, and academic success. When Denver Public Schools implemented the SPARK curriculum, kids experienced a significant increase in a variety of fitness measures, and there was a significant increase in the percentage of kids and the percentage of class time spent engaging in physical activity.

Miami Dade School District implemented an innovative physical activity curriculum which puts kids at the center of program design and activity choices. The district used a combination of grant funding and local donations to implement a variety of creative programs for physical education. The curriculum emphasized activities that excited students, as well as on the use of technology and the natural environment. Examples include rock climbing, interfacing stationary bikes with a bike-race video game, integrating instructional or educational videos and exercise equipment, tracking bio-metrics and exertion with technology, and using the available environment through water sports such as kayaking, snorkeling, and sailing.

Minneapolis Park Outreach Workers were hired by the Minneapolis Department of Health and Family Support in partnership with the Minneapolis Park and Recreation Board to address concerns about lack of safety and low levels of physical activity in three North Minneapolis parks. The outreach workers engaged children and adults in the surrounding community to encourage them to use the parks and connect them with active programming in the parks. They also set up Family Festivals throughout the summer of 2011 which focused on physical activities for families and children in order to connect people of a variety of ages to the parks. At the end of the project 70% of survey respondents said that the parks were "more safe" or "about as safe" as before the project and 52% of respondents reported using the parks either daily or weekly.





Safe Routes to School, funded by the United States Department of Transportation, has programs in all 50 states and Washington DC. It facilitates healthy behavior by encouraging students to walk and ride their bikes to school and minimizing the two most commonly cited barriers to active transportation: traffic and safety. Safe Routes to School examines the area around schools and seeks to minimize safety risks and increase pedestrian and bicycling safety. Active transportation to and from school can account for 16 minutes of a child's daily physical activity. It can encourage lifelong habits and change community norms, and kids who walk or bike to school tend to be more active throughout the rest of the day. ¹⁵ In a study of adolescents who walked both to and from school, 100% of these students met the recommended levels of 60 or more minutes of moderate to vigorous physical activity on weekdays. ¹⁶

KaBoom! is a non-profit organization that partners with child serving non-profits, community centers, and schools to provide playgrounds that encourage physical activity. A core component of a KaBoom! project is the involvement of the community that will benefit. KaBoom! provides the expertise, materials, and a majority of the funding; parents and others plan the project, solicit additional funds, and mobilize the community to help construct the playground. This encourages a sense of ownership and satisfaction among the community that benefits from the new playground. The effect of playground equipment without accompanying organized activity on the physical activity of children is not well-understood and requires further study. Common sense suggests that well-designed play structures in safe spaces invite children to engage in moderate to vigorous levels of physical activity.

Let's Move! is the comprehensive initiative begun and championed by First Lady Michelle Obama to eliminate childhood obesity within a generation. Let's Move! seeks to instill healthy habits in children and shape their choices for healthy food and regular and fun physical activity throughout their lives. The Let's Move! website (www.letsmove.gov) offers guidance for parents, policy makers, and kids about what they can do to turn the table on childhood obesity. Early results show promise in elevating childhood obesity as a national concern that we *can* do something about.

4-H Food and Fitness Camp is a short summer camp for fourth and fifth graders in Louisiana which is designed and run by high school members of 4-H. High school 4-H members work during the year to design educational activities to help young people learn basic nutrition, simple food preparation techniques and fun fitness activities they can do alone or with friends, reinforcing what they are learning in school about health and fitness.

¹⁶ Alexander, Leslie M., Inchley, Jo, Todd, Joanna, Currie, Dorothy, Cooper, Ashley R., and Currie, Candace. "The Broader Impact of Walking to School Among Adolescents: Seven Day Accelerometry Based Study". British Medical Journal. 331 (2005): 1061-1062.





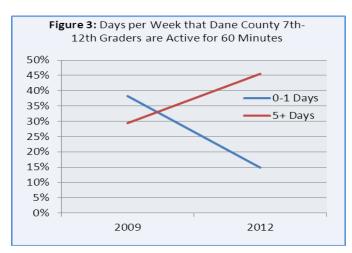
¹⁵Safe Routes to School http://guide.saferoutesinfo.org

IV Local Research

A. Disparities

Overweight, Obesity, and Time Spent in Physical Activity

The Dane County Youth Assessment, a survey of 7th-12th graders, is our best source of local data on obesity and physical activity in Dane County youth. As seen in Figure 3, the percent of Dane County adolescents who are very inactive went down, and the percent that is active most days increased between the 2009 and 2012 surveys. Despite this progress, there is more work to be done because most youth are still not getting the recommended 60 minutes of physical activity per day. In addition, some unacceptable gender and racial disparities exist in Dane County as is true nationwide.



Dane County Youth Assessment, 2009 & 2012

Note: A third data point in 2015 will provide more certainty on this emerging picture.

To deepen our understanding of these disparities, further analysis of the data for 7th-12th graders in

the Madison Metropolitan School District was done by Public Health Madison & Dane County (PHMDC), including analysis by race, gender, and family income.

