Act 256 Report:

Health-Related Physical Fitness Assessment in Schools

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Collaborators

The following state agencies and universities contributed to the information contained in this legislative report.

Introduction

Act No. 256 of the 2009 Louisiana legislative session encourages school districts to conduct health-related physical fitness assessments of students in public schools. This act includes the review and expansion of a current health-related physical fitness assessment program associated with 18 participating school districts in Louisiana during the 2010–11 school year. The review and expansion will be facilitated by the Cecil J. Picard Center for Child Development and Lifelong Learning at University of Louisiana at Lafayette's (Picard Center) Coordinated School Health (CSH) initiative. This initiative uses a standard fitness assessment as its health-related physical fitness assessment and can be used to establish a statewide standard with easily comparable baselines and subsequent measurements. The implementation of the physical assessment will thus enable evaluation of the effectiveness of interventions and promote fitness for health, rather than just for performance.

This fitness assessment uses the Cooper Institutes' Healthy Fitness Zones, which are criterion-referenced standards that represent minimal levels of fitness. The fitness assessment used during the 2010–11 school year measures three components of health-related physical fitness that have been identified as important to overall health and function:

- aerobic capacity
- muscular strength and endurance
- flexibility

The physical fitness assessment recommended by the Picard Center consists of body mass index (BMI) calculation and five subtests.

- Shoulder Stretch
- Curl-Up
- Push-Up
- Trunk Lift
- Progressive Aerobic Cardiovascular Run (PACER)

Additional fitness assessment subtests that may be completed at district discretion are the sit and reach and the sit-up.

The subtests are calculated and categorized as either falling into the Healthy Fitness Zone (HFZ) or Needs Improvement (NI). These categories are research-based standards for aerobic capacity, muscular strength and endurance, and flexibility. These standards indicate levels of fitness necessary for good health and reflect reasonable levels of fitness that can be attained by most children who participate regularly in various types of physical activity.

These three components are measured by six subtests, including Body Mass Index or BMI (body composition). The BMI is a measurement that calculates a person's body mass

based upon height, weight, age, and gender factors. The results of these subtests place each student either within or outside the HFZ. Optimally, fitness assessments also provide personalized feedback and positive reinforcement, which are vital to changing behavior, and serve as a link between teachers, parents, and students by providing health information. In summary, the fitness assessment used during 2010–11 provides objective, easy-to-understand results that track physical fitness over time and assess the effectiveness of physical education curricula.

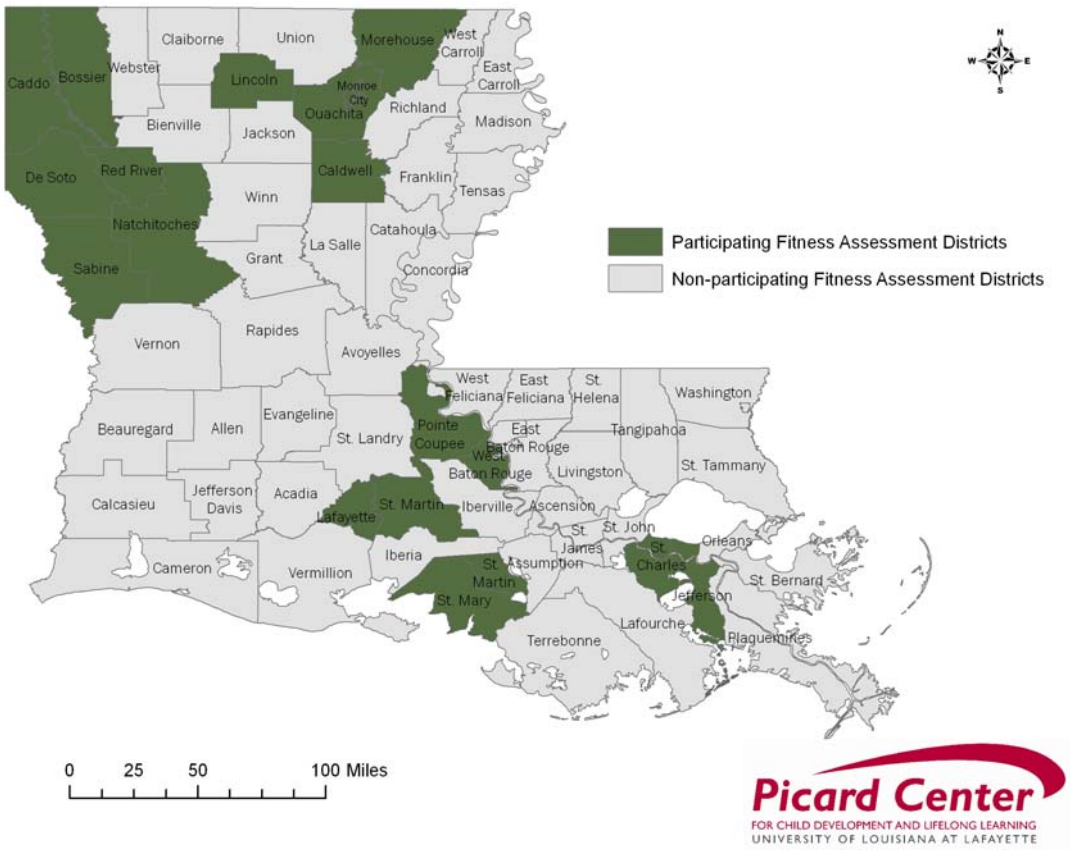
The Picard Center, along with its reporting collaborators, the Louisiana Department of Education (DOE), the Louisiana Department of Health and Hospitals (DHH), the Governor's Council on Physical Fitness and Sports, and the Louisiana Council on Obesity Prevention and Management (Louisiana Obesity Council), submits this report as part of the requirement of Act 256. Also included in the appendix is a copy of the December 2010 Act 256 report, *State Agencies and Universities Working Together to Combat Childhood Obesity In Louisiana*. This report includes recommendations regarding program implementation, best practices, and future directions, as well as a plan for expanding the assessment and developing and implementing intervention strategies.

Implementation Results of Fitness Assessment for 2009–10

This fitness assessment is part of a larger effort to understand and improve student health. The Picard Center has collaborated with the DOE and DHH for several years to implement the CSH initiative. This initiative seeks to improve the health and well-being of Louisiana's students and thereby maximize their academic abilities. In addition, the Picard Center has partnered internally at the University of Louisiana at Lafayette with the College of Nursing and the Kinesiology Department, as well as externally with the University of Louisiana at Monroe, Louisiana State University at Baton Rouge, and a kinesiology professor at a private college in central Louisiana.

In 2010–11, 18 school districts in Louisiana administered health-related, criterion-referenced physical fitness assessments as part of Act 256 and reported the results to the Picard Center for analysis. In total, more than 100,000 students from over 300 schools across the state participated in the administration of health-related physical fitness assessments. After data verification, 78,543 student records were used in the statewide data analysis. This section provides a summary of fitness assessment results completed during the 2010–11 school year.

Figure 1. Coordinated School Health District Map for 2010–11.



