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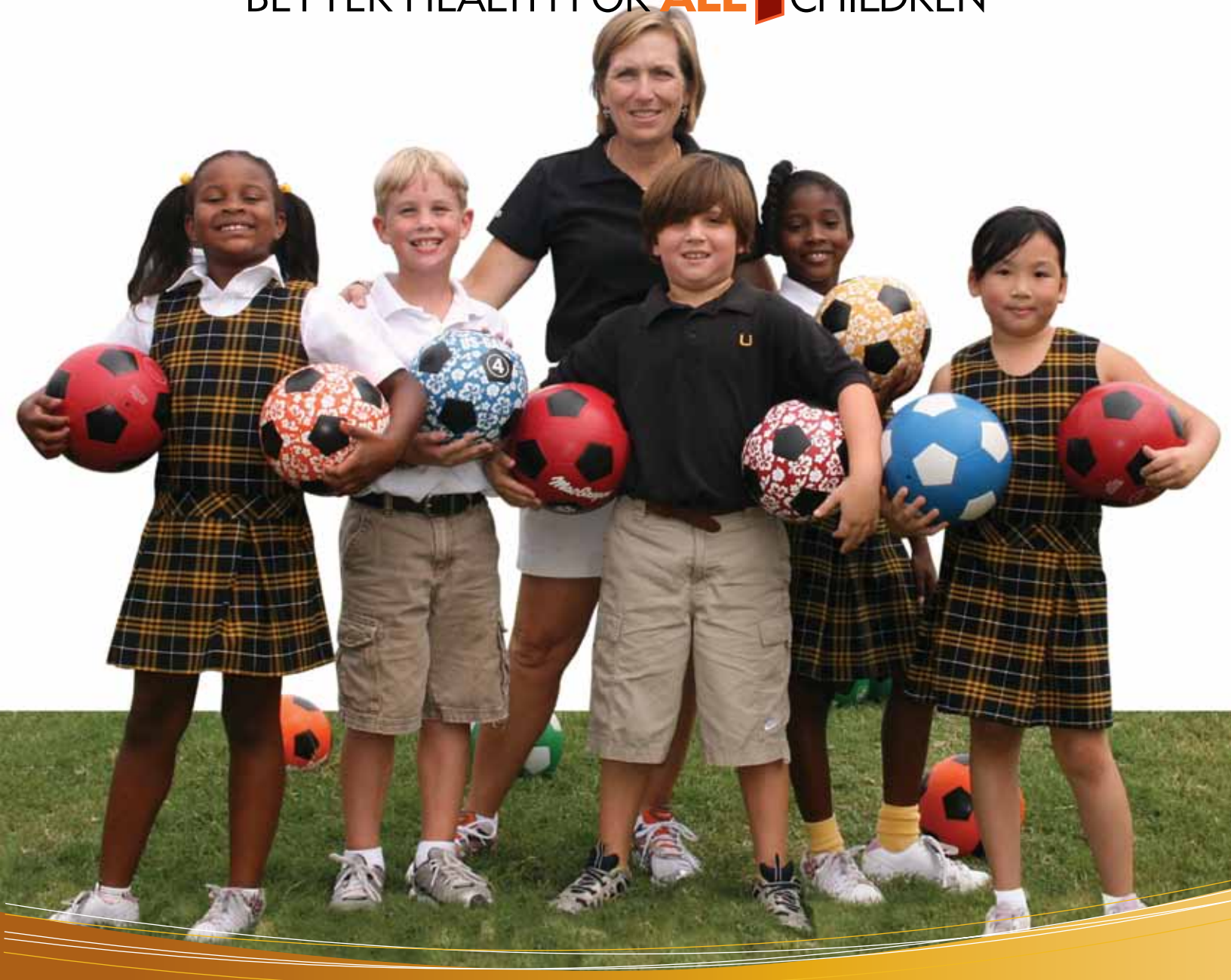

LOUISIANA'S REPORT CARD ON PHYSICAL ACTIVITY & HEALTH FOR CHILDREN AND YOUTH

2009

PENNINGTON BIOMEDICAL RESEARCH CENTER
LOUISIANA STATE UNIVERSITY SYSTEM

ACKNOWLEDGEMENTS

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The development of this report card was guided by a Research Advisory Committee, composed of scientists and professionals who collaborated on the selection of indicators and the assignment of grades.

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Goal of the Report Card

This is the second year that Louisiana's Report Card on Physical Activity & Health for Children and Youth has been released. The primary goal of the Report Card is to assess the level of physical activity and sedentary behaviors in Louisiana's children and youth, the level of facilitators and barriers of physical activity, and their related health outcomes.

The Report Card is an advocacy tool designed to increase awareness of the health concerns associated with physical inactivity and to highlight the growing problem of physical inactivity among children and youth in Louisiana. The main target audience for the Report Card is adult decision makers, and through this effort we hope to provide a level of accountability on behalf of the children and youth in the state of Louisiana. The Report Card has galvanized the research community around the topic of childhood health and has pooled resources state-wide to produce an evidence-based document.

Conceptual Model

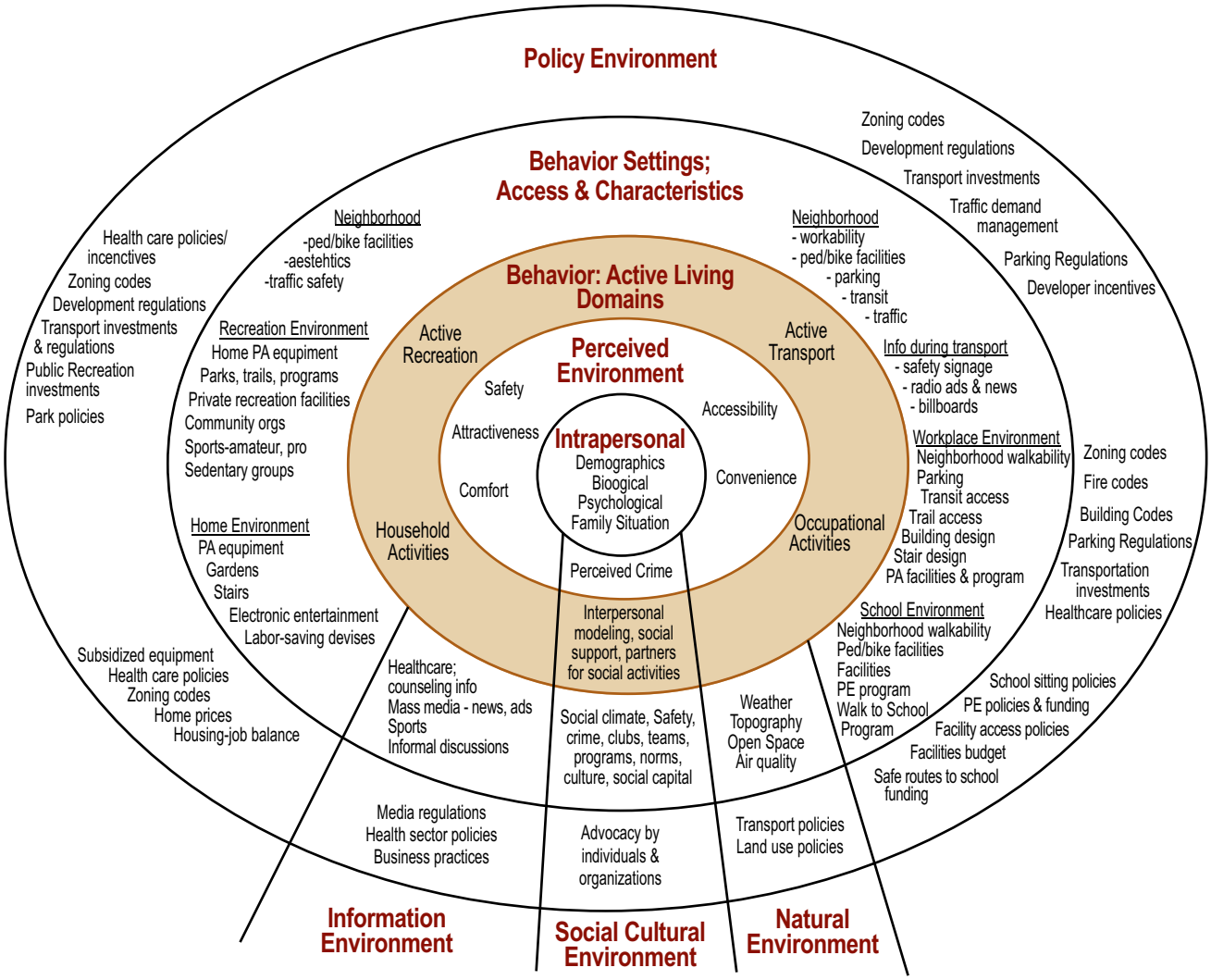
Louisiana's 2009 Report Card on Physical Activity & Health for Children and Youth takes what is called in research an "ecological approach" to the problem of physical inactivity among Louisiana's children and youth. An ecological approach recognizes that solving this problem requires improving the various environments in which our kids live – their families, schools, and communities – in order to make it easier for our kids to engage in healthy behaviors. An ecological approach also implies that we all have a role to play in getting Louisiana's children and youth to be more physically active, that the responsibility is not shouldered solely by children and their parents. The Ecological Model of Four Domains of Active Living[1] (Active Living Model; Figure 1), presented on the following page, provides a comprehensive, visual representation of this ecological approach and the various factors – from individual characteristics through neighborhood and policy environments – that influence our children's abilities to live physically active, healthy lives.

The Active Living Model provides a framework for the 2009 Report Card. The indicators of physical activity and health assessed within the 2009 Report Card correspond to various components of the Active Living Model. Participants on the research advisory committee for the 2009 Report Card were chosen to represent as fully as possible the environments and behavior settings described in the Active Living Model. In this way, we have aimed to provide a comprehensive evaluation of not only the levels of physical activity among Louisiana children and youth but also our statewide commitment to providing healthy environments in which they can be active. We challenge our audience to become familiar with the Active Living Model and, in doing so, to be even more aware of the steps we need to take – as individuals, parents, community members, and voters – to create environments that provide ample opportunities for our kids, indeed for all of us, to be physically active.

Active Living Model

Figure 1: The Ecological Model of Four Domains of Active Living

The Active Living Model shows how policy and the environment influence active living behaviors (highlighted) which include transport, occupation, household, and recreation. Tracking these behaviors across the multiple levels of influence (policy, behavior settings, perceived environment, and intrapersonal factors) shows how components within each level can influence behavior. Interpersonal factors shown at the bottom of the model which include the information environment, social cultural environment, and the natural environment affect multiple levels of influence on behavior and thus are shown to cross many levels. Recognizing and understanding how multiple levels of influences can affect behavior change is imperative to plan effective interventions and programs.



Source: Sallis JF, Cervero RB, Ascher W, Henderson KA, Kraft MK, Kerr J. An ecological approach to creating active living communities. *Annu Rev Public Health*. 2006;27:297-322.

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A Look Back: 2008 Recommendations and Progress

1. Increase opportunities for children and youth to engage in moderate-to-vigorous physical activity through active play and structured activity.

Children and youth should accumulate at least 60 minutes, and up to a few hours, of age-appropriate physical activity every day, and should avoid extended periods of inactivity (periods of two hours or more).

Progress:

Results from the National Survey of Children's Health (NSCH)[2,3] show a 5 percentage point increase from 2003 to 2007 in the proportion of children who engaged in at least 20 minutes of vigorous physical activity every day. However, one limitation of the NSCH is that physical activity levels are reported by the parents, rather than by the children and adolescents themselves or rather than being measured by even more reliable and objective methods.

Physical inactivity continues to be a problem. Results from the 2007 NSCH[2] show that over half of children and youth in Louisiana exceed the American Academy of Pediatrics (AAP) recommendation[4] for no more than two hours of screen time per day.

The 2009 Louisiana State Legislature passed House Bill No. 400/Act No. 286 that will require 30 minutes of moderate-to-vigorous physical activity (MVPA) each school day in all public schools for students in grades K-8.[5] House Bill No. 400/Act No. 286 is an amendment of a previous enactment which mandated 30 minutes of moderate-to-vigorous physical activity each school day for students in grades K-6. House Bill No. 400/Act No. 286 will provide more opportunities to help children and adolescents meet recommendations for physical activity.

2. Reduce ethnic and socio-economic disparities in childhood physical activity and health.

Increased access to opportunities for physical activity within schools, neighborhoods, and communities can be achieved through the incorporation of pedestrian facilities (sidewalks and crossways), bike paths, recreational facilities and green space in community renovation and development projects that are designed to encourage active living. Given that physical inactivity and obesity are more problematic in minority and low-income populations, programs and initiatives to improve healthy lifestyle behaviors are particularly needed in these groups.

Progress:

There is a lack of information as to the extent to which improvements have been made to increase access and opportunities for physical activity within schools, neighborhoods, and communities to reduce ethnic and socio-economic disparities over the past year. Results from the 2007 NSCH[2] show that 38% of Louisiana children and youth live in neighborhoods without sidewalks or walking paths, and those who live below the poverty level have less access to parks or playgrounds in their neighborhoods compared to children who live above the federal poverty level.

The 2009 Louisiana State Legislature recently passed Senate Bill No. 299/Act No. 252 which established the Healthy Food Retail Act.[5] Recognizing that there is a lack of access to fresh healthy foods in certain rural and urban areas in Louisiana, the Healthy Food Retail Act was established as a financing program to stimulate investment in healthy food retail outlets in underserved areas of Louisiana.[5] The Healthy Food Retail Act will promote healthy living and help decrease the prevalence of overweight and obesity by increasing access to fresh fruit and vegetables to underserved areas of Louisiana. In addition, the Healthy Food Retail Act requires that applicants, if eligible to do so, accept Food Stamps (Supplemental Nutrition Assistance Program) and WIC (Special Supplemental Nutrition Program for

Women, Infants, and Children) to increase access to fruits and vegetables among low income families.[5]

3. Improve population assessment of physical activity and health in Louisiana.

The majority of the state-wide data used to inform the development of the 2008 Report Card was obtained from surveys conducted in 1997 and 2003. There is a pressing need to increase and improve the frequency, regularity, and types of surveillance data collected about key indicators such as physical activity, obesity, perceived safety, family and community support, and evaluation and enforcement of health policies and legislation. There are several initiatives underway to collect up-to-date data for Louisiana and these efforts need to be encouraged, financed, and sustained in order to evaluate the current state of our population's health and to monitor future progress.

Progress:

The Youth Risk Behavior Survey (YRBS), conducted by the Centers for Disease Control and Prevention assesses health-risk behaviors among high school students in grades 9-12 and is monitored by the Youth Risk Behavior Surveillance System (YRBSS). The YRBS is a national survey that is completed every other year (odd years). For the first time since 1997, the YRBSS has obtained weighted data for Louisiana, which was collected during the spring of 2008 and administered to 1,349 high school students in 25 public high schools in Louisiana.[6] Having up-to-date data on key health indicators such as physical activity, screen time, overweight and obesity, smoking status, and fruit and vegetable consumption can help to better understand, assess, and evaluate these trends among youth in Louisiana. The 2008 YRBS data for Louisiana that was used in the compilation of the 2009 Report Card was made available by the Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section and is not available for access through the Centers for Disease Control and Prevention's website for the YRBS data. The YRBS was administered again to high school students in Louisiana during the 2009 school year on its normal survey cycle and is expected to be administered thereafter.