Gender Disparities

Males are more likely than females to be active most days, with 48% of Madison males being active for 60 minutes 5+ days per week as compared to 35% of Madison females. Physical activity drops off in females as they get older, so the difference between males and females is greater in high school.

Gender disparities also exist for other factors related to physical activity, such as team sports participation, exercising on their own, and sedentary screen time. Table 1 highlights the disparities between boys and girls. Males are more likely than females to participate in team sports and exercise on their own, but they are also more likely to engage in non-homework screen time in excess of the recommended maximum of 2 hours per day.

Table 1: Gender differences are seen in Dane County youth who:	Males	Females
Participate in team sports 3+ Days/ Week	52%	40%
Exercise on their own 4+ Days/ Week	51%	34%
Spend 3 or more hours/day using a screen outside of homework	40%	33%

Gender differences are most pronounced among African Americans and Hispanics, with males being much more active than females.





Racial/Ethnic Disparities

The data show that there are disparities between White youth and youth of color for many of the physical activity measures, but they are largely due to the differences between White girls and girls from other racial/ethnic groups. African American, Hispanic, Hmong and mixed race respondents also all have a higher prevalence of being overweight and obese than White youth.

Table 2: Racial Disparities in Dane County Girls 7 th -12 th Graders	African American Females	White Females
Active 60 min., 0-1 days/week	28%	14%
Active 60 min., 5+ days/week [This is the target]	28%	41%
No team sports participation	56%	40%
No exercise on their own	27%	11%
5+ hours screen time	28%	7%
Not enough summer physical activity opportunities (High School only)	26%	10%
Overweight or obese	41%	12%

Public Health Madison & Dane County analysis of the Dane County Youth Assessment, 2012

The disparity between African American females and White females is of particular concern: African American females are twice as likely as White females to fall into the least active category: getting 60 minutes of physical activity on no days or only 1 day per week. 40.5% of Black girls are overweight or obese compared to just 12% of White girls. Table 2 illustrates the magnitude of the divide for all these measures. It's clear that the large disparity between Black females and other groups in Madison warrants specific attention when considering strategies to

Income Based Disparities

In addition to these racial/ethnic and gender based differences, disparities based on family income level also exist in Dane County and Madison. Figure 4 compares the percentage of Dane County youth who are eligible for free or reduced school lunch (a measure of lower family

Public Health Madison & Dane County analysis of the Dane County Youth Assessment, 2012

income) vs. higher income youth, for each of the measures assessed in the Dane County Youth Assessment.

The degree to which adolescents who are eligible for free or reduced school lunch are more likely to be inactive was also examined. Compared to youth from more affluent families, they are: 50% more likely to be inactive (60 minutes of activity, 0-3 days per week); 60% more likely to spend 3 or more hours engaging in non-homework screen time on school days (more than half of lower income youth engage in this high amount of screen time); and 40% more likely to not play team sports.





Barriers to Physical Activity

The Dane County Youth Assessment asked youth about things that prevent them from being active. These barriers to physical activity affect various groups of 7th-12th graders in different ways as shown in Figure 5.¹⁷

Of note are the boxes shown to the right of the Risk Ratio line which indicate those groups of youth who reported particular barriers that inhibited physical activity. The further to the right of the line, the more likely those youth were to perceive these barriers.

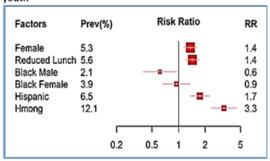
Females, low income youth, Hmong and Hispanic youth, were most likely to cite lack of programs or space, cost, or transportation as barriers to physical activity. Hmong youth are most affected by all three barriers while African American males, a very active group, are least affected by these barriers.

PHMDC also identified ZIP codes that play a bigger role or contribute most to Madison youth saying that *not enough* programs and places to exercise is a barrier to being active. The measure, PAF (population attributable fraction), combines two factors: how likely youth who live in that ZIP code were to cite that barrier AND the size of the population (percent of all Madison youth who live in that ZIP code). PAF indicates how much of the outcome (citing lack of opportunities) is explained by living in that ZIP code.

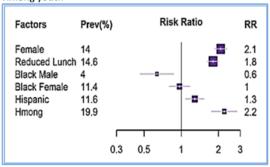
By this measure, Madison ZIP codes 53704 (northeast) and 53713 (south) are the biggest contributors to this barrier as shown on the map on the following page.