The BMI analysis is a method of screening for weight categories that may lead to health problems, and the fitness assessment subtests fill in key details regarding physical fitness. BMI is a practical measure used to determine weight status (underweight, healthy, overweight, or obese) by measuring weight in relation to height. While BMI is an accepted screening tool for the initial assessment of body fatness in children and adolescents, it is not a diagnostic measure because BMI is not a direct measure of body fat. Healthy Fitness Zones (HFZ) are research-based standards for aerobic capacity, muscular strength and endurance, and flexibility. These standards indicate levels of fitness necessary for good health and act as a complement to BMI measures.

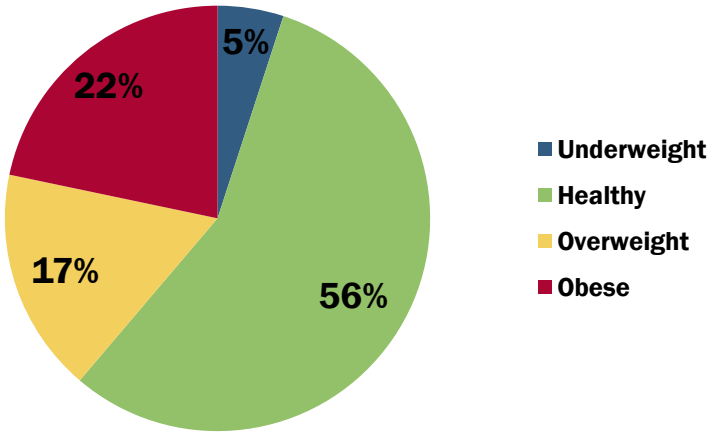
Table 1. BMI Classification Table

Healthy	5th percentile to less than the 85th percentile
Overweight	85th to less than the 95th percentile
Obese	Equal to or greater than the 95th percentile
Underweight	Less than the 5th percentile

Overall Analyses

As illustrated in Figure 2, 56% of students statewide had a healthy BMI, and 44% had some level of risk (either underweight, overweight, or obese BMIs). Specifically, 22% were obese. This information indicates that a high percentage of students in this study are at risk for health complications due to their weight status.

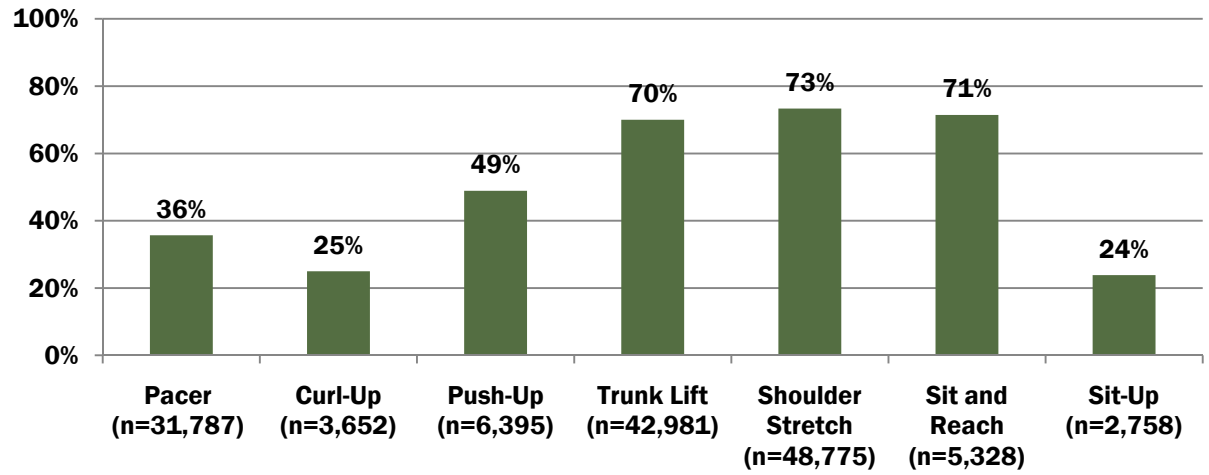
Figure 2. Louisiana State Fitness Assessment BMI Results for 2010–11 (n=74,859).



Physical fitness assessment results were analyzed according to assessment subtests (see Figure 3). Participating students did best on the shoulder stretch (73%), which measures flexibility. The participating students scored lowest on the curl-up (25%) and sit-up (24%), both of which measure muscular strength and endurance. Additionally, only 36% of students scored within a healthy level on the PACER, a measure of cardiovascular capacity.

Hence, while most students could complete certain core strength and flexibility activities, far fewer were successful in tests that emphasized muscular strength and cardiovascular endurance.

Figure 3. Louisiana State Fitness Assessment Subtest Results for 2010–11.



Figures 4 and 5 provide a snapshot look at BMI and PACER by age range. The percentage of students with a healthy BMI appears to decrease as the age of the students increases (58% at age 6 down to 46% at age 18). Also, there is a corresponding increase in the number of students with unhealthy BMI increases by age. This includes students with an overweight and obese BMI. When looking at the PACER subtest of the fitness assessment, a fairly steady trend is apparent. At age 10, 37% of students scored within the Healthy Fitness Zone for the PACER. This percentage declines to 30% at age 14 and increases to 32% by age 17. In summary, the cardiovascular fitness of Louisiana's students remains poor regardless of age.

Figure 4. Louisiana State Fitness Assessment BMI by Age for 2010–11 (n=74,859).

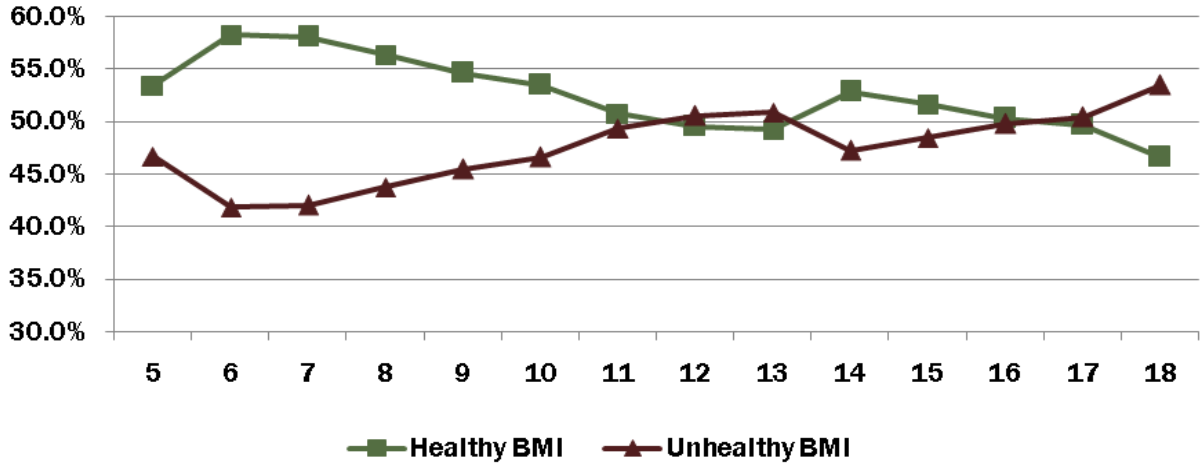
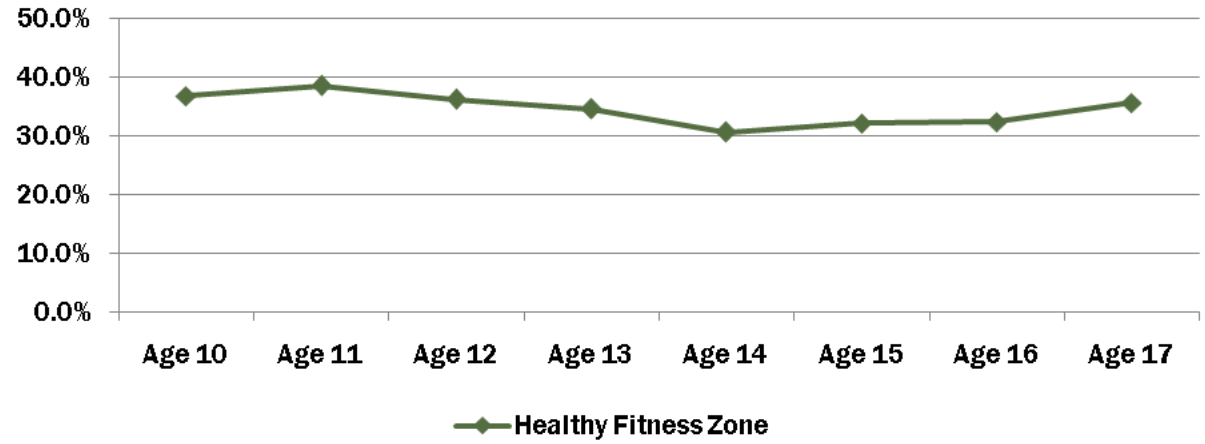