A Look Ahead: 2009 Recommendations

Parents

- Spend time with your children in healthy outdoor activities such as biking, walking, swimming, and tennis. Parents are important physical activity role models for their children.
- Ensure that your children are provided with adequate free time to be physically active. The 2008 Physical Activity Guidelines for Americans indicate that children and youth require 60 minutes of physical activity daily.
- Establish household rules for television and computer use, and set reasonable limits. The American Academy of Pediatrics recommends that children and youth watch no more than 2 hours of quality television programming each day.
- Do not place televisions in children's bedrooms. Children with a television in their bedroom are more likely to develop problems with their weight.
- Encourage, promote, and participate in school health advisory councils and parent school associations to advocate for healthy, active living environments at school.
- Volunteer to chaperone children during physically active field trips and days at school.
- Start a walk-to-school program with families in your neighborhood.

Teachers and School Administrators

- Incorporate and promote physical activity breaks during and between classes. Try 5 minutes of an activity such as marching in place, stretching - anything to get kids moving. Play some music and make it fun!
- Encourage and promote active commuting to school. Establish safe and accessible walking/cycling routes to and from the school and provide sufficient space for bicycle and helmet storage in the school or classroom.
- Model healthy habits for your students while in school. Eat healthy meals in the cafeteria with your students and drink healthy drinks in front of your students.
- Encourage moderate and vigorous physical activity behaviors during recess by coordinating games that can involve many children, such as tag, flag football, jumping rope, Frisbee, or soccer.
- Support intramural and interscholastic sports programs.
- Promote, coordinate, implement, and adhere to school wellness policies.
- Restructure physical education programs to teach more life-time and individual goal-based skills such as tennis, golf, dancing, martial arts, etc., in addition to competitive sports.
- Ensure that children are engaging in at least 30 minutes of moderate-to-vigorous physical activity during Physical Education class.
- Consider giving children physically active homework, such as nature walks, and reward superior academic performance with physical activity such as more time for outdoor play and active field trips.

Policy Makers

- Provide tax credits to parents whose children participate in physical activity programs (for fees, equipment, uniforms etc.).
- Increase opportunities for active transportation by legislating that appropriate levels of traffic safety are provided for pedestrians and cyclists.
- Mandate certain physical activity promoting qualities of the built environment for new home construction, such as requirement for sidewalks, bike paths, bike racks, vicinity to parks, etc.
- Ensure that children's active play areas are not marginalized in community planning and design.

- Put physical activity back into elementary schools. Bring back recess.
- Implement school health advisory councils comprised of school administrators, teachers, school staff, parents, public health community members, and others from the community at large.
- Ensure open access to sport and physical activity facilities for all people.
- Improve access to and the quality of public transportation systems.
- Implement public reporting requirements for school and local wellness policies that compel districts to report on their progress in a transparent manner.

Physicians and Health Care Providers

- Become familiar with, and keep information on hand, with respect to the 2008 Physical Activity Guidelines for Americans.
- Include physical activity on the vital signs chart in doctor's offices. This should be especially monitored for any patient aged 6 years and over regarding their physical activity habits at every visit.
- Monitor children's BMI on pediatric body mass index growth charts and provide educational materials on physical activity and eating behaviors to parents.
- Encourage parents to participate in physical activity with their children. Set physical activity goals, such as family biking on weekends or walking after dinner.
- Encourage the development of a monitoring system to report height and weight for children and youth as a data source or surveillance system for weight status among children and youth in Louisiana that can be used alongside or with the Louisiana Immunization Network for Kids Statewide (LINKS) web application.

Researchers

- Continue to advocate for better population surveillance of physical activity and associated health behaviors among children and youth in Louisiana.
- Continue to conduct research to determine the best strategies to increase physical activity and improve health in children and youth.
- Conduct research on the effects of sedentary behaviors such as television viewing on health among children and youth.
- Conduct research on the effects of the built environment on physical activity and health among children and youth.
- Conduct research concerning the long-term health benefits of physical activity among women during and after pregnancy and among children during the early years of development from infancy to pre-puberty.
- Study the Louisiana Report Card on Physical Activity and Health in Children and Youth, and embark on research that will inform the "Incomplete" grades.
- Incorporate objective measures of physical activity in research studies, including accelerometers and pedometers.

Making the Grade

The grades for the 2009 Report Card were assigned for each indicator using the most recent and accurate data available and the consideration of recently published scientific literature and reports. Below is a rubric for the assignment of grades for all indicators presented in the Report Card.

GRADES	
A	Louisiana's children and youth are physically active and achieving optimal health
B	Majority of Louisiana's children and youth are physically active and achieving optimal health; however, children who are obese, underserved, and physically or mentally challenged may not have appropriate physical activity opportunities provided
C	Insufficient appropriate physical activity opportunities and programs available to large segments of Louisiana's children and youth
D	Insufficient appropriate physical activity opportunities and programs available to the majority of Louisiana's children and youth
F	Louisiana's children and youth have a sedentary lifestyle with insufficient opportunities for physical activity
INC	Incomplete. At the present time there is not enough information available for grading

LOUISIANA'S OVERALL GRADE 2009:	D

Summary of Report Card Grades: 2008 & 2009

Categories	2008 Grades	2009 Grades	Indicators
Physical Activity/ Inactivity	D	D	Physical Activity Levels
	D	D-	Screen Time
	C	C	Sports Participation
Health & Health Behaviors	F	F	Overweight and Obesity
	INC	C-	Overall Physical and Emotional Well-Being
	—	D-	Fruit and Vegetable Consumption
	—	C	Smoking Status
Family	INC	INC	Family Perceptions and Roles Regarding Physical Activity
School & Community	D	D	Physical Activity Programming at School
	C	C	Training of School Personnel in Physical Activity
	INC	D	Built Environment and Community Design
Policy and Investments	B-	B-	Progress on Government Strategies and Policies
	INC	INC	Government Investments
	INC	INC	Industry and Philanthropic Investment
Overall Grade	D	D	

Physical Activity/Inactivity

The Physical Activity/Inactivity category presents the growing concern around the proportion of children and youth in Louisiana who do not meet the 2008 Physical Activity Guidelines for Americans.[7] Physical activity offers health and protective benefits against many chronic diseases. In 2005, physical inactivity was responsible for 191,000 deaths (1 in 10) in the United States.[8] In addition, physically active children and adolescents are less likely to be overweight and obese. It is important to identify and understand physical activity behaviors so as to promote, encourage, and make the appropriate changes to help children meet physical activity recommendations. To assess physical activity and inactivity among children and youth, three indicators are included in this category: physical activity levels, screen time, and sports participation. The table below presents a summary of the grades for 2008 and 2009. It is evident that there were no demonstrable improvements over the past year. Indeed, we appear to be losing ground in screen time.

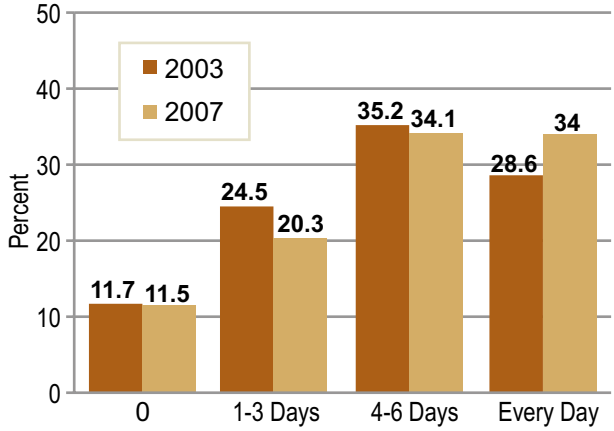
Indicators	2008 Grades	2009 Grades
Physical Activity Levels	D	D
Screen Time	D	D-
Sports Participation	C	C

Physical Activity/Inactivity: Physical Activity Levels

GRADE D

According to the 2008 Physical Activity Guidelines for Americans produced by the U.S. Department of Health and Human Services,[7] children and adolescents aged 6-17 years old should engage in a minimum of 60 minutes of physical activity every day. Of the 60 or more minutes of daily physical activity, most should be moderate-to-vigorous physical activity (MVPA) with at least 3 days a week or more that includes vigorous physical activity.[7] Examples of moderate physical activities for children include: active recreation (i.e., hiking, skateboarding, rollerblading), biking, and brisk walking; and for adolescents include: active recreation (i.e., canoeing, hiking, skateboarding, rollerblading), biking, brisk walking, housework and yard work such as sweeping or pushing a lawn mower, and games that require catching and throwing such as baseball, and softball.[7] Examples of vigorous physical activities for children include: active games involving running and chasing such as tag, running, biking, jumping rope, martial arts, sports such as soccer, basketball, ice or field hockey, swimming, and tennis; and for adolescents include: active games involving running and chasing such as flag football, biking, jumping rope, martial arts, running, sports such as soccer, ice or field hockey, basketball, swimming, tennis, and vigorous dancing.[7]

Figure 2:
In 2003 and 2007, the Percentage of Children and Youth (ages 6-17) in Louisiana that Engaged in Vigorous Physical Activity for at Least 20 Minutes



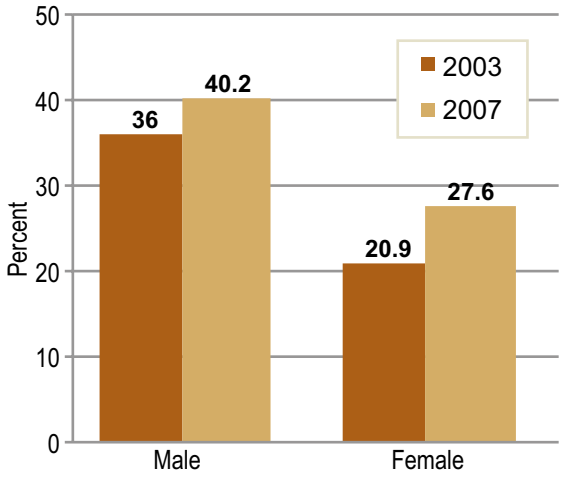
Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Louisiana Information

The 2003 National Survey of Children's Health (NSCH),[3] the 2007 NSCH,[2] and the 2008 Youth Risk Behavior Survey (YRBS) for Louisiana[6] were used to compile data that pertains to physical activity levels among children and youth in Louisiana.

Results from the 2007 NSCH[2] indicate that only 34% of children and youth aged 6-17 years in Louisiana engaged in at least 20 minutes of vigorous physical activity every day; however, this is higher than the 2003 NSCH[3] results reported in the 2008 Report Card (*Figure 2*). In contrast, 12% did not participate in any vigorous physical activity in 2007 (*Figure 2*).[2] There was a higher rate of vigorous physical activity among males compared to females (*Figure 3*).

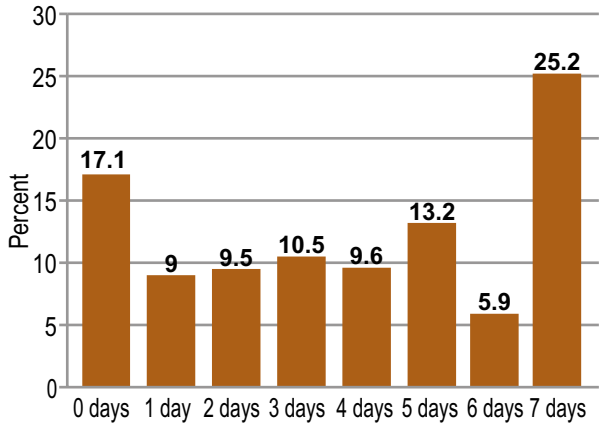
Figure 3:
In 2003 and 2007, Percentage of Children and Youth (ages 6-17) in Louisiana that Engaged in Vigorous Physical Activity Every Day (at least 20 minutes) by Gender



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

One limitation of the NSCH is that the data are collected by proxy report, with information reported by the parents of children and youth rather than the children and youth themselves. However, the YRBS provides self-reported data by high school students in grades 9-12. According to the 2008 YRBS for Louisiana,[6] 25% of high school students in Louisiana met recommendations for physical activity, and 17% of students reported that they were not physically active (*Figure 4*). A higher proportion of males met

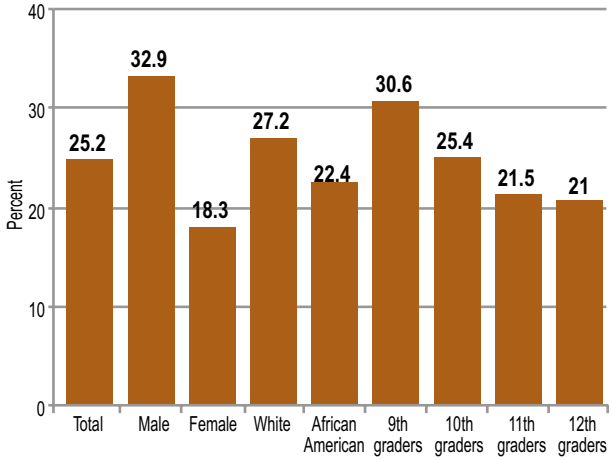
Figure 4:
In 2008, Percentage of High School Students in Louisiana who Were Physically Active for at Least 60 Minutes During the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

the recommendation for physical activity compared to females.[6] In addition, there was a higher rate of physical activity (60 min. every day) among White students compared to African American students, and among 9th graders compared to 10th, 11th, and 12th graders (*Figure 5*).[6]

Figure 5:
In 2008, Percentage of High School Students in Louisiana who Met Recommendations for Physical Activity (60 minutes every day)



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Other Information

According to the 2008 Physical Activity Guidelines for Americans,[7] 30 to 60 minutes of regular, moderate-to-vigorous physical activity (MVPA) 3 to 5 times a week can reduce overweight and obesity among children and adolescents. Physical activity not only reduces the risk of being overweight and obese,[9] but also reduces the risk of morbidity and mortality due to chronic diseases in adulthood such as: ischemic heart disease, stroke, diabetes mellitus, and certain cancers.[8] In addition, adolescents who engaged in MVPA for 5 or more times per week were less likely to engage in adverse health risk behaviors such as: sexual intercourse, sex without birth control, cigarette use, driving while drunk, using drugs, being truant, or failing to wear a seatbelt, and were less likely to have low self-esteem, according to results from the National Longitudinal Study of Adolescent Health.[10]

Key Findings for Physical Activity Levels

- 25% of high school students in Louisiana meet the recommendations for physical activity
- Females & African Americans have lower levels of physical activity
- Physical activity levels decrease with increasing age

Physical Activity/Inactivity: Screen Time

GRADE D-

For this report, screen time is defined as the time children and youth spend watching television or videos, playing video games, and using the computer for non-school purposes such as for the Internet or games. The use of interactive video games that may require some physical activities (ex. Nintendo® Wii™) among children and adolescents is not included in this report due to a lack of data and information. The American Academy of Pediatrics (AAP) recommends that children limit television and video use to no more than 2 hours per day.[4]

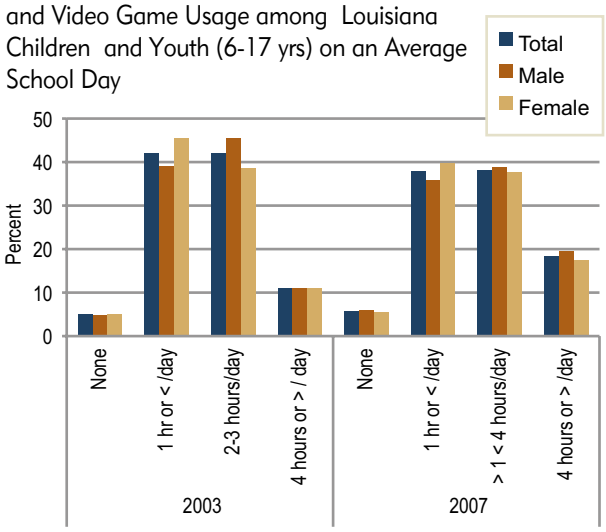
Louisiana Information

The 2003 National Survey of Children's Health (NSCH),[3] the 2007 NSCH,[2] and the 2008 Youth Risk Behavior Survey (YRBS) for Louisiana[6] were used to compile information on screen time among children and youth in Louisiana.