Figure 5: Barriers to Physical activity faced by Madison 7th-12th graders

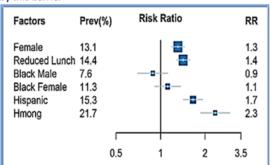
Not enough programs or places, especially for Hmong youth



Costs too much: more likely low income, females, and Hmong youth



Transportation is a problem: Hmong youth most impacted by this barrier



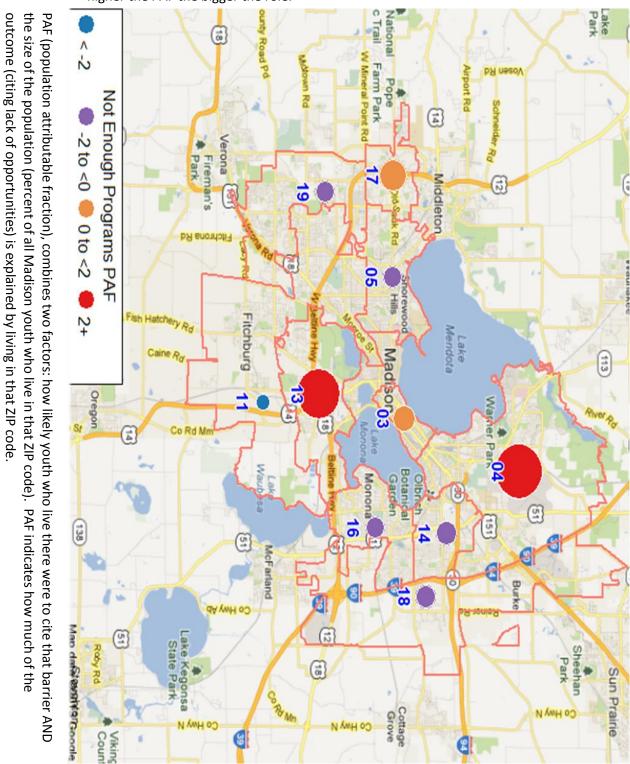
Public Health Madison & Dane County analysis of the Dane county Youth Assessment, 2012

Public Health Madison Dane County calculated risk ratios (RR) to compare groups, and determine how likely different groups were to cite certain barriers, compared to a reference. Each group listed under "Factors" was compared to a reference group, whose risk ratio is 1, represented by the vertical line. Females were compared to males; lower income youth ("Reduced Lunch") were compared to all other youth; Black males were compared to White males; Black females were compared to White females; Hispanic youth were compared to White youth; and Hmong youth were compared to White youth. "Prev (%)" refers to the percent of youth in that group who cited that barrier. A RR greater than 1 means that the group was more likely than its reference group to cite that barrier; less than 1 means less likely. (The magnitude of the RR tells us how much more likely, for example: 1.4 means 40% more likely; 2.2 means more than twice as likely; 0.6 means 40% less likely.)





ZIP codes that play a bigger role in the barrier "not enough programs or places": the higher the PAF the bigger the role.







B. Early Childhood

The importance of early motor development and the number of children and hours spent in early childcare make family or center-based settings a crucial intervention point for encouraging physical activity and planting the seed of a lifetime habit. In Wisconsin 31% of children age 2-5 are obese or overweight. The 2010 U.S. Census counted 13,551 children under age 5 living in Madison. The *Dane County Early Childhood Education Demographic Report 2011*¹⁸ identified 1,317 children in Family Child Care situations in Madison in 2010. Based on the research, that translates to 4,200 children under 5 and 408 in Family Child Care who were overweight or obese. It also means there are many more young children who benefit from a routine that includes movement and physically active play.

Recent research out of the University of Wisconsin¹⁹ and Community Coordinated Child Care²⁰ (4-C) sheds light on what interferes with the ability of private, home-based child care providers to structure physical activity into the daily routines of the children in their care. Barriers include

- Lack of space
- Weather that interferes with outdoor play
- Lack of knowledge (training) in how to incorporate physical activity into their child care setting
- Mixed age groups of infants and toddlers or older children (caring for infants requires relative quiet during nap time and also makes it difficult to lead physically active play for the others)

This research showed that both caregiver-led physical activity and having a physical activity policy in place increase the amount of time that children are physically active while under their child care provider's supervision. The Wisconsin Department of Public Instruction developed an Active Early Toolkit²¹ to guide providers in ways to increase childhood physical activity in childcare settings. This resource and accompanying training was very well received in twenty child care sites where it was piloted. Small grants that assisted

A survey of Madison Family Child Care providers conducted for the Delegation by 4-C showed:

- ▲ 60% would benefit from fun and easy physical activity ideas, low cost creative indoor and outdoor activities, and ways to incorporate free play
- ♣ 50% needed ideas for adult-led activities and role modeling techniques.

providers to purchase play equipment or improve their environment were also helpful. Evaluation of the Active Early pilot sites indicated that in all cases, the total physical activity environment and children's engagement in physical activity improved.²² These easy to

²²Physical Activity Guidelines for Americans Wisconsin Early Childhood Obesity Prevention Initiative. Publication. Arlington, VA: Association of State and Territorial Health Officials, 2013. Print.



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¹⁸Dane County Early Childhood Education Demographic Report 2011. Rep. Madison, WI: Community Coordinated Child Care, (4-C), 2011. Print.

¹⁹ LaRowe, Tara, and Tanya Kirtz. "Active Early: Preventing Childhood Obesity through Partnership, Practice, and Policy." Presentation to the Delegation. 11 Jan. 2013. Address.

²⁰ Tanya Kirtz. "Active Early: Preventing Childhood Obesity through Partnership, Practice, and Policy." Presentation to the Delegation. 11 Jan. 2013. Address.