Figure 5. Louisiana State Fitness Assessment PACER Results by Age for 2010–11 (n=19,082).



Subgroup Analyses

The physical fitness assessment was analyzed to determine performance trends in all the following subgroups:

- Gender
- Race/Ethnicity
- Free/Reduced Price Lunch

When looking at fitness assessment data by gender, 53% of males and females have a healthy BMI. When looking at BMI status by gender, few differences are noted, with the exception of overweight females (2% higher than males) and underweight males, which was 2% higher than females (see Figure 6). On the PACER subtest fitness assessment, only 36% of females and 35% of males scored within the HFZ (see Figure 7).

Figure 6. Louisiana State Fitness Assessment BMI Results by Gender for 2010–11 (n=74,859).

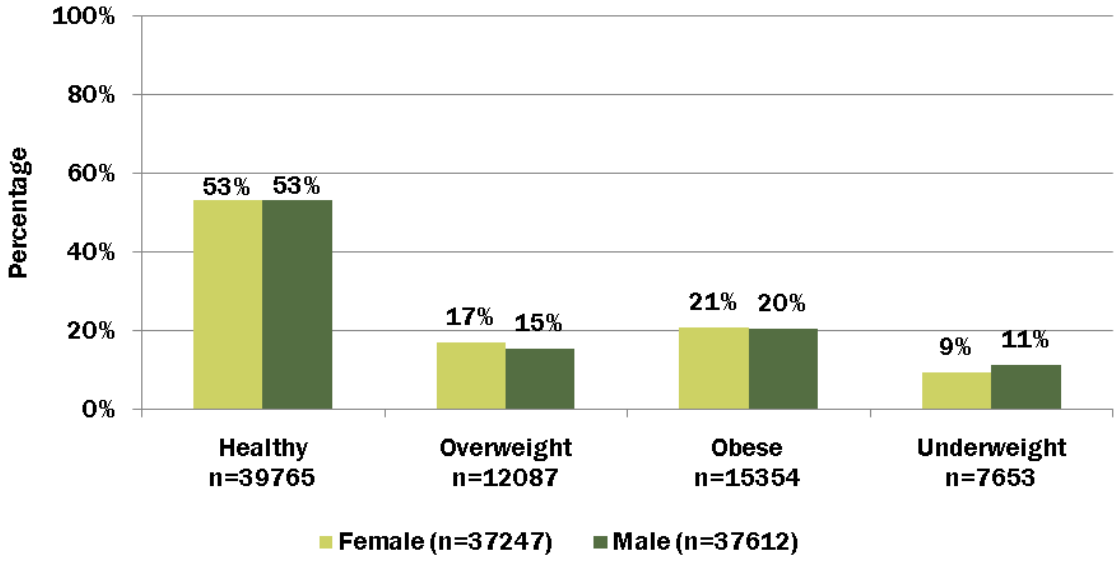
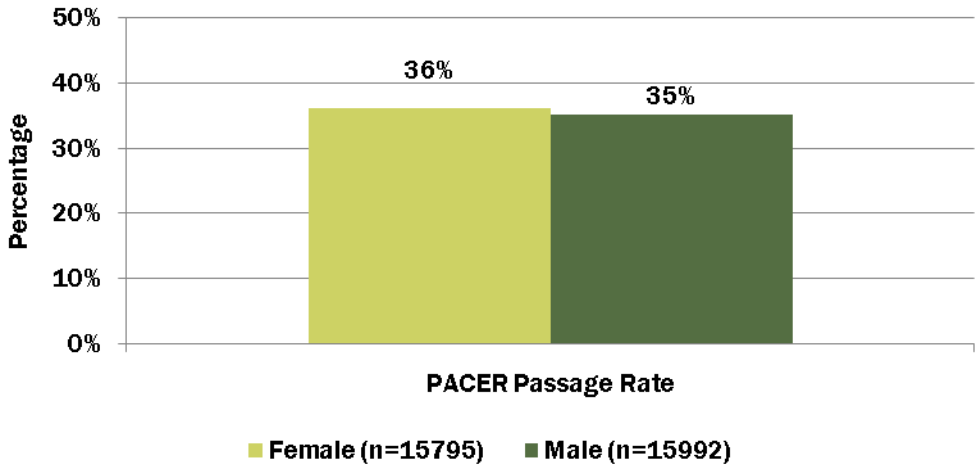


Figure 7. Louisiana State Fitness Assessment PACER Results by Gender for 2010–11 (n=31,787).



When looking at results by race/ethnicity (Figures 8 and 9), 55% of White students had a healthy BMI, compared to 52% of African American/ Black students and 50% of other races and ethnicities, including Hispanic. Conversely, African American/ Black students were slightly more likely to be overweight or obese than White students (African American: 39%, Other Race/Ethnicity: 37%, and White: 35%). Additionally, differences by race/ethnicity were noted on the PACER subtest performance. White students performed better than African American and Hispanic students on the PACER (White: 37%, African American: 34%, Hispanic: 32%).

Figure 8. Louisiana State Fitness Assessment BMI Results by Race/Ethnicity for 2010–11 (n=74,859).