It is important to note that the NSCH survey response categories for television/video and video game usage as well as computer usage for non-school purposes changed from 2003 to 2007, making comparisons between these two survey years difficult. However, according to the 2007 NSCH,[2] 57% of children and youth (6-17 yrs) in Louisiana watched television, videos, or played video games for more than 1 hour per day (*Figure 6*). There were a higher proportion of males with one or more hours per day of television, video, and video game usage compared to females (*Figure 6*). It is striking to note that 18% of children and youth in Louisiana watched 4 or more hours of television per day.[2] In addition, 52% of children and youth used a computer for more than one hour per day for non-school purposes in 2007 (*Figure 7*).[2]

Figure 6:

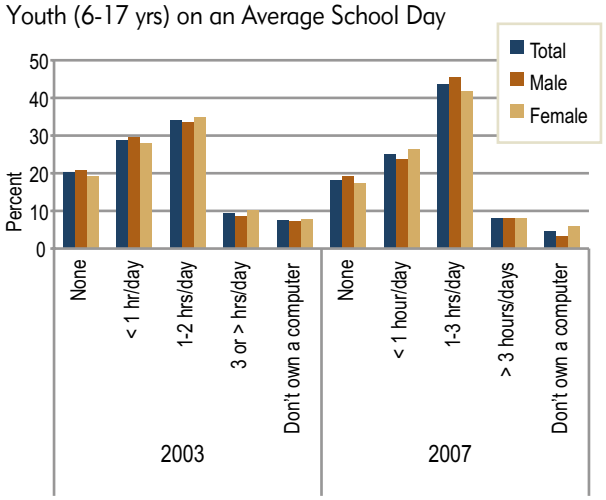
In 2003 & 2007, Percentage of Daily TV/Video and Video Game Usage among Louisiana Children and Youth (6-17 yrs) on an Average School Day



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Figure 7:

In 2003 & 2007, Percentage of Daily Computer Usage for Non-School Purposes among Louisiana Children and Youth (6-17 yrs) on an Average School Day

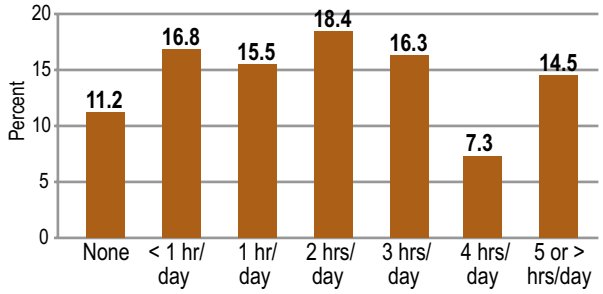


Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

The NSCH relies on proxy reports, but the YRBS acquires self-reported data from the high school students themselves. According to the 2008 YRBS for Louisiana,[6] 57% (56% male, 58% female) of high school students in Louisiana exceeded the AAP recommendations and watched 2 or more hours of television per day (*Figures 8 & 9*).[6] A disproportionate number of African American students (71%) in Louisiana watched TV for 2 or more hours per day compared to their White counterparts (48%) (*Figure 9*).[6] However, television viewing slowly declined with increasing grade level (*Figure 9*).[6]

Figure 8:

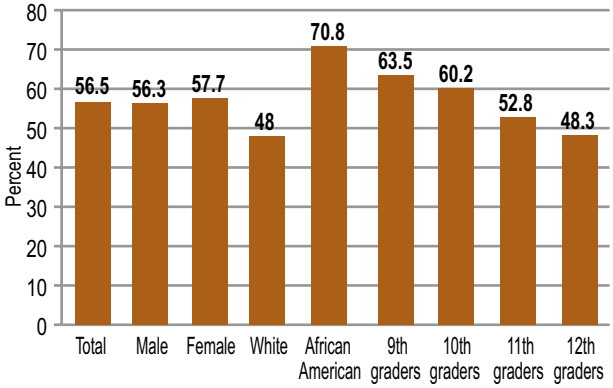
In 2008, Percentage of High School Students in Louisiana who Watched TV on an Average School Day



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Figure 9:

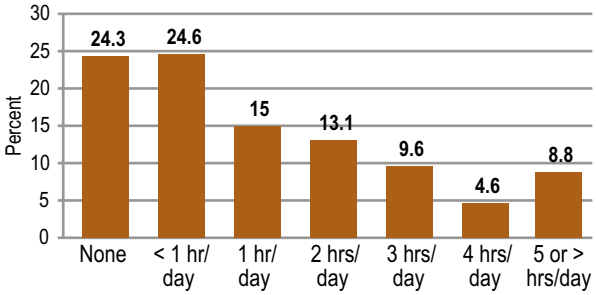
In 2008, Percentage of High School Students in Louisiana who Watched TV for 2 or More Hours Per Day on an Average School Day



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Figure 10:

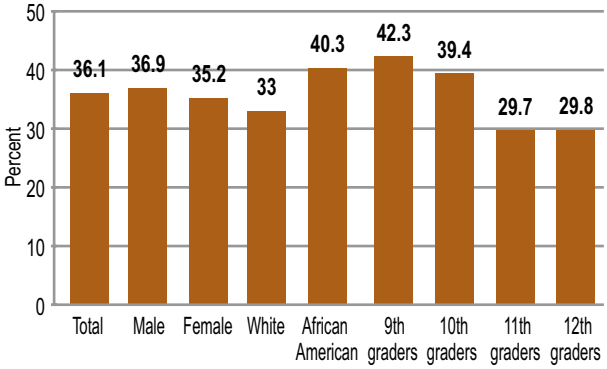
In 2008, Percentage of High School Students in Louisiana who Played Video or Computer Games or Used a Computer for Non-School Purposes on an Average School Day



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Figure 11:

In 2008, Percentage of High School Students in Louisiana who Played Video or Computer Games or Used a Computer for Non-School Purposes for 2 or More Hours Per Day on an Average School Day

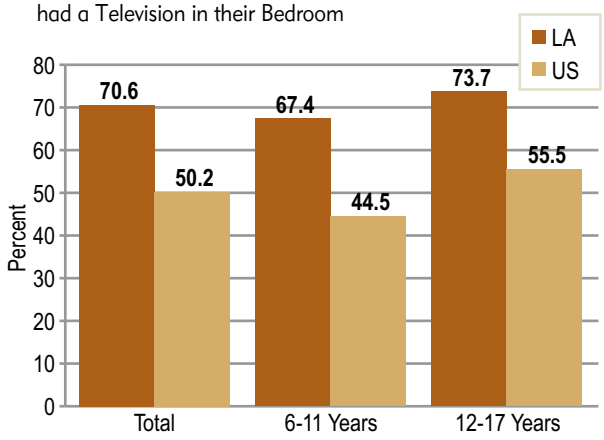


Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Thirty-six percent (37% male, 35% female) of high school students reported that they played video or computer games or used a computer for non-school purposes for 2 or more hours per day on an average school day (*Figures 10 & 11*).[6] A higher proportion of African American students (40%) played video or computer games or used a computer for non-school purposes for 2 or more hours per day compared to White students (33%) (*Figure 11*).[6]

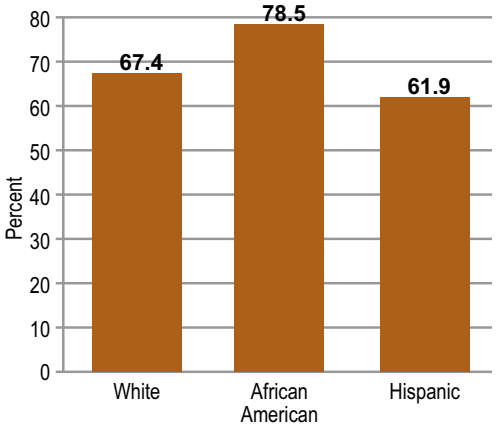
Results from the 2007 NSCH[2] show that slightly over 70% of children and youth in Louisiana had a television in their bedroom, higher than the U.S. average (*Figure 12*). A greater proportion of African American children and youth in Louisiana had access to a television in their bedroom compared to their White and Hispanic counterparts (*Figure 13*).[2]

Figure 12:
In 2007, Percentage of Children and Youth (6-17 yrs) who had a Television in their Bedroom



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Figure 13:
In 2007, Percentage of Children and Youth (6-17 yrs) in Louisiana who had a Television in their Bedroom by Ethnicity

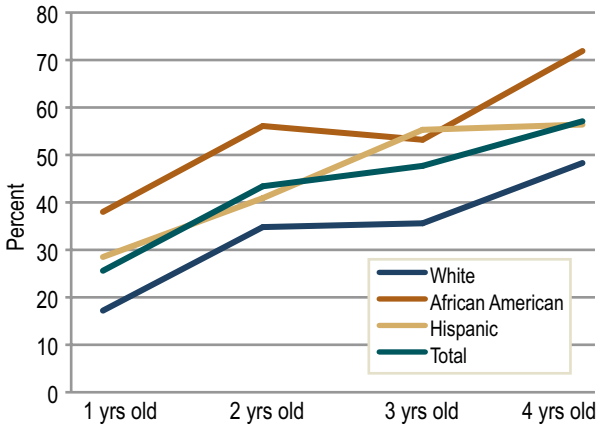


Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Other Information

Sedentary behavior, specifically television viewing, is a ubiquitous behavior among U.S. children and youth. Results from the 2007 YRBS[11] showed that 35% (38% male, 33% female) of U.S. high school students watched 3 or more hours of television per day. In addition, nearly 25% of U.S. high school students played video games or used a computer for non-school purposes for 3 or more hours per day.[11]

Figure 14:
Percentage of Children who Exceeded Recommendation (2 hrs/Day) for TV/Video Usage



Source: Dennison BA, Erb TA, Jenkins PL. Television viewing and television in bedroom associated with overweight risk among low-income preschool children. Pediatrics. 2002; 109(6):1028-1035

Many studies[12-15] have shown that children are exceeding 2 hours of television per day. Alarmingly, children are exceeding this recommendation at a very young age (*Figure 14*).[15] Among a cohort of preschool-age children, TV/video usage increased with age, and there were higher rates of TV/video usage among African American children compared to their White and Hispanic counterparts.[15]

In addition, several studies have shown that children who have a television in their bedroom have higher BMI compared to children who do not have a television in their bedroom.[15-17] One study found that children who had a television in their bedroom were 1.3 times more likely to be overweight than children who did not have a television in their bedroom.[17]

Key Findings for Screen Time

- 57% of high school students in Louisiana exceed the American Academy of Pediatrics recommendation for screen time
- Preschool-aged children are already exceeding recommendations for screen time
- Over 70% of children and youth in Louisiana have a television in their bedroom
- Children who have a TV in their bedroom are 1.3 times more likely to be overweight

Physical Activity/Inactivity: Sports Participation

GRADE C

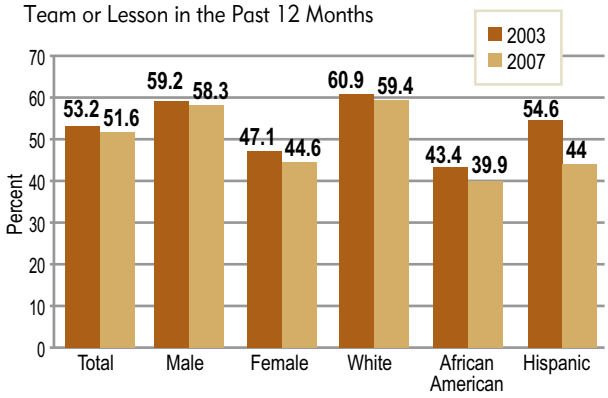
Louisiana Information

The 2007 National Survey of Children's Health (NSCH)[2] and the 2008 Youth Risk Behavior Survey (YRBS) for Louisiana[6] were used to compile information on sports participation among children and youth in Louisiana.

Slightly over 51% percent of Louisiana youth aged 6-17 years participated in at least one after-school sports teams or lessons in the 12 months preceding the survey, according to results from the 2007 NSCH (*Figure 15*).[2] This percentage is similar to the 2003

Figure 15:

In 2003 & 2007, Percentage of Children and Youth (6-17) in Louisiana that Participated in at Least One After-School Sports Team or Lesson in the Past 12 Months



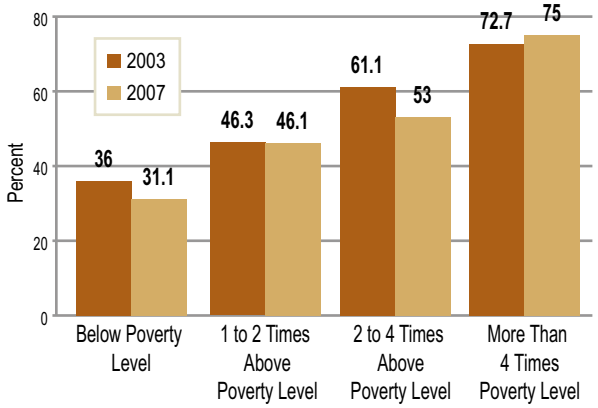
Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

NSCH[3] results (53%) reported in the 2008 Report Card (*Figure 15*). There are still disparities by race and gender for sports participation with more males than females and more Whites than African Americans or Hispanics participating in sports – as also reported in the 2008 Report Card. In addition, there are also still disparities in sports participation by level of household income level (*Figure 16*).

According to the 2008 YRBS for Louisiana,[6] 54% of high school students in Louisiana played on one or more sports teams, with a higher participation rate among males (60%) compared to females (49%) (*Figure 17*). While the 2007 NSCH[2] shows higher sports participation among White students, the 2008 YRBS[6] shows; however, that participation rates among African American and White high school students in Louisiana were similar (*Figure 17*). Further, results from the 2008 YRBS for Louisiana[6] also show that sports participation among high school students in Louisiana slowly declined with increasing grade level.

Figure 16:

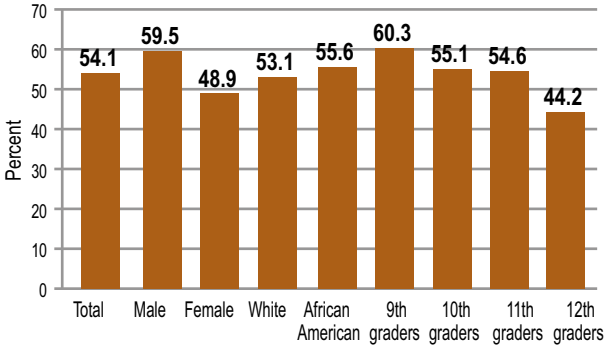
In 2003 & 2007, Percentage of Children and Youth (6-17 yrs) in Louisiana that Participated in at Least One After-School Team or Lesson in the Past 12 Months by Income Level



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Figure 17:

In 2008, Percentage of High School Students in Louisiana that Played on One or More Sports Teams During the 12 Months Before the Survey



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Key Findings for Sports Participation

- Over 50% of high school students in Louisiana play sports after-school
- Sports participation declines with increasing grade level
- Families living below the federal poverty level have lower sports participation

Health and Health Behaviors

There are many benefits of physical activity on health and health behaviors. There are four indicators included in the health and health behaviors category for the 2009 Report Card: overweight and obesity, overall physical and emotional well-being, fruit and vegetable consumption, and smoking status. Regular physical activity among children and youth helps maintain a healthy body weight and contributes to overall physical and emotional well-being. Promoting and providing opportunities for children to meet recommendations for physical activity can help fight against the obesity epidemic. According to the 2008 Physical Activity Guidelines for Americans,[7] 30 to 60 minutes of regular, moderate-to-vigorous physical activity (MVPA) 3 to 5 times a week can reduce overweight and obesity among children and adolescents. In addition, physical activity influences fruit and vegetable consumption and is associated with a reduced risk of cigarette smoking. Fruit and vegetable consumption and smoking status are two new indicators that were added to this year's Report Card.