²¹ Active Early A Wisconsin Guide for Improving Childhood Physical Activity. Department of Health Services, n.d. Web. http://www.dhs.wisconsin.gov/publications/P0/P00280.pdf>.

implement, inexpensive resources build capacity and confidence that leads to increased physical activity for young children. Expansion to additional Madison area early childcare providers is recommended.

C. School-Based Physical Activity

School is an ideal setting for increasing physical activity because almost all students spend a substantial part of their day in school throughout much of the year. Children can get much of their recommended daily physical activity through in-class activity breaks, recess, PE, and afterschool programs. The biggest barrier to achieving the recommended amount of physical activity in Madison schools is time constraints. With academic achievement being the primary focus of Madison schools, additional time for PE can be hard to justify at the expense of time for reading, math, and science. However, physical activity has been shown to improve classroom behavior, increase attention, and improve academic performance so the goal of academic achievement is, in fact, aligned with the goal of increasing physical activity in children.

One way to get physical activity without increasing PE time is short, in class, activity breaks, which have been shown to have the benefits listed above. The YMCA of Dane County's Y5210 program helps elementary school teachers integrate education about the importance of healthy eating and physical activity - and mini breaks for physical activity - into the school day. Pre- to post- test results suggest that students are intentionally eating healthier and being physically active each day as a result of what they learned.

D. Need for Equitable and Relevant Programming

The Delegation learned a great deal from reaching out to youth through the Vera Court and Kennedy Heights Neighborhood Centers, the Boys and Girls Club (South Madison), a special African American Town Hall meeting with women and their adolescent daughters and through a survey distributed to volunteers at Dane County's Youth Service Day. Three common themes emerged as well as various concerns pertaining to a specific site or program.

- 1. There is a need for targeted programming developed for specific communities and populations based on their interests and needs. Much improvement is needed in disseminating information about available programs and financial assistance that is available to participate in these programs.
 - Although many Kennedy Heights Neighborhood Center boys enjoy a variety of sports and activities, almost none of them have participated on an organized team either because none are nearby, they and their parents didn't know how to sign up, or they thought it was too expensive. Soccer was of particular interest.
 - Although Warner Park Community Recreation Center offers facilities and programming, many of the youth at Kennedy Heights and Vera Court Neighborhood Centers do not go there for activities. One barrier is that youth are not allowed to go outside of their





immediate neighborhood. Meanwhile, at the Boys and Girls Club, the youth lamented that there are not a lot of teams on the South Side.

- 2. There is a need for more casual, less athletically-competitive, and "club sport" type programming, particularly for middle and high schools girls.
 - 10% of respondents in the Dane County Youth Assessment cited "skills not being good enough" as a barrier to physical activity. The number of youth who participate in team sports 1-2 days a week dropped from middle school to high school, corresponding with an increase in females who don't participate in any team sports at all.
 - Youth we spoke with perceive a lack of available programming for middle and high school girls, especially if the girls are not skilled athletes who have participated in athletics since childhood.
 - Boys and girls at Vera Court Neighborhood Center expressed interest in less formal sports tournaments that are less of a time commitment than formal teams, such as a weekend 3-on-3 basketball tournament between teams from area neighborhood centers.
 - Walking clubs, gardening, martial arts, dancing, and other activities that promote
 movement, build strength, and cultivate personal interests were also mentioned in our
 conversations with youth. Members of the Boys and Girls Club remembered the sense
 of accomplishment they felt when volunteering at the Run for the Cure event.
- 3. Special focus should be placed on developing more culturally relevant programming for youth in Madison. In particular, this is a key strategy to engaging African American girls in addressing problems with weight and physical inactivity.

Participants attending the United Way/Foundation for Black Women's Wellness Town Hall meeting expressed interest in more cultural activities such as African and hip-hop dance and more social and casual activities, such as taking walks and exercising with friends.

In sum, data and our community encounters highlight the need for additional programming that is tailored to specific communities' interests with an overt emphasis on cultural relevancy and more casual and social participation. Culturally relevant programming can help close the gap in physical activity between African American females and other groups. More casual and social options can encourage kids who may lose interest in sports and yard games during adolescence to stay active in other ways, potentially making a dent in the 38 minutes a week of physical activity that kids lose on average between the age of 9 and 15²³.

E. Perceptions and Beliefs

We found that two general perceptions prevent many Madison residents from engaging in physical activity. The first is about neighborhood safety.

²³ Nader, Philip et al. Moderate to Vigorous Physical Activity From Ages 9 to 15 years



United Way

A survey conducted as part of the South Madison Promise Zone project found that 52% of respondents identified safety as their biggest concern for their neighborhood.