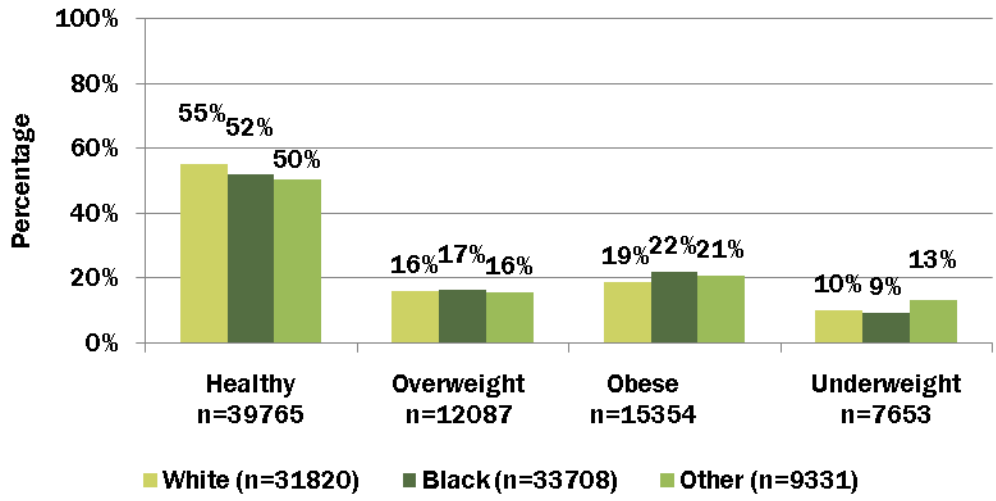
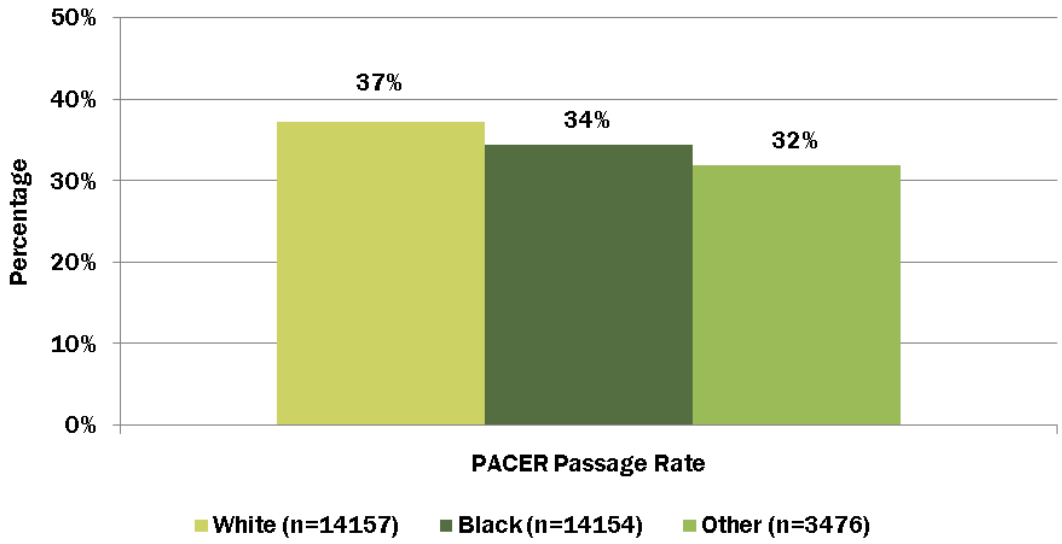


Figure 9. Louisiana State Fitness Assessment PACER Results by Race/Ethnicity for 2010–11 (n=31,787).



Fitness assessment data were also analyzed by free/reduced price lunch status (FRL), which is a marker for poverty (Figures 10 and 11). Among students with FRL status, 53% had a healthy BMI, which was the same as students with non-free/reduced price lunch status. This same trend held when looking at the other BMI categories; differences did not exceed 1%. On the PACER subtest, students receiving FRL services performed lower than their non-FRL peers by 3%. (35% to 38%).

Figure 10. Louisiana State Fitness Assessment BMI Results by Free and Reduced Price Lunch Status for 2010–11 (n=74,859).

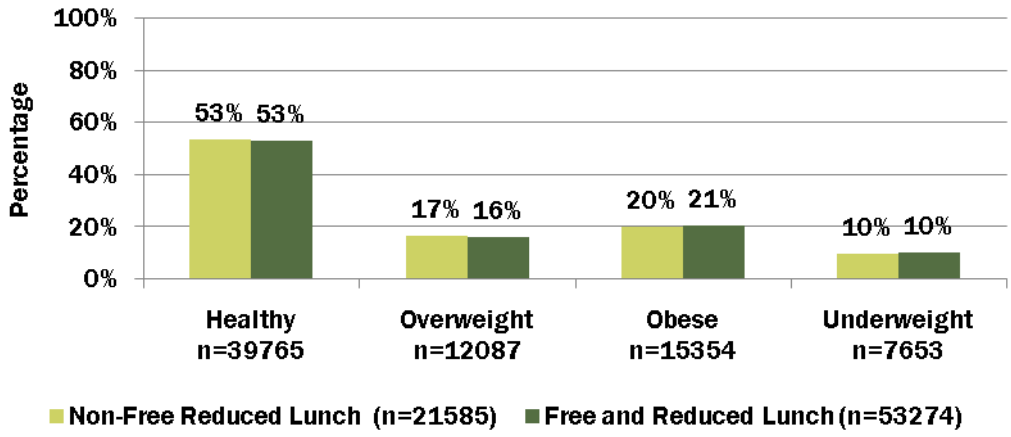
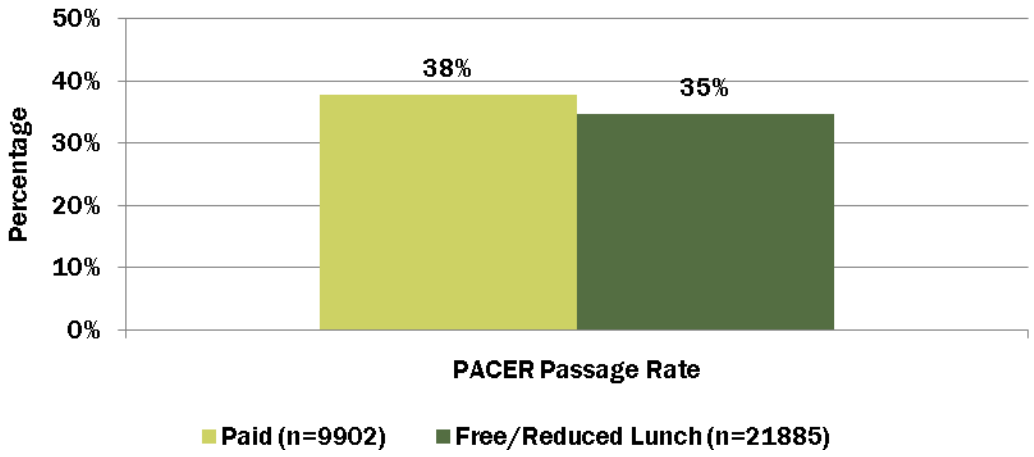


Figure 11. Louisiana state fitness assessment PACER results by free and reduced price lunch status for 2010–11 (n=31,787).



Behavioral and Academic Analyses

The DOE has not released official student discipline data or LEAP, *i*LEAP, or GEE results from the 2010–11 school year. Therefore, correlational analyses of behavioral outcomes and academic outcomes could not be conducted. It is the Picard Center's plan to conduct these analyses by using a similar methodology to that used for last year's report as soon as the data becomes available. These results will be published in an addendum to this report.

Progress on 2010 Plan

In 2009, with guidance from the Louisiana Obesity Council, the collaborators mentioned earlier developed a plan for physical health fitness assessment with three goals:

1. To establish baseline and annual measurements to monitor children's physical fitness and childhood obesity rates;
2. To identify best-practice universal interventions, targeted interventions, and intensive, individual interventions and evaluate their effectiveness; and
3. To relate health outcomes to academic and behavioral outcomes (e.g., LEAP scores and suspension rates).