Indicators	2008 Grades	2009 Grades
Overweight and Obesity	F	F
Overall Physical and Emotional Well-Being	INC	C-
Fruit and Vegetable Consumption	—	D-
Smoking Status	—	C

Health and Health Behaviors: Overweight and Obesity

GRADE F

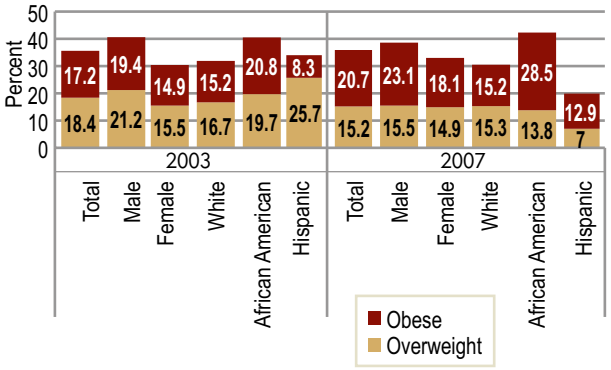
For children and adolescents, a body mass index (BMI) greater than or equal to the 85th percentile and less than the 95th percentile is considered overweight, and a BMI greater than or equal to the 95th percentile is considered obese.[18] These percentiles are based on a child's age and gender.

Louisiana Information

Data pertaining to overweight and obesity for children and youth in Louisiana were obtained from the 2003 National Survey of Children's Health (NSCH),[3] the 2007 NSCH,[2] and the 2008 Youth Risk Behavior Survey (YRBS) for Louisiana.[6]

According to the 2007 NSCH,[2] 36% of 10-17 year olds in Louisiana were overweight and obese (*Figure 18*). While the rates of children and youth in Louisiana who were overweight and obese may seem constant from 2003 to 2007, it is important to notice the increase in obesity rates from 2003 (17.2%) to 2007 (20.7%)

Figure 18:
In 2003 and 2007, Percentage of Louisiana Children and Youth (ages 10-17) who were Overweight and Obese

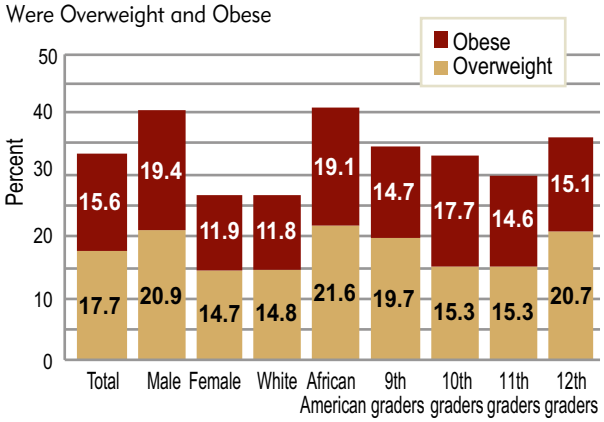


Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

(*Figure 18*). Thus, among children and youth who were overweight and obese, a larger proportion of children and youth in Louisiana moved into the obese category. This trend is also seen across subgroups.[2, 3]

In the 2008 YRBS for Louisiana,[6] high school students were asked to report their height and weight. BMI was then calculated from the self-reports which show that 33% of high school students were overweight and obese (*Figure 19*).[6] Strikingly, 40% of males and 41% of African Americans were overweight and obese (*Figure 19*).[6] However, when students were asked to describe

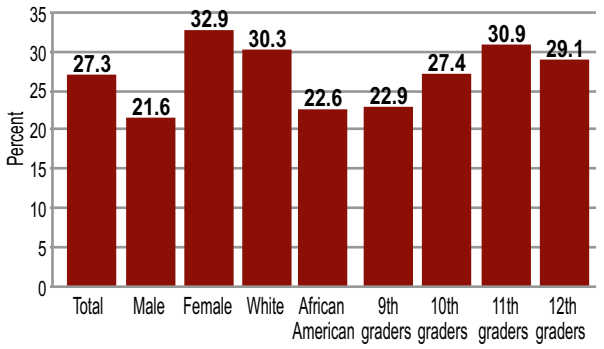
Figure 19:
In 2008, Percentage of High School Students in Louisiana who Were Overweight and Obese



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

their body weight, only 27% described themselves as slightly overweight or very overweight. A higher proportion of females (33%) described themselves as slightly overweight or very overweight than males (22%), although there was a higher rate of overweight and obesity among male students (*Figures 19 & 20*). In addition, a higher proportion of White students (30%) described themselves as slightly overweight or very overweight compared to African American students (23%) when indeed there was a higher rate of overweight and obesity among African American students based on their BMI (*Figures 19 & 20*).

Figure 20:
In 2008, Percentage of Students who Described Themselves as Slightly Overweight or Very Overweight

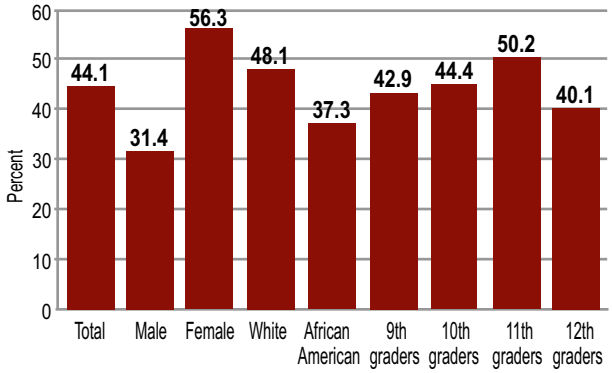


Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Slightly over 44% of high school students in Louisiana reported that they were trying to lose weight (*Figure 21*).[6] A higher proportion of female and White students reported that they were trying to lose weight compared to males and African Americans, respectively.[6]

Figure 21:

In 2008, Percentage of Students who Were Trying to Lose Weight

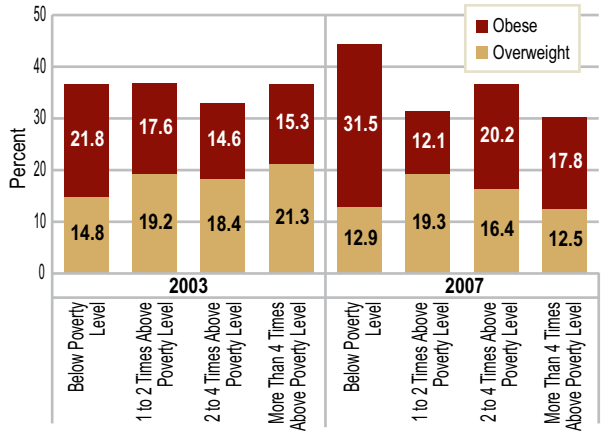


Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

There continue to be disparities among children and youth in Louisiana for rates of overweight and obesity (*Figures 18 & 19*).[2,6] A higher proportion of African American children and youth in Louisiana were overweight and obese compared to children in other ethnic groups (*Figures 18 & 19*).[2,6] Also, a higher proportion of children and youth who lived below the federal poverty level were overweight and obese compared to children in other socioeconomic levels.[2,3] According to data from the 2007 NSCH,[2] 44% of children and youth in Louisiana who lived below the poverty level were overweight and obese (*Figure 22*).

Figure 22:

In 2003 & 2007, Percentage of Louisiana Children and Youth (10-17 yrs) who Were Overweight and Obese by Income Level



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

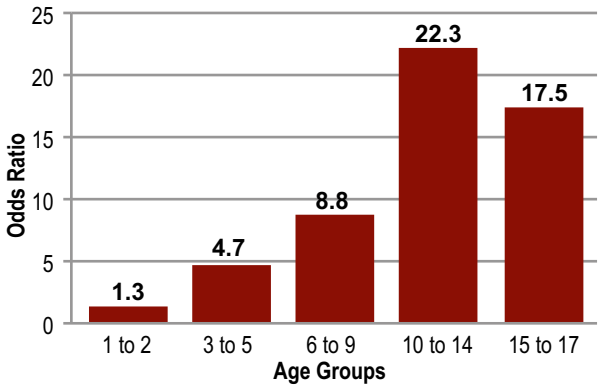
Other Information

Results from the 2007 Youth Risk Behavior Survey (YRBS)[11] show that 16% of students (grades 9-12) in the U.S. population were overweight and 13% were obese, and males had a higher prevalence of overweight (16%) and obesity (16%) than females (15% & 7%, respectively).

Childhood obesity is a predictor of obesity in adulthood.[19] In particular, one study showed that children who were obese in the age category of 10 to 14 years of age were 22 times more likely to become obese adults than children who were not obese in that age category (*Figure 23*).[19] Furthermore, overweight and obesity increases the risk of diseases such as: ischemic heart disease, ischemic stroke, hypertensive disease, diabetes mellitus, and certain cancers.[8]

Figure 23:

Odds Ratios for Obesity in Young Adulthood According to Subject's Obesity Status in Childhood



Source: Whitaker RC, Wright JA, Pepe MS, Seidel KD, Dietz WH. Predicting obesity in young adulthood from childhood and parental obesity. N Engl J Med. 1997;337(13):869-873

Key Findings for Overweight/Obesity

- In Louisiana, 36% of 10 to 17 yr olds and 33% of high school students are overweight and obese
- 40% of male and 41% of African American high school students are overweight and obese
- Children who are obese are many times more likely to become obese adults

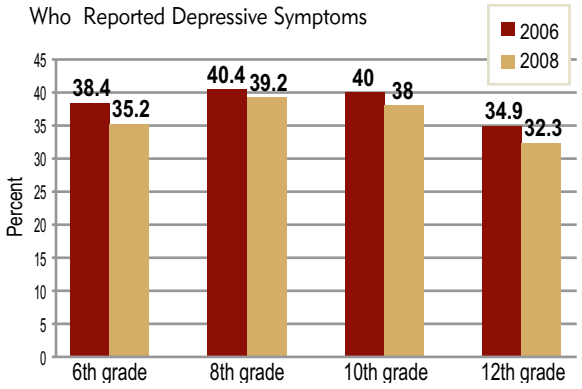
Health and Health Behaviors:
Overall Physical and Emotional Well-Being

GRADE C-

Louisiana Information

The data for overall physical and emotional well-being among children and youth in Louisiana came from the 2006 Caring Communities Youth Survey (CCYS),[20] the 2008 CCYS,[21] and the 2007 National Survey of Children's Health (NSCH).[2]

Figure 24:
In 2006 & 2008, Percentage of Youth in Louisiana Who Reported Depressive Symptoms



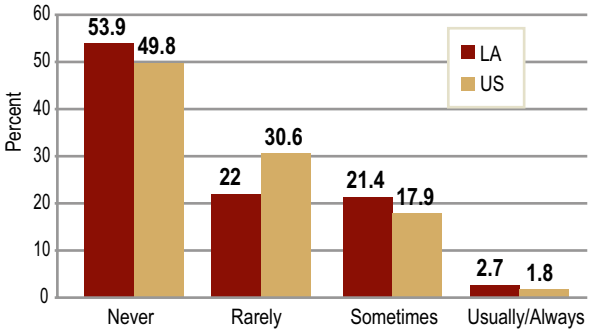
Source: Picard Center for Child Development, University of Louisiana Lafayette. 2006 and 2008 Caring Communities Youth Surveys. Retrieved from: http://ccd-web.louisiana.edu/Portals/0/CCYS_2006/State_of_Louisiana_Profile_Report.pdf and http://ccd-web.louisiana.edu/Portals/0/State_of_Louisiana_2008_Profile_Report.pdf

Over 30% of children and youth in grades 6 through 12 in Louisiana reported depressive symptoms, according to results from the 2008 CCYS (*Figure 24*).[21] These results are similar to those from the 2006 CCYS[20] reported in the 2008 Report Card.

In the 2007 NSCH, parents of children and youth (6-17 years) were asked how often their child was unhappy, sad, or depressed. While 54% of parents in Louisiana reported that their child was never unhappy, sad, or depressed during the past month of the survey, 22% responded rarely, 21% answered sometimes, and 3% reported that their child was usually or always unhappy, sad, or depressed (*Figure 25*).[2] These results are similar to the overall U.S. population.

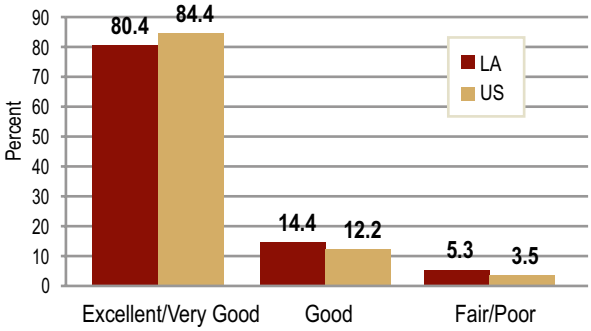
Parents were also asked in the 2007 NSCH[2] about their child's overall health status. Slightly over 80% of parents in Louisiana reported that their child (0-17 yrs) had excellent or very good health (*Figure 26*).[2] In addition, 14.4% of parents reported that their child had good health, and 5.3% reported that their child had fair or poor health (*Figure 26*).[2]

Figure 25:
In 2007, Percentage of Children and Youth (6-17 yrs) in Louisiana that Were Unhappy, Sad, or Depressed During the Past Month



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Figure 26:
In 2007, Percentage of Children and Youth (0-17 yrs) in Louisiana with Excellent/Very Good, Good, and Fair/Poor Health Overall



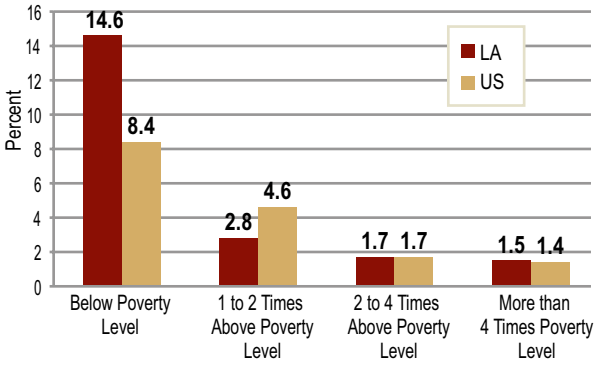
Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

There were clear economic disparities among children and youth in Louisiana who had fair or poor health, according to data from the 2007 NSCH (*Figure 27*).[2] Children and youth in Louisiana who lived below the federal poverty level were disproportionately affected by fair or poor health compared to their counterparts.[2]

Results from the 2007 NSCH[2] also show the proportion of children and youth (0-17 yrs) in Louisiana who had a chronic health condition. Parents were asked if their

Figure 27:

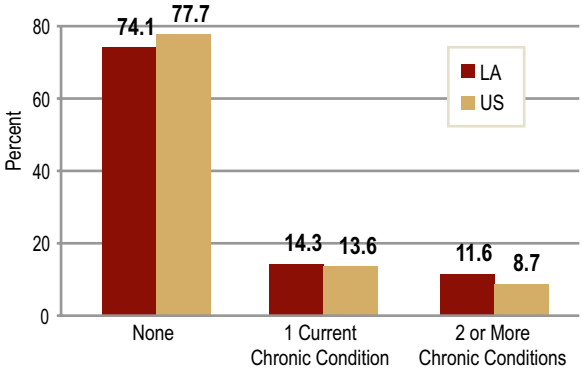
In 2007, Percentage of Children and Youth (0-17 yrs) with Fair/Poor Health by Income Level