2012 Community and Service Provider Leadership

Various neighborhood surveys conducted by PHMDC in the Northport Drive area, and discussions with staff at north side community centers for this project, have found that youth and parents are

concerned about pedestrian safety. These results are important as studies show that parental concerns about traffic and crime have a strong influence on physical activity. In particular, park condition and safety is associated with use and activity levels within that park. Parental <u>perception</u> of safety has a greater impact on physical activity than the <u>actual</u> level of safety as indicated by crime and traffic data.²⁴

The second generally-held perception is the belief that available programming is out of reach or costs too much. This theme surfaced in several recent local studies reviewed:

Year	Source	Question		Response			
			Overall	Reduced Lunch	Female	Hmong	Hispanic
2012	Dane County Youth Assessment	Cite cost as barrier to physical activity	11%	15%	14%	20%	12%
2009	PHMDC Northport Survey	Don't play team sports because it costs too much	28%	-	-	-	-
2012	Dane County Youth Assessment	Cite transportation as a barrier to physical activity	12%	14%	13%	22%	15%
2009	PHMDC Northport Survey	Don't play team sports because they can't get a ride there or home	16%	-	-	-	-
2012	Dane County Youth Assessment	Don't know what is offered or how to sign up	6%	8%	7%	16%	8%
2009	PHMDC Northport Survey	Don't play team sports because they don't know about programs or how to get into them	16%	-	-	-	-
2012	South Madison Promise Zone Survey	Open ended response when parents were asked what programs for kids they would like to see		say they war say they war	•	. , .	

^{*} All DCYA data is for Madison respondents only

In practice, most of Madison's major recreational providers – Madison Parks Department, Madison School Community Recreation (MSCR), the YMCA, Madison Area Youth Soccer Association (MAYSA), etc. – do offer financial assistance or fee waivers to make opportunities to be physically active accessible and affordable for those who would otherwise be unable to participate. The financial assistance provided by the Goodman Foundation for the Goodman Swimming Pool is a stellar example of a resource that is well-known, greatly appreciated, and fully used by our community each summer. Other providers can apply what the pool and Goodman Foundation have learned about what makes this work and has removed any perception that swimming in this pool is not for every Madison resident.

²⁴ Designing for Active Living Among Children



United Way

Many children and parents are not aware of the variety of active and recreational options they may enjoy or the fee waivers and scholarships that may be available to assist with the cost of programming. There is no single location or resource where this information can be easily found. Parents and youth would benefit from additional outreach about existing programming, the process for signing up, and available scholarships.

F. Specific Cultural Issues – African American Females



Because of the striking disparities in physical activity between African American girls and African American boys and between African American girls and other groups of females, the Foundation for Black Women's Wellness and United Way convened a special town hall meeting for a conversation focused on raising the physical activity levels of Black women and girls and to generate solutions for improving their physical health and wellness. There is also a small body of research about physical activity and Black adolescent girls that is very consistent with what we learned through our conversation with both women and girls who attended the town hall meeting as shown in the accompanying table.

Research sources:

- Physical Inactivity of Black Adolescent Girls: Is It All About Attitude? Wanda M. Thompson, PhD, RN, WHNP-BC Home Health Care Management & Practice 23(3) 186-192 SAGE Publications, 2011
- Physical Activity Among African American and Latino Middle School Girls: Consistent Beliefs, Expectations, and Experiences Across Two Sites Wendell C. Taylor PhD and MPH Et Al; Women & Health, Oct. 2008



Participants at our Town Hall meeting for African American women.





	Comparison of findings from research and our Town Hall Meeting						
What the research says			What we heard in Madison				
lm	pedes participation in physical activity:						
•	Negative experiences in physical education classes (inequitable and unpleasant experience)+	1	•	Changing clothes in front of others is uncomfortable; why can't we participate in street clothes? + Girls-only PE would be better			
•	Concerns about appearance after activity – especially self-consciousness about their appearance in the presence of boys Exercise interferes with attractive appearance	1	•	Teachers don't address boys' comments that make girls feel uncomfortable+			
-	Hair maintenance required after physical activity	V	•	Fixing hair is not worth it for 25 minutes of exercise Too much pressure on girls to have perfect hair/appearance Girls/women with natural hair are negatively judged by others Swimming pools nowadays don't damage hair like they used to & now products to help are available			
•	Lack of opportunity and accessibility	1	•	Discouraged and embarrassed to participate by lack of skill or athleticism Other kids learn skills when they are young; if you don't start at the beginning you lack the skill to continue into high school Access is a problem at neighborhood/community centers where membership is required (instead of walking in) Not enough programs for high school girls			
•	Weight is not viewed as a health problem; heavier body weight and larger size are attractive	1		Cultural beauty standards are different.			
•	Stereotypes that being physically active means being less feminine	1	•	Parents follow boys' sports but not girls' sports Used to be that girls showing masculine behavior was unacceptable and discouraged; attitudes starting to change			
•	Enjoyment, fun and preferred activities that challenge and require/build skill	√	•	Dance (hip hop; adults also mentioned African dance)			
•	Social support that comes with doing things with family and friends	1	•	Walking with friends is a good bonding experience Mom/daughter workouts Group activities			
•	Belief that physical activity can improve their appearance and perception of body image Parents who are role models and supporters of girls being physically active	1	•	Change attitudes and expectations around femininity and appearance – focus on health and appearance will follow More African American women are physically active and aware of their influence as role models for their daughters			
Su	ggested Solutions:			J .			
•	Culturally sensitive, gender appropriate, specific, and tailored activity interventions	1	•	Variety of options to appeal to more folks: Double Dutch, Zumba, yoga, hopscotch, etc.			
•	Understanding and addressing attitudes of Black adolescent girls could help to increase their intention to be more physically active						
•	Identify morning and evening activity opportunities that allow adequate time for grooming afterwards						
			•	Need to educate girls at young age about the standards of what is beautiful, history of Black people as swimmers, etc. Better disseminate information about community options			
				and free opportunities for being physically active: through church health ministries; informational website, etc.			