Further, in August 2010, representatives from the DHH, DOE, and Picard Center met to review and revise the plan for implementing and expanding assessments and interventions. The decision was made to focus on ten strategies for school-based obesity prevention (as recommended by the Centers for Disease Control and Prevention):

1. Coordinate and integrate school health-related programs across state agencies and with nongovernmental organizations.
2. Use state and local data to guide decision-making and policy formulation.
3. Support the development of school health councils and rigorous school health planning processes.
4. Establish strong wellness policies.
5. Improve the capacity of school staff through certification and professional development.
6. Establish requirements for how much time students must spend in physical education (activity).
7. Set nutrition standards for food and beverages offered in schools.
8. Promote high-quality health education and physical education.
9. Support student participation in high-quality school meal programs.
10. Support opportunities for students to engage in physical activity and consume healthier foods.

These 10 strategies were incorporated into the December 2010 Act 256 report, which is included in the appendix of this report.

Specifically, all partners, through participation in the Louisiana Obesity Council, have been active in developing policy recommendations and fostering partnerships at the state, regional, and local levels. Strong wellness policies lay the foundation for effective school health programs and go beyond the minimal requirements to address child nutrition, nutrition education, and physical education. The School Wellness Policy Implementation Project, led by the Council, developed the 2009 Louisiana School Wellness Policy Action Plan Guide, which was distributed to over 1,000 schools across the state. In 2009, legislators also passed Act 286, which mandates school districts to form a district level

School Health Advisory Council (SHAC). Although the exact number is not known, many school districts have begun to assemble similar council. The presence of SHACs and school health coordinators can facilitate the development and implementation of many of the strategies in this report. A key purpose of the SHAC is to review, improve, and implement the school's health and wellness related policies.

Furthermore, in 2010, the DHH, DOE, and Louisiana School Board Association collaborated on the Schools Putting Prevention to Work (SPPW) grant, which provides funds for almost 40% of Louisiana's public school districts to develop SHACs to advance the level of actual implementation of their school district wellness policies. When possible, the Picard Center fitness data will provide the 27 participating school district grantees with information to support their program expansion. Additionally, the DHH and DOE plan to readminister the 2007 Healthy Kids Wellness Policy Survey in 2012–13.

Through Louisiana Action for Healthy Kids (LA AFHK), the Obesity Council has created five regional teams to increase parental and community engagement in efforts to improve nutrition and physical activity in schools. LA AFHK partners with the Louisiana Dairy Association to distribute Fuel Up to Play 60 school wellness activation kits and provide grant awards to schools across the state. During the 2010-2011 school year, 1440 schools engaged with Fuel Up to Play 60 and total grants funds awarded were $53,900 in 21 schools. Annual funding opportunities continue and schools can apply four times a year for up to $4000 per year. Funding is provided by the NFL and National Dairy Council. The NFL New Orleans Saints also partnered with the Louisiana Obesity Council to donate 35 Fitnessgram kits to be distributed to Louisiana schools. These activities and partnerships seek to monitor obesity rates and program advancement and facilitate community involvement. The LA AFHK is also coordinating efforts with the SPPW project.

In collaboration with the National Association for Sport and Physical Education (NASPE), the DOE has provided professional development workshops for physical education teachers throughout the state. These workshops provided instruction on best practices and assessment strategies that will assist teachers in implementing and assessing physical education grade-level expectations. Further, DOE is also collaborating with a NASPE task force to train physical educators as Directors of Physical Activity (DPAs), school-based champions for physical activity. DPAs will play a vital role in the development of a comprehensive school physical activity program (CSPAP). The goal of a CSPAP is to develop a school culture conducive to promoting lifelong physical activity across five integral components: Physical Education, Physical Activity during School, Physical Activity Before and After School, Staff Involvement, and Family and Community Involvement.

Act 331 of the 2005 legislative session established healthy standards for foods and beverages sold on campus from 30 minutes before school begins until 30 minutes after

school ends. Elementary and middle schools must have 100% compliance, and high schools must have 50% compliance with food items and 100% compliance with beverages. To further improve the nutritional value of school meals, the DOE encourages school districts to participate in Healthier U.S. School Challenge (HUSSC). In 2009–10, eight school districts in Louisiana received USDA Team Nutrition mini-grant funds to implement this program. A cadre of trainers is being developed to assist districts in implementing HUSSC. Currently, 49 schools in four districts have received national recognition. Not only are HUSSC standards for competitive foods and beverages stricter than the state standards, most schools receiving recognition for the HUSSC do not even sell competitive foods and beverages.

Finally, the Picard Center continues its successful partnerships with public universities and experts in fitness assessments and physical and health education to increase the number of fitness assessments conducted in Louisiana, as well as its usefulness to district and school administrators and teachers. During the 2010–11 school year, the Picard Center internally partnered with the College of Education's Kinesiology Department and the College of Nursing and Allied Health Professions. The Picard Center also partnered with the University of Louisiana at Monroe and Louisiana State University in Baton Rouge. A final partnership is ongoing with a private individual with many years of experience working with physical education teachers in Louisiana. Through our successful partnerships, the Picard Center was able to increase the number of fitness assessment participants to over 100,000 students.

Appendix

STATE AGENCIES AND UNIVERSITIES WORKING TOGETHER TO IMPACT CHILDHOOD OBESITY IN LOUISIANA

REPORT PREPARED IN RESPONSE TO ACT 256 OF THE 2009 REGULAR SESSION

DECEMBER 2010

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The following state agencies and universities contributed to the information contained in this legislative report.

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UNIVERSITY OF LOUISIANA AT LAFAYETTE

Louisiana Department of
EDUCATION

Executive Summary

Act 256 of the 2009 Louisiana legislative session encourages school districts to conduct health-related physical fitness assessments of students in public schools. It further calls for the review and expansion of the current health-related physical fitness assessment program as well as a plan for developing interventions and making recommendations regarding program implementation, best practices and future directions.

In September 2010, a companion report was submitted to the legislature which reported fitness assessment results for 2009-10. Results indicated that half of Louisiana's public school students have an overweight or obese body composition (50 percent) and a large percentage (37 percent) did not meet minimum fitness standards for most subtests on the fitness assessment. This data can be used in conjunction with other data sources to formulate and promulgate policy that addresses childhood obesity and identify best practices for nutrition, physical activity and obesity prevention programs.

The use of data and evidenced based research to drive policy and program implementation cannot be stressed enough. State agencies and local organizations as well as other state stakeholders can encourage schools and districts to support the collection of meaningful data through health-related physical fitness assessment administration.