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Figure 28:

In 2007, Percentage of Children and Youth (0-17 yrs) in Louisiana with Chronic Health Conditions



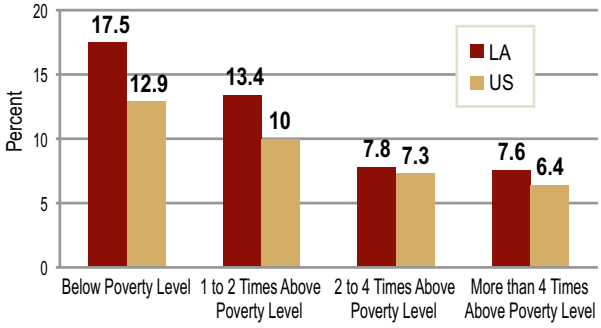
Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

child currently had any of the following conditions: learning disability, attention deficit disorder, depression, anxiety problems, behavioral or conduct problems, autism or Asperger's, developmental delay, speech problems, Tourette Syndrome, asthma, diabetes, epilepsy or seizure disorder, hearing problems, vision problems, bone or joint problems, or brain injury.[2] Seventy-four percent of parents in Louisiana reported that their child did not have any current chronic health conditions (*Figure 28*).[2]

There were a higher proportion of children and youth (0-17 yrs) with 2 or more current chronic health conditions that lived below the poverty level compared to children who lived in higher economic levels (*Figure 29*). Of the children who lived below the poverty level, 18% had 2 or more chronic health conditions.[2]

Figure 29:

In 2007, Percentage of Children and Youth (0-17 yrs) in Louisiana with 2 or More Current Chronic Conditions by Income Level



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Other Information

Increasing physical activity is a potential approach to increase overall physical and emotional well-being among children and youth. Studies have shown an inverse relationship between physical activity and poor psychological health.[22, 23] One study showed that adolescents (aged 13-16 yrs) who reported lower physical activity levels also reported lower psychological wellbeing.[23] Results from the National Longitudinal Study of Adolescent Health[10] showed that students (grades 7-12) who reported at least 5 bouts of MVPA per week were less likely to have low self-esteem compared to their peers with less than 5 bouts of MVPA. In addition, physically active adolescents were less likely to engage is certain risky behaviors, were more likely to have higher self-esteem, and have higher academic performance compared to adolescents who did not engage in physical activity.[10]

Key Findings for Overall Physical Well-Being

- Over 30% of Louisiana children and youth in grades 6-12 have depressive symptoms
- Children and youth in Louisiana who live below the poverty level are more likely to have fair or poor health compared to their counterparts who live above the poverty level
- 12% of children and youth in Louisiana have 2 or more current chronic health conditions
- Adolescents who engage in physical activity are less likely to have low self-esteem and engage in risky behaviors

Health and Health Behaviors: Fruit and Vegetable Consumption

GRADE **D-**

Along with physical activity, good nutrition can lead to healthier children and adolescents. While nutrition is a broad category that includes many food groups, this year's Report Card will only include a discussion on fruit and vegetables.

According to the 2005 Dietary Guidelines for Americans,[24] based on a 2,000 calorie diet, Americans (ages 2 and up) should consume 2 cups or 4 servings of fruit along with 2½ cups or 5 servings of vegetables every day. A variety of fruits and vegetables should be consumed to meet the fruit and vegetable recommendations.[24] Several times a week, vegetables should be selected from the following subgroups: dark green, orange, legumes, starchy vegetables, and other vegetables.[24]

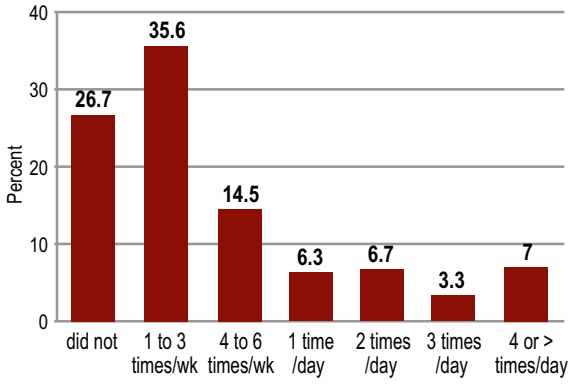
Louisiana Information

Information pertaining to fruit and vegetable consumption among children and youth in Louisiana was provided by the 2008 Youth Risk Behavior Survey (YRBS) for Louisiana.[6]

High school students in Louisiana were asked about food they ate or drank during the 7 days before the survey.[6] Slightly over 73% responded that they drank 100% fruit juices while 27% reported that they did not drink 100% fruit juices (*Figure 30*).[6] In addition, 78% of high school students in Louisiana reported that they ate fruit one or more times during the 7 days before the survey, while 22% did not eat any fruit.[6] However, less than 4% of students ate fruit 4 or more times a day (*Figure 31*).[6]

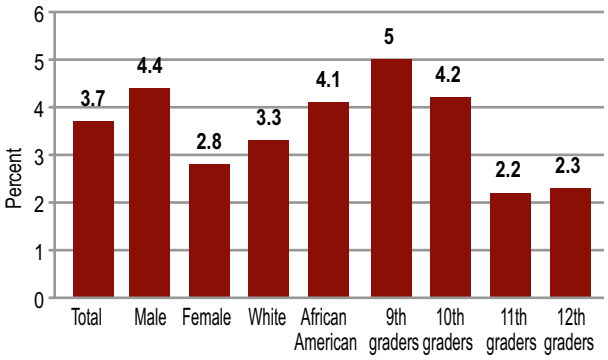
Students were also asked about their vegetable consumption during the 7 days preceding the survey. Nearly 50% of students reported that they ate green salad, 60% ate potatoes (excluding french fries, fried potatoes, or potato chips), 28% reported that they ate carrots, and 74% reported that they ate other vegetables (*Figure 32*).[6] Although the proportion of high school

Figure 30:
In 2008, Percentage of High School Students in Louisiana who Drank 100% Fruit Juices During the 7 Days Before the Survey



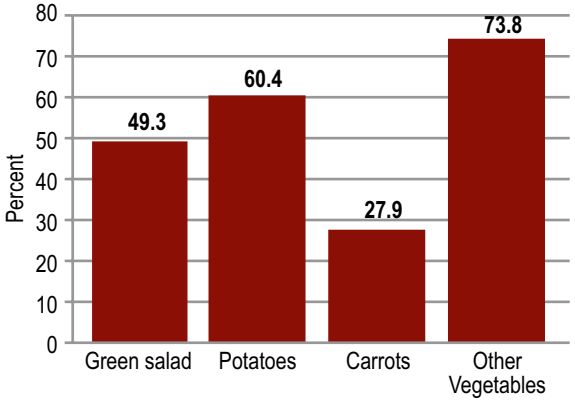
Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Figure 31:
In 2008, Percentage of High School Students in Louisiana who Ate Fruit 4 or More Times a Day During the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

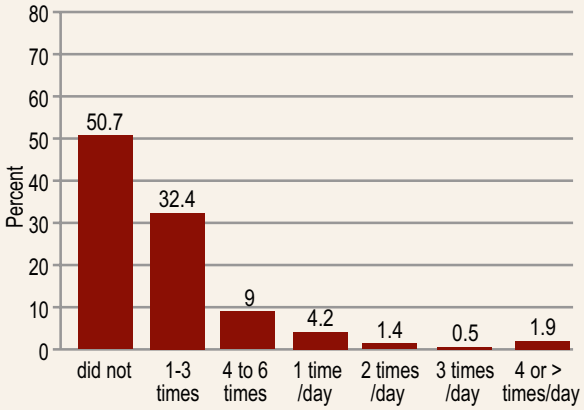
Figure 32:
In 2008, Percentage of High School Students in Louisiana who Ate Vegetables During the 7 Days Before the Survey



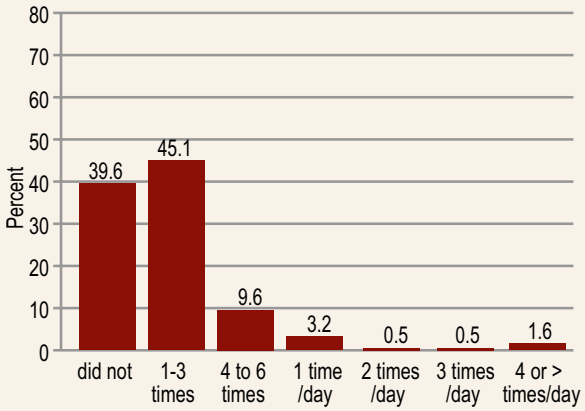
Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Figure 33: In 2008, Percentage of High School Students who Ate Vegetables - continued

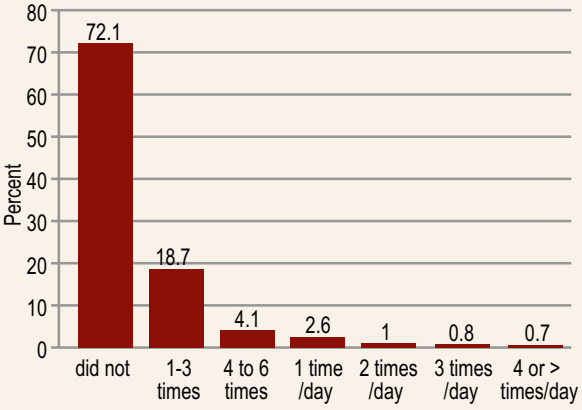
In 2008, Percentage of High School Students in Louisiana who Ate Green Salad During the 7 Days Before the Survey



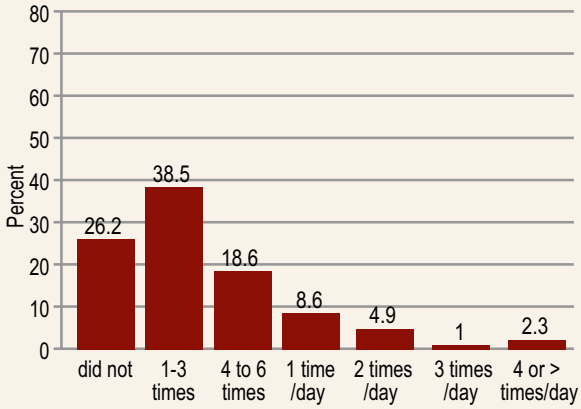
In 2008, Percentage of High School Students in Louisiana who Ate Potatoes (excluding french fries, fried potatoes, or potatoe chips) During the 7 Days Before the Survey



In 2008, Percentage of High School Students in Louisiana who Ate Carrots During the 7 Days Before the Survey



In 2008, Percentage of High School Students in Louisiana who Ate Other Vegetables During the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

students who ate vegetables during the 7 days before the survey may seem fairly high, it is important to note the frequency of vegetable consumption among these high school students (*Figure 33*). Most types of vegetables were eaten 1-3 times a week or less.

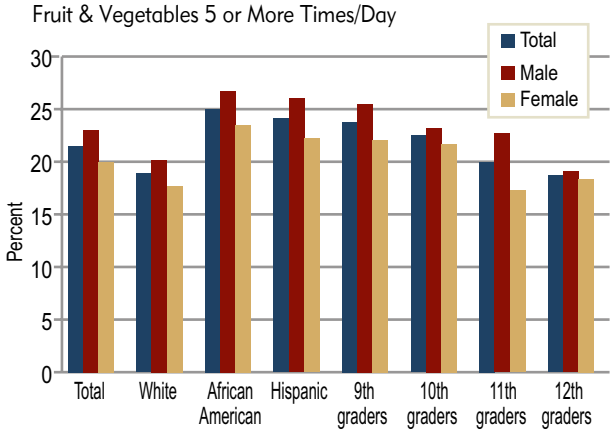
While availability, affordability, and access to healthy food may hinder fruit and vegetable consumption, several strategies and initiatives are currently underway in Louisiana to not only provide access to fruit and vegetables but to also support healthy food choices. Some legislative actions to promote healthy eating are provided in the Policy and Investments section of the Report Card under Progress on Government Strategies and Policies.

Other Information

According to results from the 2007 YRBS,[11] 21% of high school students in the U.S. ate fruit and vegetables for five or more times per day (*Figure 34*). Across subgroups, there was a higher proportion of males who ate fruit and vegetables for 5 or more times per day compared to females.[11] There was also a higher proportion of African American (25%) students who ate 5 or more servings of fruit and vegetables per day compared to White (19%) and Hispanic (24%) students (*Figure 34*).[11] There was a decline in the proportion of high school students who ate 5 or more servings of fruit and vegetables with increasing grade level (*Figure 34*).[11]

Figure 34:

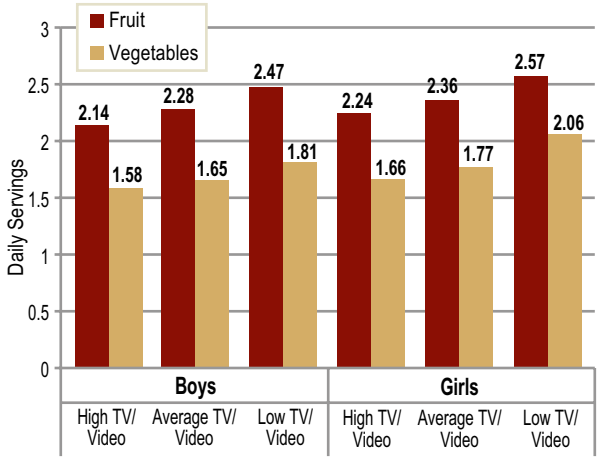
In 2007, Percentage of U.S. High School Students who Ate Fruit & Vegetables 5 or More Times/Day



Source: Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System: 2007 Youth Risk Behavior Survey. Retrieved from http://apps.nccd.cdc.gov/yrbss/

Figure 35:

Fruit & Vegetable Consumption and Screen Time by Gender



Source: Utter J, Neumark-Sztainer D, Jeffery R, Story M. Couch potatoes or french fries: are sedentary behaviors associated with body mass index, physical activity, and dietary behaviors among adolescents? J Am Diet Assoc. 2003;103(10):1298-1305

Some studies have shown that eating fewer servings of fruit and vegetables is influenced by physical inactivity and certain sedentary behaviors.[12, 25-27] Results from the Bogalusa Heart Study,[25] which was conducted in Louisiana, found that participants who had higher levels of physical activity consumed more servings of fruit and 100% fruit juices as well as vegetables compared to participants with lower levels of physical activity. However, fruit and vegetable consumption may be explained by certain health behavior profiles rather than physical activity per se.[28, 29]

Another study found a significant association between certain sedentary behaviors and lower fruit and vegetable consumption.[12] Specifically, children who had high screen time (television/video use) had fewer servings of fruit and vegetables (*Figure 35*).[12] Television advertisements and commercials can implicitly cue habitual[12] and unhealthy eating behaviors.[26]

Key Findings for Fruit and Vegetable Consumption

- 27% of high school students did not report drinking 100% fruit juice
- Less than 4% of high school students ate fruit 4 or more times per day
- Low frequency of vegetable consumption among Louisiana high school students
- Children with high screen time consume fewer servings of fruit and fewer servings of vegetables

Health and Health Behaviors: Smoking Status

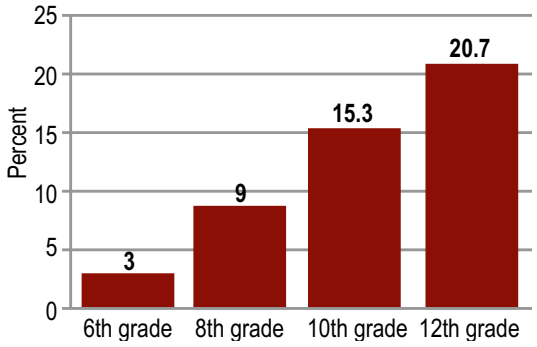
GRADE C

Louisiana Information

The data on smoking status among Louisiana children and youth were obtained from the 2008 Caring Communities Youth Survey (CCYS)[21] and the 2008 Youth Risk Behavior Survey (YRBS) for Louisiana.[6]

Three percent of 6th graders, 9% of 8th graders, 15% of 10th graders, and 21% of 12th graders had reported in the 2008 CCYS[21] that they had smoked cigarettes in the past 30 days (*Figure 36*).