⁺This is not unique to African American girls







Examples of enjoyable activities noted at the Town Hall meeting include Double Dutch jump rope, Hip-Hop dance, volleyball, horse shoes, hopscotch, bean bag toss, and the Harriet Tubman Walk.



G. Infrastructure and Equipment

Having access to facilities and places where people can be active increases physical activity and reduces the risk of obesity. During non-school hours, Madison schools are open and well-utilized (based on scheduled use of facilities) by community members involved in organized activities and sports teams, including those on a swim team or in MSCR classes. However, there is not a way for the community to use these facilities for more informal and casual use such as hall walking, open swim in warm water, or open gyms. Community surveys and engagements showed us that there are continual opportunities to promote physical activity by providing equipment and improving infrastructure in Madison. Equipment does not have to be fancy; small, targeted, investments in equipment can go a long way. Girls on Vera Court Community Center's dance team expressed their desire to have full-length mirrors to use in practice. Boys and Girls Club uses old tires for outdoor weight training and strengthening exercises. Nearly one-third of kids responding to a public health survey at Northport Community Center said they don't exercise on their own because they don't have the right equipment.

Larger infrastructure projects are also beneficial where warranted. Madison's Parks Department does a stellar job of creating and maintaining beautiful neighborhood and community parks, most with play equipment. (One study found that renovating parks increases a child's daily

We heard...

At the Kennedy Heights Neighborhood Center, youth frequently use the basketball hoops at Lindbergh School despite the fact that the blacktop is run down and the hoops are in poor condition. physical activity by 12 minutes.²⁶) The Parks
Department has also secured snow making machines,
wagons and horses for hay rides, and other
"nontraditional" equipment that help to increase the
variety, accessibility, and family friendliness of
free/low-cost recreational activities.

Research has also shown that increasing pedestrian infrastructure such as sidewalks, traffic calming features, and high visibility and traffic-light equipped crosswalks increase pedestrian traffic. Generally speaking, these considerations are well-vetted and addressed through the

City's building design and permitting processes. We learned from our conversations with youth that many parents do not allow their children (especially the younger ones) to leave their immediate neighborhoods, even to walk to Warner Park from the nearby Kennedy Heights and Vera Court neighborhood centers.

We also heard...

At both north-side neighborhood centers, youth enjoyed swimming in area pools, but transporting kids to those pools was time consuming and difficult for staff. A pool located on the north side of town would benefit the community, but the costs and benefits should be further analyzed.

²⁵ Designing for Active Living Among Children, ALR

²⁶ http://activelivingresearch.org/files/AJPM2013 ArticleSummary Basset.pdf





IV. Innovative Local Community Programs – A Few Examples

- Mobile Resources Madison enjoys a variety of traveling physical activity resources which
 are housed in vehicles. The Art Cart and FIT2GO Van are provided by Madison School and
 Community Recreation (MSCR), YMCA of Dane County supplies a mobile activity trailer,
 Trek has a bike van, and activities such as Walk with a Doc travel to different areas of the
 community.
- HMO Healthy Rebate Healthy Living Rebates are offered by Dean, Unity, Group Health Cooperative-SCW, and Physician's Plus to incentivize healthy living, including physical activity.
- Garden Programs Gardens are a great way to be active, while encouraging healthy eating and community cohesion. There are a variety of resources in Madison aimed at supporting the development of new gardens. UW Extension, Community Action Coalition of South Central Wisconsin, and the Community Food and Garden Network provide resources for starting and maintaining gardens.
- Community and Neighborhood Centers Community and neighborhood centers across
 Madison serve as local gathering points for many children and youth. Many of these
 programs incorporate physical activity into their daily routines, have play grounds and sports
 facilities and equipment, and at some locations support teams and provide instructors or
 coaches. Some centers lack the space and/or staff capacity to serve the additional children
 who would like to be a part of these activities. Additional financial resources are required to
 address these issues.
- Physical Activity Programming There are many organizations that provide physically active programs such as YMCA, MSCR, Madison Area Youth Soccer Association (MAYSA), football teams such as the South Side Raiders and Tigers, and others. Many programs that have the capacity will waive the fees for children who cannot afford them
- Boys and Girls Club Basketball League Because the kids at the Boys and Girls Club
 Taft St. location were not interested in more competitive and expensive options for
 basketball, they set up a basketball team of their own which plays other Boys and Girls Club
 locations from around WI.
- **Equipment Sharing** Community Coordinated Child Care (4-C) has equipment baskets that early childcare providers can check out from their office.
- City of Madison Website The City of Madison's website is a great resource for learning
 about the active resources Madison has to offer. You can plan a trip via bicycle, locate
 facilities, such as playgrounds or sport facilities, which are catalogued by the type of activity
 you want to do, and reserve these facilities. You can also see a schedule of activities and
 programs in the parks, zoo, botanical gardens, and museums.
- Professional Development of Activity Leaders 4-C works closely with early childcare
 providers to offer training and the Active Early Toolkit, increasing provider's confidence and
 the amount of daily activity in those settings. The YMCA and MSCR have professional
 development models that insure that their activity leaders and instructors are well trained.
- Playground at Blackhawk Middle School Growing Together, a north-Madison organization, was able to effectively align interests around building a new playground and