This report focuses on current interventions, identified needs and future directions for a comprehensive approach to childhood obesity and children's physical fitness. Act 256 specifies that the Louisiana Council on Obesity Prevention and Management, Department of Health and Hospitals, Department of Education, Cecil J. Picard Center for Child Development and Lifelong Learning at the University of Louisiana at Lafayette and the Governor's Council on Physical Fitness and Sports act as state-wide collaborators on the issue of childhood obesity. The framework for this comprehensive report is built around the Centers for Disease Control and Prevention's School-based Obesity Prevention Strategies for State Policymakers (Centers for Disease Control and Prevention, 2010). These evidence-based strategies are:

- Strategy 1: Coordinate and integrate school health programs across state agencies and with nongovernmental organizations.
- Strategy 2: Use state and local data to guide decision-making and policy formulation.
- Strategy 3: Support the development of school health councils and rigorous school health planning processes.
- Strategy 4: Establish strong wellness policies.
- Strategy 5: Improve the capacity of school staff through certification and professional development.
- Strategy 6: Establish requirements for how much time students must spend in physical education.

- Strategy 7: Set nutrition standards for food and beverages offered in schools.
- Strategy 8: Promote high quality health education and physical education.
- Strategy 9: Support student participation in high quality meal programs.
- Strategy 10: Support opportunities for students to engage in physical activity and consume healthier foods.

Recommendations at a Glance:

- Create a living document which establishes a three tiered intervention approach addressing obesity in public school children through effective health, nutrition and physical education.

- Provide fiscal support to each local education agency to have in place a Children's Health Facilitator, serving as staff to the School Health Advisory Council (SHAC) to oversee the implementation of healthy nutrition and physical activity programs and health-related physical fitness assessments.

- Increase the use of school nurses to decrease the number of chronic childhood disease related to childhood obesity (establish baseline data during the 2011-12 school year).

- Continue to expand the surveillance of the status of students across Louisiana through the health related physical fitness assessment, including BMI assessments of from approximately 25,000 children to 700,000 children within three years.

- Provide information regarding health related physical fitness assessment results by local education agencies (LEAs). This would include aggregate results to district School Health Advisory Councils and School Boards, Louisiana Departments' of Education and Health and Hospitals, and individual student written reports provided to parents/families.

- Combine the Act 256 September and December annual reports into one annual December report.

ACT 256 DECEMBER 2010 REPORT: STATE AGENCIES AND UNIVERSITIES WORKING TOGETHER TO IMPACT CHILDHOOD OBESITY IN LOUISIANA

Introduction

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Strategy 1: Coordinate and integrate school health programs across state agencies and with nongovernmental organizations. With childhood obesity being a hot topic in the public, many governmental agencies (state, regional and local) as well as nongovernmental organizations (e.g., hospitals, churches, philanthropic foundations) are developing and implementing school-based programs to address childhood obesity through physical activity and/or nutrition. State policymakers can take advantage of the multiple efforts by focusing on program coordination,

collaboration and integration. A study conducted by Veugelers and Fitzgerald (2005) measured student health outcomes based upon the type of health program implemented in their school. Some schools had no health programming, some schools had a nutrition program only, and some schools had a comprehensive coordinated school health program (components included, but were not limited to, physical health, mental health, nutrition, family and community involvement). The results indicated that students who attended a school with a coordinated school health program had better health outcomes than either of the other school types at a statistically significant level.

Current Interventions: The Louisiana Obesity Council's strategic plan for 2007-10 includes a capacity building goal to strengthen statewide, regional, and local infrastructure to promote coordination among private and public partners across the state. To date, the Louisiana Obesity Council has developed partnerships with over 50 public and private organizations across the state and developed a workgroup, linked to a national partner, Action for Healthy Kids (AFHK), focusing on impacting obesity in schools and communities. The Louisiana Action for Healthy Kids (LA AFHK) Workgroup has developed five regional LA AFHK teams across the state in order to have locals work closely with their schools and communities. Projects include partnering with the Southeast United Dairy Industry Association and the NFL New Orleans Saints for the distribution and implementation of Fuel Up to Play 60, a youth-led wellness program that empowers youth to take action in their school and for their own health and the donation of 35 health-related physical fitness kits to Louisiana schools, by the NFL New Orleans Saints.

The coordination of efforts between state agencies and nongovernmental organizations continues with the successful collaboration of several Obesity Council member organizations working with the DHH Chronic Disease Tobacco Control Program to receive a federal grant award to implement a nutrition, physical activity and obesity prevention project in Louisiana schools. This project, Schools Putting Prevention to Work (SPPW) provides funding to implement an unfunded mandate of ACT 286 of the 2009 legislative session to create district level SHACs in Louisiana schools. The SPPW project complements the work of ACT 256 health-related Physical Fitness Assessments in Schools as an intervention to increase nutrition, physical activity and obesity prevention in schools continues until 2012. Further, the Picard Center has partnered with three other state universities, Louisiana State University, Northwestern State University and University of Louisiana at Monroe, to provide training and technical assistance to 19 school districts across the state on student physical fitness.

Identified Needs: Coordination efforts continue to foster partnerships at the state, regional and local level, with plans to develop additional collaborative partnerships in order to cover the entire state, and ensure efficient and effective use of resources. Continued strengthening of these

partnerships and the development of new partnerships is needed to comprehensively address childhood obesity.

Future Directions: The Act 256 partners plan to develop metrics to evaluate the success of coordinated school health collaborations. The first step in the process is to catalog the number and type of partnerships that are currently active in the state. Subsequently, one or more instruments will be developed to gauge the impact of these collaborations on children's health, specifically childhood obesity.

Strategy 2: Use state and local data to guide decision-making and policy formulation. The use of data and evidenced based research to drive policy and program implementation cannot be stressed enough. State agencies, local organizations as well as other state stakeholders can encourage schools and districts to support the collection of meaningful data through health-related physical fitness assessment administration and participate in data collection surveys such as the Youth Risk Behavior Survey (YRBS) and School Health Profiles which contain a vast amount of self-reported student level data. This data can be used in conjunction with other data sources to formulate and promulgate policy that addresses childhood obesity (Sussman, Jones, Wilson & Kann, 2002).

Current Interventions: Even before the passage of Act 256, the Picard Center was working with school districts to collect student physical fitness data. Since the passage of Act 256, the Picard Center has increased collected data to include over 25,000 students in Louisiana (more than 300 percent increase from 2008-2009). Aggregated data results have been discussed with schools, districts, regional organizations and state leadership. Further, this data has been shared with another current intervention, the Pennington Biomedical Research Center's (PBRC) Annual Report Card on Physical Activity and Health for Children and Youth. For the past three years, PBRC has compiled secondary source data into a comprehensive look at the health of Louisiana's children. PBRC publishes the report card as an advocacy tool designed to promote awareness of the health concerns associated with physical inactivity and the growing problem of physical inactivity and obesity among children and youth in Louisiana (Pennington Biomedical Research Center, 2010). Finally, DOE has administered the YRBS survey in Louisiana for the past 17 years.

Identified Needs: While Louisiana has several data sources to understand the childhood obesity epidemic, these databases have not been fully utilized to make data-driven decisions. First, state, regional and local organizations need additional professional development on the application of data to the development and implementation of processes, policies and programs. Second, these organizations need easy access to this type of data.

Future Directions: In 2010 DHH, DOE and the Louisiana School Board Association are collaborating on the grant, SPPW, which provides funds for school districts to develop SHACs and advance the level of actual implementation of their school district wellness policies. The 27 school district grantees will use available data sets, including the YRBS and Picard Center fitness assessment data to make data driven decisions. Additionally, DHH and DOE plan to re-administer the 2007 Healthy Kids Wellness Policy Survey in December 2011 and January 2013. Finally, the Picard Center, through its university partnerships, is working with 15 school districts to analyze their fitness assessment results in order to improve the physical education curriculum.