Figure 36:
In 2008, Percentage of Louisiana Youth that Smoked Cigarettes in the Past 30 Days



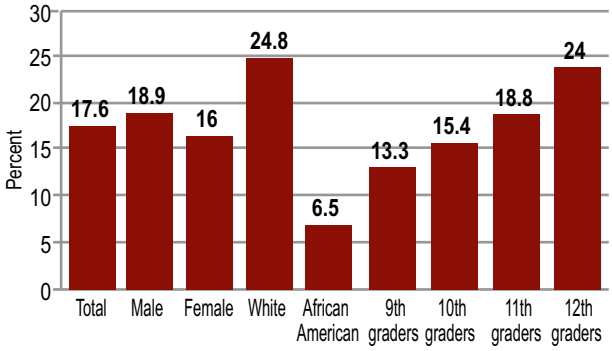
Source: Picard Center for Child Development University of Louisiana Lafayette. 2008 Caring Communities Youth Survey. Retrieved from http://ccd-web.louisiana.edu/Portals/0/State_of_Louisiana_2008_Profile_Report.pdf.

While the 2008 CCYS shows smoking status across grade levels, data from the 2008 YRBS for Louisiana[6] also provides information across gender and ethnic groups. About 18% of high school students (19% male and 16% female) reported that they smoked cigarettes on one or more days during the 30 days before the survey (*Figure 37*).[6] White students (25%) were more likely to report smoking compared to African American students (7%).[6] In addition, smoking status among high school students increased with increasing grade level.

Other Information

According to the 2007 YRBS,[11] 14% of U.S. high school students responded that they had smoked a whole cigarette for the first time before the age of 13, with a higher prevalence among males (16%) compared to females (12%). Among high school students who currently smoked cigarettes, almost 11% of high school students reported that they smoked more than 10 cigarettes a day.[11]

Figure 37:
In 2008, Percentage of High School Students in Louisiana who Smoked Cigarettes on One or More of the Past 30 Days



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Some studies have found an inverse relationship between physical activity and cigarette use.[10, 27, 30, 31] Results from the National Longitudinal Study of Adolescent Health[10] showed that participation in a variety of sports and physical activities was associated with reduced risk for smoking. In addition, children and adolescents who achieved 5 or more bouts of MVPA per week were less likely to smoke compared to those who did not reach 5 bouts of MVPA.[10]

A recent study that was conducted among 4,750 ninth grade students in south-central Louisiana found that students who smoked were less likely to be physically active.[31] This study found that almost 20% of 9th grade students were co-users of tobacco and alcohol.[31] Co-users were more likely to be White than African American, have grades of D's and F's, and were less likely to expect to graduate from high school compared to nonusers.[31] In addition, co-users were more likely to: have parents who smoked, siblings who smoked, friends who smoked, have friends who got drunk at least once a week, and have friends who drank for "kicks" compared to nonusers.[31]

Key Findings for Smoking Status

- Nearly 18% of high school students in Louisiana smoke cigarettes
- Higher prevalence among males compared to females and among White students compared to African American students
- There is a lower risk of smoking among physically active youth

Family

When children and adolescents are not in school, they spend most of their time in the home environment. The category of family in the 2009 Report Card includes one indicator: family perceptions and roles regarding physical activity. Parental propensity and roles regarding physical activity can influence their child's physical activity levels. Thus, providing a healthy home environment can have many positive implications. The recommendations made for parents are important in that they suggest appropriate measures that parents can make to increase physical activity and healthy behaviors among children and youth.

Indicators	2008 Grades	2009 Grades
Family Perceptions and Roles Regarding Physical Activity	INC	INC

Family: Family Perceptions and Roles Regarding Physical Activity

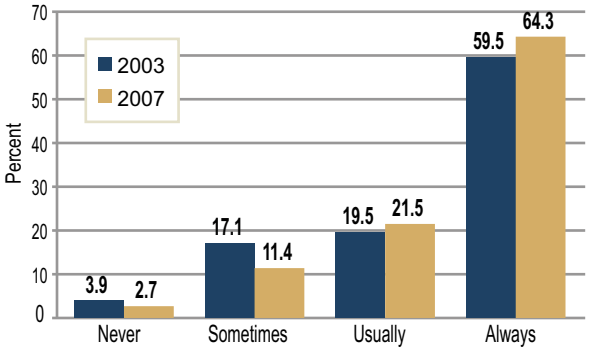
GRADE **INC**

Louisiana Information

The 2007 National Survey of Children's Health (NSCH)[2] provided data on family perceptions and roles regarding physical activity.

According to the 2007 NSCH,[2] almost 86% of parents usually or always attended the events and activities of their children in the preceding 12 months, a seven percentage point increase from the 2003 NSCH[3] results reported in the 2008 Report Card (*Figure 38*). These statistics are very encouraging. However, the NSCH does not specifically ask whether these events are "physical activity" related. Given the general nature of these results, we are unable to provide a grade assignment this year.

Figure 38:
In 2003 & 2007, Percentage of Louisiana Parent's Attendance at their Child's (6-17 yrs) Activities or Events during the Past 12 Months



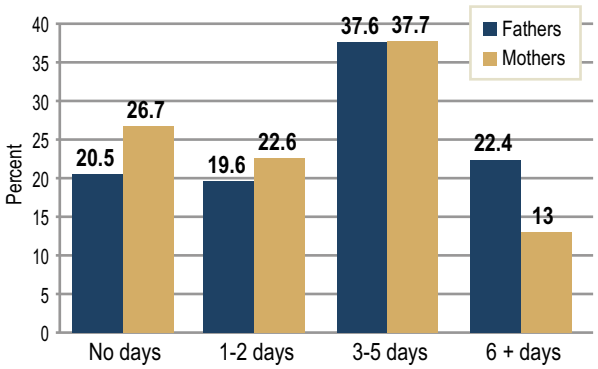
Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2003 and 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

The 2007 NSCH[2] also asked parents how often they engaged in 20 minutes of vigorous physical activity per week. Only 22% of fathers and 13% of mothers reported at least 20 minutes of vigorous physical activity on 6 or more days per week (*Figure 39*).[2] Studies have shown that parental exercise was associated with their child's physical activity,[32] and participation in extracurricular sports.[33]

Other Information

The most important influence on children's physical activity and eating behaviors is the home environment.[34] Family perceptions and roles regarding physical activity can have many implications on their child's physical activity levels.

Figure 39:
In 2003 & 2007, Number of Days During the Past Week that Louisiana Parents of Children (6-17 yrs) Engaged in at Least 20 Minutes of Vigorous Activity



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

In a study using data collected from the National Longitudinal Study of Adolescent Health,[10] adolescents who played sports or exercised with their parents were less likely to engage in adverse health risk behaviors related to sex, smoking, alcohol use, and drug use. In addition to parental physical activity levels, a review of correlates of physical activity of children and adolescents found that physical activity levels are also associated with encouragement, support from others, and sibling physical activity.[35] Conversely, the home environment also influences sedentary behaviors as well, such as screen time via modelling, reinforcement, restrictions, and availability of media.[36] Thus, parental propensity can greatly influence childhood physical activity and sedentary behaviors, a channel through which interventions can be designed.

Key Findings for Family Perceptions and Roles Regarding Physical Activity

- 86% of Louisiana parents usually or always attend the activities or events of their children
- Adolescents who play sports or exercise with their parents are less likely to engage in adverse health risk behaviors
- Parental propensity can greatly influence childhood physical activity and conversely, sedentary behaviors as well
- There is insufficient information available on family perceptions and roles regarding physical activity to provide a grade this year

School and Community

The school and community environment can have an impact on the physical activity levels of children and adolescents. The school environment is an important channel through which interventions, programs, and policies can be made to increase the physical activity levels of children and youth, especially since a large proportion of their day is spent in school – and sitting. In addition, the built design of a community can also influence or hinder physical activity. There are three indicators used in the school and community category: physical activity programming at school, training of school personnel in physical activity, and the built environment and community design.

Indicators	2008 Grades	2009 Grades
Physical Activity Programming at School	D	D
Training of School Personnel in Physical Activity	C	C
Built Environment and Community Design	INC	D

School and Community: Physical Activity Programming at School

GRADE D

Louisiana Information

Data for Louisiana pertaining to physical activity programming at school were provided by the 2008 Youth Risk Behavior Surveillance Survey (YRBS) and the 2006 School Health Policies and Programs Study (SHPSS).[37] The 2006 SHPSS data were also used in last year's Report Card. In this section of the Report Card, physical activity programming at school includes a discussion on structured physical education, free-play recess, physical activity during academic lessons, and the daily commute to and from school.

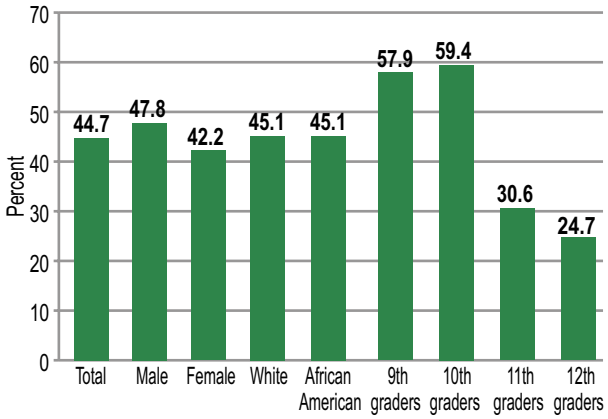
Structured Physical Education

According to the 2006 SHPSS,[37] Louisiana has a state health education (HED) coordinator and requires schools to teach health education on various subjects; however, physical activity and fitness is only required in high schools (rather than elementary or middle schools). Louisiana also has a state physical education (PE) coordinator and requires districts or schools to follow national or state PE standards or guidelines.[37] In addition, Louisiana requires that schools teach PE in elementary schools, middle schools, and high schools with specified time requirements for PE in elementary schools and middle schools.[37] In PE classes, Louisiana recommends that schools give skills performance tests and fitness level tests in elementary schools, middle schools, and high schools.[37]

The state DOE requires 30 minutes per day of quality physical activity for all public elementary students and requires that public high school students take at least 1½ years of physical education and another ½ year of health to fulfill the requirements for graduation.[38] In non-public high schools, students are required to have two years of physical education with a minimum of 30 hours of health instruction to fulfill graduation requirements.[39]

According to the 2008 YRBS,[6] less than 50% of high school students in Louisiana reported that they had attended physical education classes 5 days a week when they were in school (*Figure 40*). There were a higher proportion of 9th and 10th graders who attended PE compared to students in 11th & 12th grades, perhaps due to students completing the graduation requirements at an earlier grade level.

Figure 40:
In 2008, Percentage of High School Students in Louisiana who Went to Physical Education Classes 5 Days a Week in an Average Week When They Were in School



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Free-Play Recess

Recess in schools is another approach to increase physical activity among children to help them meet the physical activity recommendations. According to data from the 2006 SHPSS,[37] the Louisiana Department of Education recommends that children in elementary schools are provided regularly scheduled recess. Data are currently unavailable to assess whether or not this recommendation is implemented throughout elementary schools in Louisiana.

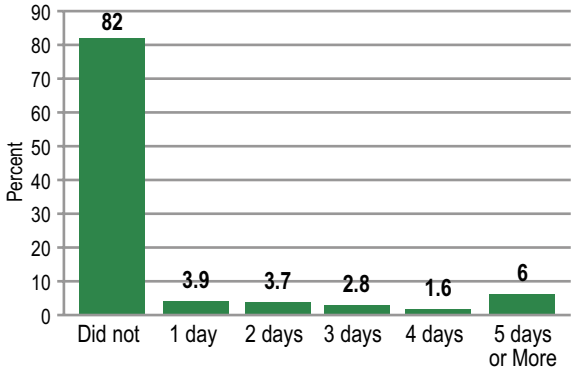
Physical Activity during Academic Lessons

Information on physical activity during academic lessons is equivalent to the information that was presented in last year's Report Card. Researchers at Louisiana State University Department of Kinesiology received funding from the Governor's Council for Physical Fitness and Sports to hold a state-wide in-service training for public teachers on how to make their lessons more active and incorporate activity into daily activities such as waiting and standing in lines. However, information on the incorporation of physical activity into the academic school curriculum is currently lacking.

Daily Commute to and From School

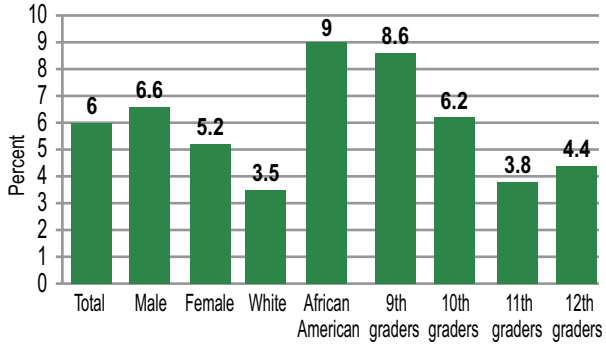
Results from the 2008 YRBS for Louisiana[6] show that 82% of high school students in Louisiana did not walk or bike to school during the 7 days before the survey while only 6% reported that they walked or rode a bicycle to school on 5 or more days (*Figures 41 & 42*). There were a higher proportion of males than females who walked or biked to school.[6] Additionally, the proportion of African American students in Louisiana who walked or biked to school on 5 or more days during the 7 days before the survey was over 2½ times higher than the proportion of White students (*Figure 42*).[6]

Figure 41:
In 2007, Percentage of Students who Walked or Rode a Bicycle to School During the 7 Days Before the Survey



Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Figure 42:
In 2008, Percentage of Students who Walked or Rode a Bicycle to School 5 or More Days During the 7 Days Before the Study



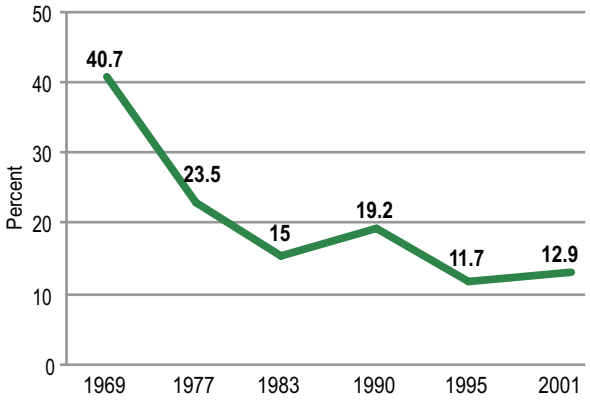
Source: Centers for Disease Control and Prevention, and Louisiana Department of Education, Division of Student Learning and Support, Safe and Healthy Schools Section. Youth Risk Behavior Surveillance System: 2008 Louisiana Youth Risk Behavior Survey (YRBS).