trail with exercise stations at Blackhawk Middle School. They secured partial funding and equipment from a KaBoom! grant for the playground, secured community donations, partnered with Vogel Brothers for pro-bono construction, and rallied the community to do a "community build."

• By Youth For Youth – BYFY is a model for funding which puts youth in control. Led by the United Way, a committee of Dane County youth reviews applications and directs funding for projects that are planned and implemented by youth and youth groups. One of the current funding priorities, which are set by the youth committee, is healthy living.

V. Goal

Vision: Create sustainable and targeted community initiatives that increase the amount and enjoyment of daily physical activity for Madison youth and families.

Goals: By 2023

- Increase the physical activity levels of youth, as measured by the percent that get the recommended 60 minutes of physical activity per day.
- Decrease gender, race, and income disparities related to physical activity levels and barriers to physical activity.

Progress on these goals should be measured using appropriate indicators from the Dane County Youth Assessment. (3 year assessment; see baseline measures in Appendix B.)

VI. Strategies

Three important areas of emphasis emerge in the effort to help kids be more physically active now and establish healthy patterns for life: starting early and the important roles of parents and caregivers in nurturing physically active children; increasing targeted and culturally-relevant opportunities for youth of color, especially African American adolescent girls; and improving collaboration toward maximizing access to and information about available free and low-cost opportunities for recreation and movement.

Five specific strategies are recommended that fall in the general categories of programs, people, products & play spaces, perceptions and public schools. A sixth strategy proposes the creation of an ongoing Leadership Group to implement and steward these strategies/recommendations.

Strategies address five areas







1. Develop Safe and Local Programs

Madison as a whole has a great number of physically active options offered by a number of organizations. However, certain youth currently do not participate because they lack the confidence, cannot access programs because of cost or transportation, do not have an interest in the options that are available, or face other barriers. It is important that we increase the availability and variety of programming. New programs should be community/neighborhood specific, and developed with youth and parent input and in alliance with organizations already "plugged in" to those communities to insure that they address the issues that prevent kids from participating currently. An emphasis should be placed on safety and inclusion, as well as non-competitive, group-oriented, and culturally relevant options – features that are especially important to engaging young African American females who are at highest risk for being overweight or obese.

Objective:

 Increase participation in active programming by making available a variety of targeted, community specific, safe, and inclusive physically active options, including noncompetitive, group-oriented, and culturally relevant options.

2. Train and Develop Local Physical Activity Leaders

Providing training and development opportunities for youth, neighborhood and specific target population leaders that position them to teach and model the importance of making physical activity a life-long habit has multiple benefits. It can mean more people who are available to teach and do neighborhood outreach for Zumba classes, neighborhood walks, etc. By developing childcare providers, teachers, parents, youth, and others into physical activity advocates we can change the culture of our community and make physical activity a more permanent priority.

Objective:

• Increase capacity of community members to lead and facilitate physically active lifestyles in targeted communities.

3. Infrastructure and Equipment to Increase Participation

We have already noted the importance of infrastructure and safe, inviting equipment to promoting movement and physical activity. In many cases, relatively small investments in equipment and small-scale active infrastructure can have a large impact. Meeting these small needs could be considered "low hanging fruit." Other investments in infrastructure may have large upfront costs, but may have great value in the long run. The feasibility and value of targeted improvements and additions to infrastructure and equipment, including large and small scale investments, should be assessed.

Objective:





• Provide for improved and additional infrastructure and equipment to increase the access of youth and families to opportunities for activity.

4. Connect Youth and Parents with Safe and Active Community Options

Information about programming, how to sign up, cost and scholarship/fee waivers, etc. should be easily available. Through better outreach and communication to youth, parents, faith communities, and neighborhood/community centers, we can more effectively connect kids with programs that are available. It is also important to continually monitor and address the perception among parents that safety is an issue in their neighborhood. Research has shown that perception of safety significantly impacts activity levels in neighborhoods. The positive presence of families in neighborhood parks and yards increases the perception of safety and youth and families will be more connected to the options for activity in their neighborhood.

Objective:

 Increase the connection of children and families to opportunities for physical activity through improved outreach and increased positive presence in safe neighborhood spaces for physical activity.