Strategy 3: Support the development of school health councils and rigorous school health planning processes. The presence of SHACs and school health coordinators can facilitate the development and implementation of many of the strategies in this report at the local school district level. A key purpose of the SHAC is to review and improve the school's health and wellness related policies. When comparing coordinated school health schools with non-coordinated school health schools, researchers determined that four essential elements were associated with improved health and academic outcomes for students. One of the essential elements was the presence of an active SHAC (Stoltz, Coburn & Knickelbein, 2009).

Current Interventions: In 2009, legislators also passed Act 286 which mandated that school districts form a district level SHAC. Although the exact number is not known, many school districts have begun to assemble this council. Further, through the SPPW grant, 27 school districts are being given funds to not only convene their SHAC, but also to review and revise their school district's wellness policy.

Identified Needs: While the SPPW grant reaches almost 40 percent of Louisiana's public school districts, professional development and technical assistance is needed for the other 43 school districts. Many school districts have only minimally addressed student health needs in the past and are in need of assistance to form a productive SHAC. Further, progress monitoring is needed to ensure the actual convening of the SHAC, as well as, their ultimate success in positively influencing student and staff health outcomes.

Future Directions: The continued implementation of the SPPW grant will focus resources on 27 school districts in Louisiana. The Picard Center will continue to work with its 18 coordinated school health (CSH) districts on convening a SHAC and plans to increase that number by at least 10 in the 2010-11 school year. While there is some overlap between the SPPW grantees and Picard Center CSH districts, it is estimated 45 school districts will receive some level of technical assistance in this area. Further, as stated previously, DHH and DOE will re-administer the Healthy Kids Wellness Policy Survey during the 2011-12 school year.

Strategy 4: Establish strong wellness policies. The Federal Child Nutrition and WIC Reauthorization Act of 2004 required the development of wellness policies for school districts participating in United States Department of Agriculture (USDA) National School Lunch Program and the National School Breakfast Program (virtually every school district in Louisiana). Strong wellness policies lay the foundation for effective school health programs and go beyond the minimal requirements to address child nutrition, nutrition education and physical education. A recent, comprehensive survey of school wellness policies and their impacts (Argons, Berends, Ellis & Gonzalez, 2010) gathered information on perceptions, barriers and opportunities surrounding school wellness policies. One relevant result was that SHACs and local school boards were interested in professional development around the creation, implementation and evaluation of wellness policies.

Current Interventions: In addition to the aforementioned SPPW grant, all schools have access to several resources to assist their development of school wellness policies. The Louisiana Obesity Council led a collaborative project between state agencies, universities and the Governor's Office to develop the 2009 Louisiana School Wellness Policy Action Plan Guide to assist schools in putting their wellness policy into action.

Through a USDA Team Nutrition Training Grant, 22 schools in six districts participated in activities to strengthen their wellness policies. DOE developed an evaluation tool that was piloted in 2009-10. Also through the grant, DOE offered the course, Build a Better Wellness Policy, in 2010 with 12 districts participating.

Identified Needs: While all school districts who participate in the National School Lunch Program and the National School Breakfast Program have a wellness policy on file, there is no mechanism in place to judge the impact of the policy on children's health. There is a continued need for professional development to create effective school wellness policies and a means for progress monitoring to ensure effective implementation.

Future Directions: DOE is revising its Wellness Policy Evaluation Tool to analyze school districts' wellness policies. The tool follows mandated components of the wellness policy and will be administered in 2011. Additionally, the continued implementation of the SPPW grant will focus resources on 27 school districts in Louisiana to assist in the refinement of their district's school wellness policy.

Strategy 5: Improve the capacity of school staff through certification and professional development. A qualified and proactive staff is the key to successfully implementing health, physical activity and nutrition programs that address childhood obesity. In addition to having highly qualified teachers in the academic classroom, certified teachers in health and physical education increase the effectiveness of these classes. In a national study of physical education

teachers (Lee, Burgeson, Fulton & Spain, 2007), researchers cited the lack of professional development specific to health and physical education as a major impediment to delivering quality health and physical education. However, in Louisiana, only secondary level physical education teachers must be certified. Elementary school physical education teachers are not required, and therefore, physical education is often left to the elementary classroom teacher. He or she may have had only one course in physical education and may never receive any professional development in this area. Consequently, many students at the elementary school level receive inadequate physical and health education.

Current Interventions: The Louisiana Association for Health, Physical Education, Recreation and Dance (LAHPERD) hosts an annual conference which provides a yearly opportunity for health and physical education teachers to receive professional development on the latest topics and trends**.**

Identified Needs: Physical education and health education teachers need regular professional development to stay abreast of the latest innovations in their field. Additionally, elementary classroom teachers who provide physical education for their students should receive additional professional development on physical and health education on a regular basis.

Future Directions: The Picard Center is working with its university partners around the state to provide at least two technical assistance opportunities in each of the 18 coordinated school health districts. These technical assistance sessions will center around applying fitness assessment results to improving physical education programs. Additionally, the Louisiana Obesity Council, including DOE continue to develop collaborative partnerships with universities and professional associations to provide multiple opportunities for professional development.

Strategy 6: Establish requirements for how much time students must spend in physical education. With the national standard of 60 minutes of physical activity per day for most children and adults, a daily requirement of physical education can assist students in meeting that requirement. Unfortunately, a recent national survey indicated that few school districts provide either adequate physical education or physical activity for its students (Lee, et. al, 2007). A first step in supporting physical activity at school is limiting the amount and type of exemptions or waivers for physical education. This may increase the physical activity of many at-risk students.

Current Interventions: Bulletin 741 (DOE) provides the minimum requirements for physical education. Currently, students in grades K-8 must spend 150 minutes in physical education and up to 50 minutes in health education per week. High school students (grades 9-12) must take 1.5 units (semesters) of physical education and 0.5 units of health education.

Identified Needs: While Louisiana has appropriate requirements for physical education, there is no enforcement system in place to ensure compliance with these regulations. Anecdotal reports indicate that some schools and districts count recess time or class change periods as physical education minutes.

Future Directions: Increasing awareness of physical education requirements in school districts and SHACs is a key next step in assuring compliance with physical education. The SPPW grant will assist 27 districts in self-monitoring their district's physical education schedule. DOE continues to seek additional, low cost but effective means to ensure compliance with Bulletin 741 physical and health education requirements.

Strategy 7: Set nutrition standards for food and beverages offered in schools. While school breakfast and lunch meals must follow USDA nutritional guidelines, other food sold or provided outside the federally funded school food service programs in schools often do not have to comply with these guidelines. Some examples include fundraising foods, vending machines for staff and students and food sold at athletic events. The availability of unhealthy food at schools can impact student nutrition negatively as observed in a study by Neumark-Sztainer, French, Hannan, Story & Fulkerson (2005). They studied high school students' lunch behaviors and found that the availability of vending machines during lunch hours decreased student nutritional intake and that schools with open campuses for lunch had similar results, decreased nutritional intake.