Increasing the number of children who actively commute to school (walk or bike) is an approach to help children meet recommendations for physical activity. The Louisiana Department of Transportation funds the Safe Routes to School Program each year with the goal to improve the health of kids and the community by making walking and bicycling to school safer, easier, and more enjoyable.[40]

Other Information

Data from the National Household Travel Survey (NHTS),[41] formerly the National Personal Transportation Survey, show that less than 13% of students (age 5-18 yrs) walked or biked to school in 2001 compared to

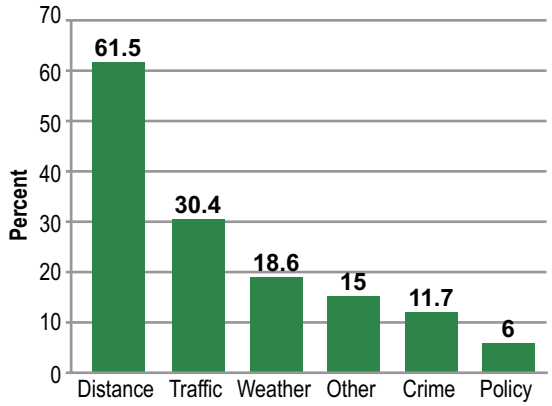
Figure 43:
Percentage of Students (5-18 yrs) who Walked and Biked to School (1969-2001) in the U.S.



Source: McDonald NC. Active transportation to school: trends among U.S. schoolchildren, 1969-2001. Am J Prev Med. 2007;32(6):509-516

41% in 1969.[41] According to the NHTS,[41] 47% of the total decline in the number of children who walked or biked to school from 1969 to 2001 may be explained by the change in the distance from the children's home to their school (trip distance). Other barriers may have also influenced the decline in the number of children who walk or bike to and from school. In addition to trip distance, traffic, crime, weather, school policies, and other reasons were reported by parents as barriers to their child's active commute to school, according to the CDC (*Figure 44*).[42] By addressing these barriers and promoting safe walking and biking to school, the Safe Routes to School program in Marin, County, CA was responsible for a 64% increase in the number of children who walked to school and an increase of 114% in the number of children who rode their bike to school.[43]

Figure 44:
Percentage of Parents Reporting Barriers to Their Child's Walk to or From School



Source: From the Centers for Disease Control and Prevention. Barriers to children walking and biking to school--United States, 1999. JAMA. 2002;288(11):1343-1344

Key Findings for Physical Activity Programming at School

- Less than 50% of high school students in Louisiana attended physical education classes 5 days or more each week
- Only 6% of high school students in Louisiana walk or bike to school 5 days or more each week
- The Safe Routes to School program in Marin County, CA was responsible for a 64% increase in the number of children who walked to school and an 114% increase in the number of children who rode their bike to school

School and Community:
Training of School Personnel in Physical Activity

GRADE C

Louisiana Information

Data for Louisiana pertaining to training of school personnel in physical activity were provided by the Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD) and the 2006 School Health Policies and Programs Study (SHPSS). The 2006 SHPSS data were also used in last year's Report Card.

The Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD) is an organization that aims to improve the quality of life through health and fitness and recreational activities.[44] LAHPERD holds an annual conference for health professionals, teachers, and PE teachers to attend health sessions, workshops, and discussions where they can learn and share the latest techniques in teaching and promoting physical activity while they also earn continuing education credits.[44]

According to the 2006 SHPSS data, Louisiana requires newly hired middle and high school PE teachers to have an undergraduate or graduate training in PE or a related field and be certified, licensed, and endorsed by the state.[37] Out of the 16 possible development categories, the state of Louisiana only offered the six categories listed below.[37] Thirty of the 50 states, including Louisiana, offered 6 or more of the categories for continued learning.[37]

- Assessing or evaluating student performance
- Recognizing and responding to chronic health conditions
- Teaching movement skills and concepts
- Teaching students with long term disabilities
- Teaching team or group activities or sports
- Using physical activity monitoring devices

Key Findings for Training of School Personnel in Physical Activity

- Louisiana requires newly hired middle and high school physical education teachers to have a college degree in physical education or a related field
- LAHPERD offers opportunities to earn continuing education credits

School and Community:
Built Environment and Community Design

GRADE D

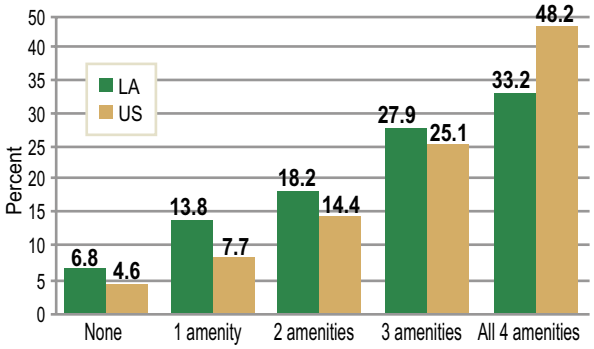
Louisiana Information

Information pertaining to the built environment and community design for Louisiana was provided by the 2007 National Survey of Children's Health (NSCH).[2]

As reported in the 2008 Report Card, the Louisiana Department of Culture, Recreation, and Tourism reported that there were 20 state parks in Louisiana which have amenities such as hiking, biking, birding, nature trails, and cabins for overnight stays,[45] and the National Park Service[46] listed another six parks and historical sites on their website. Local neighborhood and community parks also provide opportunities for physical activity. Thus, many opportunities exist for outdoor activities and pursuits. Elements of the physical environment, the built environment, and community design may influence physical activity behaviors. These elements are important components of the Ecological Model of Four Domains of Active Living (*Figure 1, pg 7*).

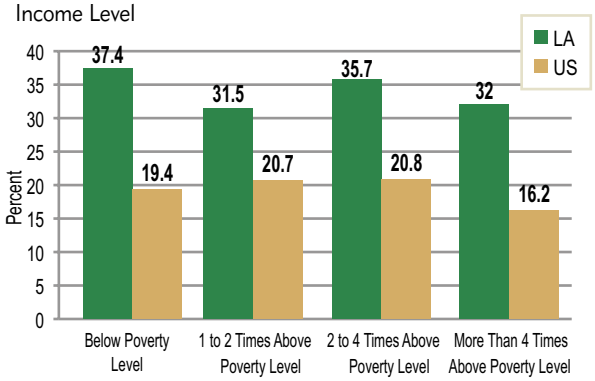
The built environment and design of the community is important in providing access to neighborhood amenities and opportunities for physical activity. The 2007 NSCH[2] asked parents about their child's access to neighborhood amenities (parks, recreation centers, sidewalks, and libraries). Results show that slightly over 33% of Louisiana children and youth aged 0-17 years lived in neighborhoods with parks, recreation centers, sidewalks, and libraries (*Figure 45*).[2] However; children who lived below the poverty level had less access to parks or playgrounds in their neighborhood than those who lived above the poverty level (*Figure 46*).[2]

Figure 45:
In 2007, Percentage of Children and Youth (aged 0-17 yrs) That Lived in Neighborhoods With Parks, Recreation Centers, Sidewalks and Libraries



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

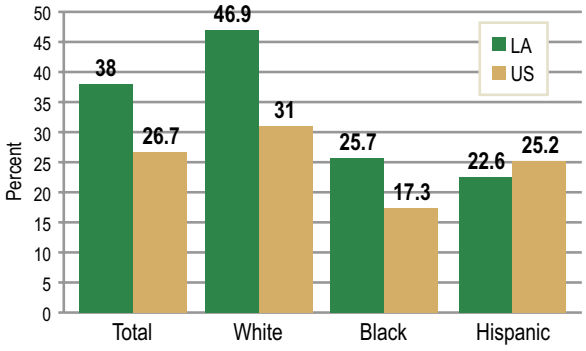
Figure 46:
In 2007, Percentage of Children and Youth (aged 0-17 yrs) that Lived in Neighborhoods Without a Park or Playground by Income Level



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Thirty-eight percent of children and youth (aged 0-17 yrs) in Louisiana lived in neighborhoods without sidewalks or walking paths (*Figure 47*).[2] A lower proportion of White children lived in neighborhoods without sidewalks or walking paths compared to children in other ethnic groups.[2] When sidewalks or walking paths are not accessible, safety becomes a concern for parents, which may reduce the amount of time children spend being physically active outdoors and their ability to walk or bike to school or other destinations.

Figure 47:
In 2007, Percentage of Children and Youth (aged 0-17 yrs) that Lived in Neighborhood Without Sidewalks or Walking Paths



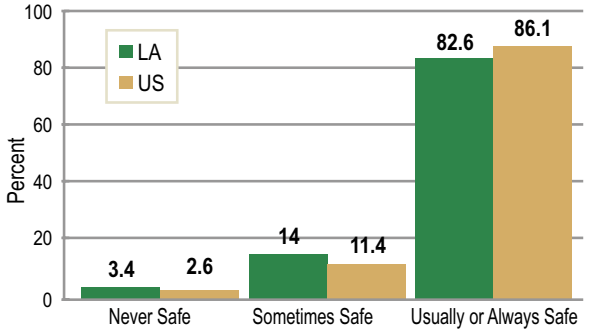
Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

According to the National Center for Injury Prevention and Control,[47] from 2000 to 2006, there were 88 pedestrian (1.36 deaths per 100,000) and 30 pedal cyclist deaths (0.46 deaths per 100,000) among children and youth aged 5-18 years in Louisiana. In the 2009 Louisiana Legislative Session, Senate Concurrent Resolution No. 110 created the Complete Streets Work Group in the Department of Transportation and Development to design and construct roads to meet the needs of bicyclists, pedestrians, transit riders, and drivers and also promote the walkability and bicycle friendliness of communities.[5]

Parental perception of neighborhood safety can affect whether, where and for how long children are allowed to play outdoors. The 2007 NSCH[2] also asked parents how often they felt their community and neighborhood was safe for their children. Results indicate that 3%, 14% and 83% of Louisiana children and youth (aged 0-17 yrs) lived in never safe, sometimes safe, and usually or always safe neighborhoods, respectively (*Figure 48*).[2]

Figure 48:

In 2007, Percentage of Children and Youth (aged 0-17 yrs) That Lived in Safe Communities or Neighborhoods



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

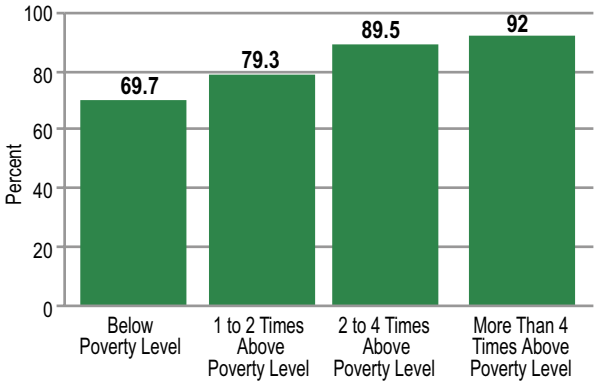
Stratified by income level, almost 70% of parents who lived below the federal poverty level reported that their community or neighborhood was usually or always safe while 92% of parents with an income four or more times above the federal poverty level reported that their community or neighborhood was usually or always safe for their children (*Figure 49*).[2]

Other Information

It is important to understand how inequalities in the built environment (access to parks, playgrounds, and other amenities) can lead to decreased physical activity and related health outcomes. A study using data from the National Longitudinal Study of Adolescent Health and the number of physical activity facilities using Geographic Information Systems (GIS) technology[48] found that lower socioeconomic status groups were less likely to have access to public activity facilities, and this contributed to disparities in physical activity and prevalence of overweight among these cohorts (*Figure 50*).

Figure 49:

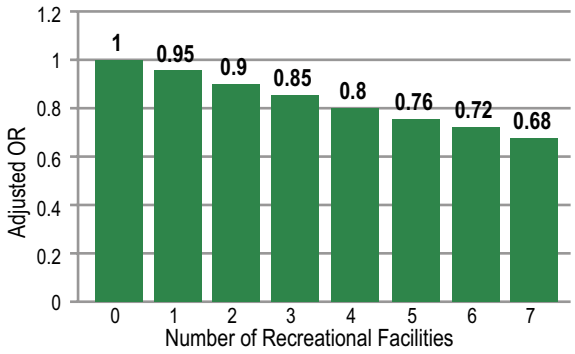
In 2007, Percentage of Children and Youth (age 0-17) in Louisiana that lived in Communities or Neighborhoods that were Usually or Always Safe by Income Level



Source: Child and Adolescent Health Measurement Initiative, Maternal and Child Health Bureau. 2007 National Survey of Children's Health. Retrieved from www.nschdata.org

Figure 50:

Relative Odds of Overweight with Increasing Numbers of Physical Activity Facilities



Source: Gordon-Larsen P, Nelson MC, Page P, Popkin BM. Inequality in the built environment underlies key health disparities in physical activity and obesity. 2006; Pediatrics.117(2):417-424.

Key Findings for the Built Environment and Community Design

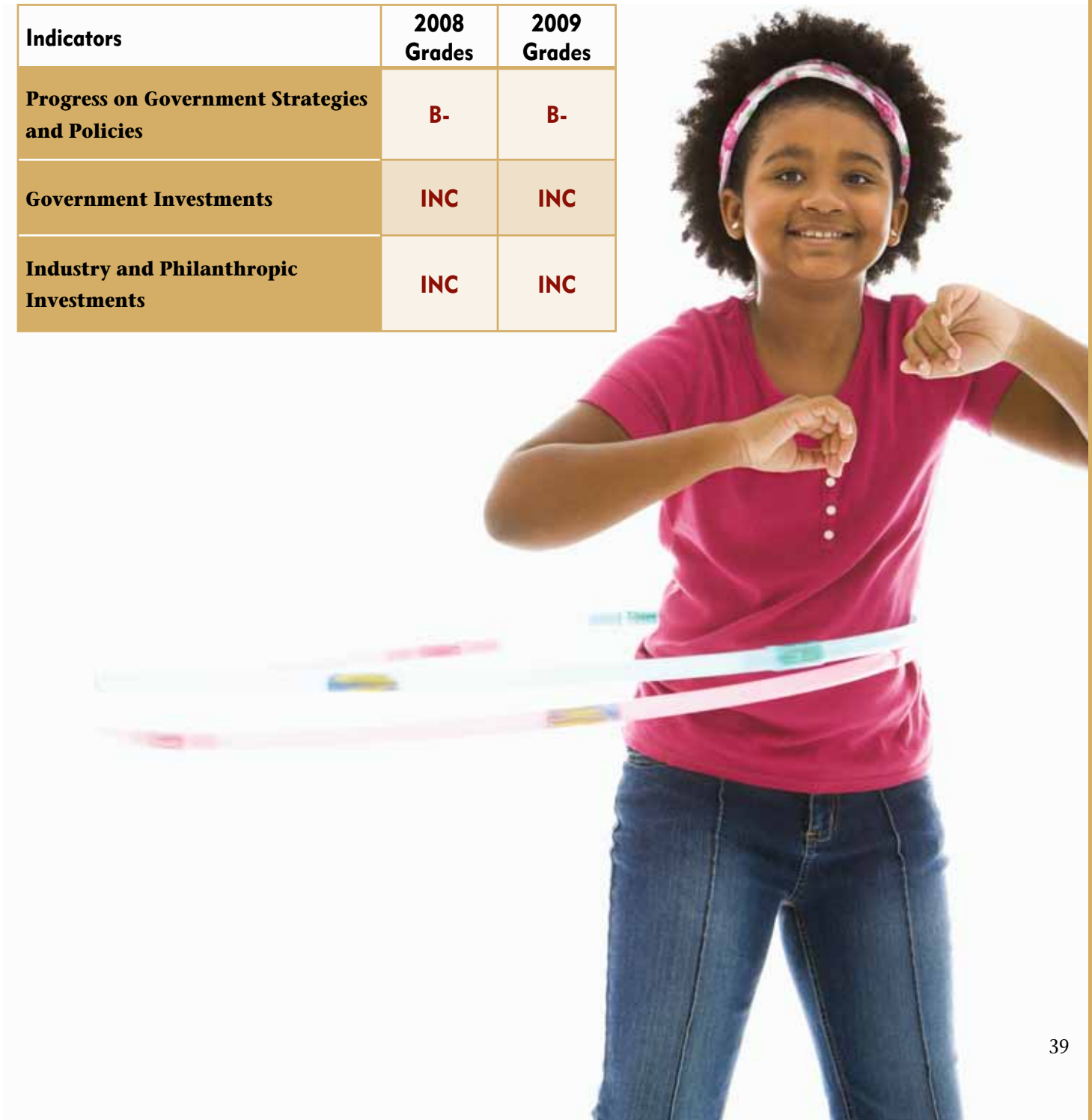
- 38% of children and youth in Louisiana live in neighborhoods without sidewalks or walking paths
- Children who live below the poverty level have less access to parks or playgrounds in their neighborhoods
- Safe neighborhoods can promote physical activity

Policy and Investments

Ecological models are unique in that they not only incorporate intrapersonal and interpersonal factors, but also the social and physical environment and policy.[1] Intervention strategies that involve the environment or public policy may be the strongest approach to achieve behavior changes, especially as they relate to physical activity.[1] Thus, progress on policy and investments is imperative to change behavior at the population level.