5. School Based Opportunities

Most children in Madison spend a large portion of their day for most of the year in school and in before and after school programs. Through walking and biking to school, recess, PE, activity breaks, and before and after school programs students can exceed the recommended 60 minutes of activity per day. There are ongoing efforts in Madison, such as Safe Routes to School, that increase school based physical activity, but barriers remain, namely time, equipment, and buy-in. An important part of increasing physical activity in Madison will be reducing the impact of these barriers to increase the amount of activity during a school day.

Objective:

 Increase physical activity as part of school day. Remove negative factors to PE, encouraging in-class activity breaks, increasing recess activity, and supporting bike and walk-to-school efforts.

6. Opportunities for Collaboration

With so many great opportunities for physical activity available in Madison, and with many of the stakeholder organizations represented on the Delegation, it became clear that one of the greatest weaknesses can also become one of the greatest opportunities for helping youth to be more active: better, more formalized collaboration, coordination and communication between resources that are already providing services in our community. Many ideas came out of our monthly Delegation meetings:

 Additional/new school-community partnerships through using parks for recess and PE, nature centers and community gardens for biology, and increasing access to school





facilities for casual recreation activities such as open gyms, open swim, and hall walking.

- Partnerships between recreation providers and organizations that are plugged into target communities such as the Foundation for Black Women's Wellness, neighborhood centers, and other agencies in order to develop community specific programming.
- Equipment sharing. Some organizations have surplus exercise/sports equipment, overflowing lost and founds, or only need certain equipment during short periods of time. Others have limited storage to house larger equipment, but would benefit from using it temporarily. Individuals and families may be willing to donate equipment for redistribution. An online exchange could facilitate equipment sharing and moving of surplus equipment to organizations in need.
- Coordinated communications strategies and co-marketing of available resources
- A centralized, web-based portal for information about programs and costs. The Madison Parks Department plans to add this feature, which might also be used by other providers, to its website.

Delegation members enthusiastically embraced the vision of coming together and working on common goals in a Coordinating/Leadership group. This group should be charged with monitoring progress toward the Ten Year Plan goals and maintaining regular accountability to the community. It would require facilitation and support by someone other than the participating organizations.





APPENDIX A

We are grateful to the members of the Delegation for their leadership and commitment to our community and this work.

Delegation to Increase Children's Physical Activity Members

Co-Chairs: Dr. David Allen UW American Family Children's Hospital

Kevin Heppner Baker Tilly Virchow Krause

Members Alanna Medearis Aldo Leopold Nature Center

Brenna Holzhauer Aldo Leopold Nature Center, Nature Net

Chris Lay Madison Area Youth Soccer Association &

Reddan Soccer Park

Don Wigington Special Olympics Wisconsin

E.G. Schramka Irwin A. and Robert D. Goodman Foundation

Eric Hartwig Goodman Community Center

Jaimie Hollenback Growing Together

Jill Jacklitz Group Health Cooperative of South Central

Wisconsin

Julia Stanley Childhood Obesity Prevention Collaborative

Kevin Briski Madison Parks

Kia Karlen Madison Children's Museum

Lucy Chaffin Madison School and Community Recreation

Peg Smelser United Way Healthy for Life Community

Solutions Team

Sharon Baldwin YMCA – Dane County

Stephanie Hayden Foundation for Madison's Public Schools

Stephanie Navarre YMCA – Dane County

Steve Steinhoff Capital Area Regional Planning Commission

Susan Webb-Lukomski Public Health Madison and Dane County

Tanya Kirtz Community Coordinated Child Care (4C)

Tim Peterson Madison Metropolitan School District





APPENDIX B: Proposed Indicators to Assess Progress toward the Plan's Goals and 2012 Baseline Measures

Suggested indicators for evaluating progress on achieving the goals set out in this plan, and the 2012 baseline data, are noted below. The Dane County Youth Assessment occurs every 3 years with the next update planned for 2015.

- Percent of Madison 7th-12th graders who get 60 minutes of physical activity 5+ days per week. 2012 Baseline: 42%
- Percent of Madison 7th-12th grade females who get 60 minutes of physical activity 5+ days per week. 2012 Baseline: 35%
- Percent of Dane County African American 7th-12th grade girls who get 60 minutes of physical activity 0-1 days per week. 2012 Baseline: 28%
- Percent of Madison Hmong 7th-12th graders who cite cost and transportation as a barrier to exercise. 2012 Baseline: 20% and 22% respectively





APPENDIX C

Two excellent on-line resources provide a wealth of information about research and strategies that promote physically active kids and ultimately, healthier adults.

 Active Living Research – a project of the Robert Wood Johnson Foundation http://activelivingresearch.org/

Research about "what works": Environmental and policy strategies that can promote daily physical activity for children and families.

II. Designed to Move: A Physical Activity Action Agenda – a report funded by Nike and strategic partners http://www.designedtomove.org/

Report presents a framework for action toward a common vision for increasing physical activity among kids worldwide. Promotes at-scale solutions and the importance of all parties aligning around what needs to be done and how.