Three indicators are used in the category under policy and investments: progress on government strategies and policies, government investments, and industry and philanthropic investments.

Indicators	2008 Grades	2009 Grades
Progress on Government Strategies and Policies	B-	B-
Government Investments	INC	INC
Industry and Philanthropic Investments	INC	INC



Policy and Investments:
Progress on Government Strategies and Policies

GRADE B-

Louisiana Information

Government policies and strategies in this section pertain exclusively to state government strategies, rather than local, community, or parish policies and programs.

The Louisiana State Legislature created the Louisiana Council on Obesity Prevention and Management in 1999 with the mission to "promote an environment that supports opportunities for all Louisiana residents to make healthy food choices and to be physically active in order to achieve or maintain a healthy weight".[49] Four years after the creation of the Council, the Louisiana Task Force was also created by legislation in 2003 to study obesity prevention and management in Louisiana.[50] The Louisiana Task Force created two reports that help guide legislation related to the prevention and treatment of obesity: 1) Effectiveness of Interventions for Overweight and Obesity in Children and Adolescents[51] and 2) Effectiveness of Interventions for Overweight and Obesity in Adults.[52] The Louisiana Council on Obesity Prevention and Management and the Louisiana Task Force has been instrumental in bringing attention, legislation, and programs related to the treatment of obesity in Louisiana.

Bills that have been passed by the Louisiana Legislature in the past five years related to physical activity and the prevention and treatment of obesity among children and youth in Louisiana are listed below.

2004

Senate Bill No. 871-Act 734 – Physical Activity & Award Program[5]

- Requirement of 30 minutes of moderate to vigorous physical activity each school day in all public schools, grades K-6th.
- A state-wide, annual award program for outstanding physical activity programs in elementary or secondary schools.

2005

Senate Bill No. 146-Act 331 – Vending Bill[5]

- Restriction of certain beverages and food sales during specified hours in public elementary and secondary schools.

2007

Senate Bill No. 362-Act 180 – Health & Physical Education Coordinator[5]

- Requirement for the state of Louisiana to have a state health and physical education coordinator to develop, implement, and monitor health and physical education classes in all pubic elementary and secondary schools.

2009

House Bill No. 400-Act 286 –Physical Activity for Children and Establishment of a School Health Advisory Council[5]

- Requirement of 30 minutes of moderate-to-vigorous physical activity each school day in all public schools, grades K-8th.
- School Health Advisory Councils will study the adherence to requirements for physical activity for students, physical and health education, nutrition and overall health and also study the compliance with school vending machine restrictions, use of physical fitness assessment results, and school recess policies.

Senate Bill No. 299-Act 252 – Establishes the Healthy Food Retail Act[5]

- Establishes a program to stimulate investment in healthy food retail outlets to increase access to fresh fruit and vegetables in underserved areas of Louisiana.

Senate Bill No. 309-Act 256 - Fitness Assessments in Schools[5]

- Expansion program of physical fitness assessments in schools which will determine the fitness levels of students as a means to impact childhood obesity in Louisiana.

House Bill No. 725-Act 147 – Bicycle Protection Bill[5]

- Prohibits certain actions against bicyclists, provides a method by which drivers of vehicles shall pass bicyclists; provides penalties, publications, signage and a public awareness campaign.

House Bill No. 767-Act 306 – Restriction of Beverage Selection[5]

- Restriction of certain beverages offered for sale in public high schools.

House Bill No. 802-Act 226 – Prevention and Treatment of Childhood Obesity[5]

- Establishes the Walking the Walk for Our Kids Fund which will be used for the diagnosis, prevention, and treatment of childhood obesity.

In addition to the aforementioned bills that were passed in the Louisiana Legislature in the past five years, many House and Senate Resolutions were also passed relevant to the prevention and treatment of obesity among children and youth in Louisiana. Some of these resolutions include: the creation of the Healthy Food Retail Study Group, the creation of Healthy People of Louisiana Task Force, the creation of the Complete Streets Work Group, and annual Legislative Wellness Days in both the Senate and House of Representatives.[5] For more information on the Complete Streets Work Group, reference the "Built Environment and Community Design."

Key Findings for Progress on Government Strategies and Policies

- An important way to achieve population change is through public policy
- The Louisiana Council on Obesity Prevention and Management maintains a prominent presence that helps guide legislation related to physical activity, healthy eating, and obesity
- In the 2009 State Legislature, 6 bills were enacted relevant to physical activity, healthy eating, and obesity

Policy and Investments: Government Investments

GRADE **INC**

Government investment in interventions, programs, and state supported initiatives relevant to supporting and promoting physical activity is a key component to reducing the impact of morbidity and mortality related to physical inactivity and obesity. Legislated policy can enforce regulations and promote change to reduce the impact of physical inactivity and obesity, but only when there is funding to support the initiatives. However, at the current time an exhaustive list of fiscal commitments on the behalf of government investments is not available. In the future, a greater understanding of these investments will be important in grading the role of government in promoting physically-active lifestyles.

Key Findings for Government Investments

- Resource allocations to support policies that impact public health are important for enforcement and implementation
- Insufficient information is available at this time to determine a grade

Policy and Investments: Industry and Philanthropic Investments

GRADE **INC**

This Report Card received tremendous support from industry and philanthropic investments; however, data are still limited as to the involvement of industry and foundations in other endeavors in Louisiana. Growing concerns about the health and welfare of our children, particularly with respect to the increasing number of those who are obese, have caught the attention of both industry and private foundations. These sectors provide an important source of funding for research and community projects related to improving physical activity and health for children. However, at the present time, a comprehensive account of industry and philanthropic investments is not available from which to provide a grade this year.

Key Findings for Industry and Philanthropic Investments

- Rising rates of physical inactivity and obesity among children and youth have gained the attention and concern of corporate and philanthropic organizations.
- Limited information is available at this time with respect to investments.

2009 Report Card Development and Data Sources

An interdisciplinary team of scientists and professionals compiled and assessed the available resources for the grading of each of the indicators. The grade assignments were based on the analysis of the most recently available information for Louisiana from the following sources.

Caring Communities Youth Survey (CCYS)[20, 21]

The most recent CCYS was administered in 2008 among 6th, 8th, 10th, and 12th graders in Louisiana. The CCYS is designed to assess students' involvement in a specific set of problem behaviors, as well as their exposure to a set of scientifically validated risk and protective factors. The risk and protective factors have been shown to influence the likelihood of academic success, school dropout, substance abuse, violence, and delinquency among youth. Across the state of Louisiana, 109, 765 youth from 769 schools participated in the 2008 survey. Coordination and administration of the Louisiana CCYS was a collaborative effort of the Department of Health and Hospitals, Office for Addictive Disorders, Prevention Services; Regional Prevention Coordinators; Department of Education; the University of Louisiana at Lafayette, Picard Center for Child Development; and Bach Harrison, L.L.C. The 2008 CCYS can be found at: http://ccd-web.louisiana.edu/Portals/0/State_of_Louisiana_2008_Profile_Report.pdf.

Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD)[44]

Founded in 1934, the aim of this organization is to improve the quality of life through health and fitness and recreational activities. LAHPERD is an affiliate of the American Alliance for Health, Physical Education, Recreation and Dance. The members of LAHPERD include teachers, administrators, dance instructors, recreation supervisors, fitness directors, college students, allied health specialists, exercise physiologists, athletic trainers, etc., and are found in sixty-four parishes (counties) and twenty four universities in the state. LAHPERD also hosts an annual training and educational convention in Baton Rouge. The website for LAHPERD is: http://www.lahperd.org/convention.html.

Louisiana Department of Culture, Recreation, and Tourism[45]

A list of state parks and historic sites can be found at: http://www.cr.state.la.us/parks/iparkslisting.aspx.

Louisiana Department of Education (DOE)[38, 39]

The Department of Education published the Handbook for School Administrators for public and non-public schools that determine the requirements for elementary, middle, and high school students in the state. The handbook for public school administrators can be found at: http://www.doa.louisiana.gov/osr/lac/28v115/28v115.doc#_Toc196292677; while the handbook for non-public schools can be found at: http://www.doa.louisiana.gov/osr/lac/28v79/28v79.doc.

Louisiana Department of Transportation and Development (DOTD)[40]

The Louisiana Department of Transportation and Development houses the Louisiana Safe Routes to School Program (http://www.dotd.louisiana.gov/planning/highway_safety/safe_routes/).

National Survey of Children's Health (NSCH)[2, 3]

This national survey is conducted every four years by the Maternal and Child Health Bureau within the U.S. Department of Health and Human Services. This survey is administered to parents of children under age 18 years with the purpose to educate stakeholders, inform decision makers, and motivate and track improvement. It provides a broad range of information about children's health and well-being collected in a manner that allows comparisons among states as well as nationally. Telephone numbers are called at random to identify households with one or more children under 18 years old. In each household, one child was randomly selected to be the subject of the interview. From April 2007 to July 2008, there were 91,642 interviews completed in the United States while 1,868

interviews were completed in Louisiana.[53] Children in the survey were weighted to be representative of each state and the national population. The NSCH information can be found at: http://www.nschdata.org.

National Park Service[46]

A listing of national parks in Louisiana can be found on the National Park Service website: http://www.nps.gov/state/LA/.

School Health Policies and Programs Study (SHPPS)[37]

The School Health Policies and Programs Study (SHPPS) is a national survey conducted by the Centers for Disease Control and Prevention to assess school health policies and practices at the state, district, school, and classroom levels. SHPPS was most recently conducted in 2006 and the next SHPPS is planned for 2012. Computer-assisted telephone interviews or self-administered mail questionnaires were completed by state education agency personnel in all 50 states plus the District of Columbia and among a nationally representative sample of districts (n = 538). Computer-assisted personal interviews were conducted with personnel in a nationally representative sample of elementary, middle, and high schools (n = 1103) and with a nationally representative sample of teachers of classes covering required health instruction in elementary schools and required health education courses in middle and high schools (n = 912) and teachers of required physical education classes and courses (n = 1194). This is an important resource for school and public health practitioners, scientists, advocates, policymakers, and all those who care about the health and safety of youth and their ability to succeed academically and socially. SHPPS can be assessed at the following website: http://www.cdc.gov/HealthyYouth/shpps/index.htm.

Youth Risk Behavior Survey (YRBS)[6, 11]

The YRBS is completed every other year (odd years) among high school students in grades 9 through 12 across the U.S. by the Youth Risk Behavior Surveillance System (YRBSS) under the Division of Adolescent and School Health at the Centers for Disease Control and Prevention. The YRBSS monitors priority health-risk behaviors and the prevalence of obesity and asthma among youth and young adults. For the first time since 1997, the YRBSS has obtained weighted data for Louisiana, which was collected during the spring of 2008 and administered to 1,349 high school students in 25 public high schools in Louisiana.[6] However, the 2008 YRBS data for Louisiana is not available on the CDC website. The 2008 YRBS data for Louisiana that was used in the compilation of the 2009 Report Card was made available by the Louisiana Department of Education, Division of Student Learning and Support, Safe and healthy Schools Section. The YRBSS website can be found at: http://apps.nccd.cdc.gov/yrbss/.

Additional Data Sources used in the compilation of this report include:

- Bogalusa Heart Study[25]
- National Household Travel Survey (NHTS)[41]
- National Longitudinal Study of Children's Health[10]

Acronyms and Definitions

Acronym	Definition
AAP	American Academy of Pediatrics
BMI	Body Mass Index
CCYS	Caring Communities Youth Survey
CDC	Centers for Disease Control and Prevention
DOE	Louisiana Department of Education
DOTD	Louisiana Department of Transportation and Development
LA	Louisiana
LAHPERD	Louisiana Association for Health, Physical Education, Recreation and Dance
LSU	Louisiana State University
MVPA	Moderate-to-Vigorous Physical Activity
NASPE	National Association for Sport and Physical Education
NHTS	National Household Travel Survey
NSCH	National Survey of Children's Health
PA	Physical Activity
PE	Physical Education
SHPPS	School Health Policy and Program Study
YRBS	Youth Risk Behavior Survey
YRBSS	Youth Risk Behavior Surveillance System

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REPORT CARD DEVELOPMENT AND DATA SOURCES

The grade assignments were based on the analysis of the most recently available information for Louisiana from the following sources: the 2006 & 2008 Caring Communities Youth Surveys, Louisiana Association for Health, Physical Education, Recreation, and Dance, Louisiana Department of Culture, Recreation, and Tourism, Louisiana Department of Education, Louisiana Department of Transportation and Development, 2003 & 2007 National Survey of Children's Health, National Park Service, School Health Policies and Programs Study, 2007 Youth Risk Behavior Survey, and the 2008 Youth Risk Behavior Survey for Louisiana.

The development of the 2009 Report Card was guided by a Research Advisory Committee, composed of scientists and professionals who collaborated on the selection of indicators and the assignment of grades including (in alphabetical order) Lisanne Brown (Louisiana Public Health Institute), Stephanie T. Broyles (Pennington Biomedical Research Center), Catherine Champagne (Pennington Biomedical Research Center), Stewart T. Gordon (American Academy of Pediatrics, Louisiana Chapter), David Harsha (Pennington Biomedical Research Center), Kathy Hill (LSU-Kinesiology & LAHPERD), Raegan Carter Jones (Louisiana Department of Education), Peter T. Katzmarzyk (Pennington Biomedical Research Center), Pamela Romero (Louisiana Council on Obesity Prevention and Management), Heli Roy (Pennington Biomedical Research Center), Arian Rung (LSU School of Public Health), Melinda Sothern (LSU Health Sciences Center), Kathleen L. Spencer (Center for Planning Excellence), and Samaah M. Sullivan (Pennington Biomedical Research Center). The development of the 2009 Report Card also received assistance from Jennifer Winstead (Pennington Biomedical Research Foundation), Glen Duncan (Pennington Biomedical Research Center), Melissa Bell (Pennington Biomedical Research Foundation), and Angela W. deGravelles (deGravelles and Associates).

Louisiana's Report Card on Physical Activity & Health for Children and Youth is based on a similar initiative developed by Active Healthy Kids Canada (*www.activehealthykids.ca*).

For more information and details on the development and grading of *Louisiana's Report Card on Physical Activity & Health for Children and Youth*, please refer to the more detailed version on-line at www.louisianareportcard.org.

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