Current Interventions: Act 331 of the 2005 legislative session established healthy standards for foods and beverages sold on campus from 30 minutes before school begins until 30 minutes after school ends. Elementary and middle schools must have 100 percent compliance, and high schools must have 50 percent compliance with food items and 100 percent compliance with beverages. To further improve the nutritional value of school meals, DOE encourages school districts to participate in Healthier U.S. School Challenge (HUSSC). In 2009-10, eight school districts in Louisiana received USDA Team Nutrition mini-grant funds to implement this program. A cadre of trainers is being developed to assist districts in implementing HUSSC. Currently, 49 schools in four districts have received national recognition. The HUSSC not only has standards for competitive foods and beverages that are stricter than the state standards, most schools receiving recognition for the HUSSC do not sell competitive foods and beverages.

Identified Needs: HUSSC provides school districts with incentives and resources to improve the nutritional quality of school meals. However, districts may need assistance with identifying funds to implement this programs. Additionally, there is continued need to monitor compliance with vending machine regulations. Schools should be encouraged to operate non-related fundraisers and eliminate food and beverage items.

Future Directions: DOE will continue to encourage and support districts in their efforts to join the HUSSC. This school year, five additional districts are implementing HUSSC. Further, districts working with the SPPW grant will be encouraged to incorporate aspects of the Healthier U. S. School Challenge into their wellness policy.

Strategy 8: Promote high quality health education and physical education. By increasing the quality of health and physical education curriculums, school districts can prepare students to make positive decisions about their overall health, nutrition and physical activity over the course of their lives. Nationally, there are few states that have rigorous, enforceable requirements for quality physical and health education. Kann, Telljohan & Wooley (2007), conducted a study of health education curriculum. Their findings indicated that although there was a wide variance in states' health education standards, few curriculums addressed all 14 nationally recommended topics.

Current Interventions: DOE developed physical education grade level expectations (GLEs) for grades K-12 in 2009. Subsequently, DOE conducted state-wide trainings for physical education teachers on these GLEs and methods for appropriate implementation. The University of Louisiana at Monroe, one of the Picard Center's university partners, is working with three school districts on Carol White Physical Education Program grants. These grants provide funding, training and other resources to school districts to improve their physical and health education programs.

Identified Needs: With the success of the physical education GLEs, the DOE has recognized a need for health education GLEs. These GLEs will assist districts in developing quality health education curriculums. Further, the CDC has two assessment tools for physical and health education curriculums available (Physical Education Curriculum Assessment Tool – PECAT and Health Education Curriculum Assessment Tool – HECAT) for free use. However, few schools and districts in Louisiana use this tool.

Future Directions: The DOE plans to disseminate Health Education GLEs with the 2011-12 school year and to provide districts with training on their use in a similar manner as the dissemination of the Physical Education GLEs. Additionally, DOE, DHH and the Picard Center will encourage collaborative school districts to complete the PECAT and HECAT and to use those results in improving their health and physical education instruction.

Strategy 9: Support student participation in high quality meal programs. School meals can provide a substantial portion of a student's nutritional intake during the school year. It is important to encourage students make healthy food choices while at school. Related is the importance of encouraging families to participate in free or reduced price school meal programs. A national study by Gleason and Dodd (2009) found that students who ate a school breakfast had

a lower body mass index than those who did not. School breakfast programs may be considered a protective factor in childhood obesity.

Current Interventions: All public school districts in Louisiana participate in the USDA National School Lunch Program and the National School Breakfast Program. Further, as previously stated eight school districts are participating in the HUSSC. This year, the legislature passed Act 737 which required school districts to provide a sandwich or a substantial and nutritious snack item to children who could not pay for lunch. Previously, some school districts refused to provide food to students with a negative balance in their school lunch account**.**

Identified Needs: While participation in National School Lunch Program is high in the elementary and middle school levels, participation is lower among high school students. Increasing high school student lunch participation may positively impact student health and possibly academic performance.

Future Directions: The Federal government will reauthorize the USDA Child Nutrition Act in 2011, and there may be unspecified changes to federal regulations on school meals and school meal programs. The DOE will work with the federal government and local school districts to ensure compliance with any future changes.

Strategy 10: Support opportunities for students to engage in physical activity and consume healthier foods. As stated earlier, schools can provide students with multiple opportunities to practice making positive health choices in regards to nutrition and physical activity. Researchers (Robinson-O'Brien, Burgess-Champoux, Haines, Hannan & Neumark-Sztainer (2010) studied fruit and vegetable consumption in students from urban, low-income areas and found that most children did not consume five fruits or vegetables per day. However, most fruit and vegetable consumption occurred at school.

Current Interventions: DOE has developed several nutrition education materials for schools and districts that are available on DOE's website. Additionally, DOE is encouraging school districts to improve the amount of fresh fruits and vegetables through USDA grants. Further, the nonprofit Safe Routes to Schools is working with state agencies and local school districts to promote physical activity on the way to and from schools. In fall 2010, the Louisiana Safe Routes to School organized a successful campaign to have students walk to school on October 3, 2010.

Identified Needs: With schools under enormous pressure to meet academic requirements, many school administrators make the decision to reduce physical education time, recess and lunch periods to increase the number of instructional minutes. In many cases, students do not have

enough time to eat lunch or be physically active during the school day. Further, students often do not either select or eat fruits and vegetables offered at school.

Future Directions: School districts working with the SPPW grant are encouraged to develop and implement programs, policies and processes to improve the amount of healthy food and physical activity within a school day. DOE is continuing to develop nutrition education and marketing tools to improve dietary intake as well as support faculty and staff to serve as role models for improved nutrition intake.

CONCLUSION

Act 256 solidified the collaboration for improving physical health between Louisiana's DOE and DHH and universities including the Picard Center at UL-Lafayette. As the physical fitness assessment initiative progresses, and additional data related to health and physical fitness of Louisiana's youth are harvested, the Picard Center, DHH, DOE and the Louisiana Obesity Council will continue to work in tandem and will be better situated to make informed policy recommendations impacting the most cost-effective strategies for changing the trajectory of children's health and physical fitness.

Recommendations

The following recommendations are given for legislative consideration.

- **Create of a living document which establishes a three tiered intervention approach addressing obesity in public school children through effective health, nutrition and physical education.** It is recommended that the Louisiana Departments' of Education and Health and Hospitals, working with the SHACs, the medical community and other stakeholders, establish **a three tiered approach** to addressing obesity in public school children. With effective nutrition, physical activity and behavior modification programs at the primary, secondary and tertiary levels, interventions should be developed based on best practices. These interventions should be inclusive of a parent education campaign that provides knowledge about the immediate and long-term risks associated with childhood obesity. Parents should be armed with the knowledge that obese children and adolescents will become obese adults and suffer other health problems as a result.

- **Provide fiscal support to each local education agency to have in place a Children's Health Facilitator, serving as staff to the School Health Advisory Council (SHAC) to oversee the implementation of healthy nutrition and physical activity programs and health-related physical fitness assessments.** It is recommended that fiscal support be given to each local education agency to have in place a **Children's Health Facilitator**, serving as staff to the SHAC, to oversee the implementation of healthy nutrition

programs, health-related physical fitness assessments and effectiveness of health and physical education programs. These programs are designed to address childhood obesity and fitness in the schools and to generally plan for disease prevention and management for children. Allowable expenditures for these dollars should include, but not be limited to, resources for education for children and their families about nutrition, health-related physical fitness assessments, training in administration, acquisition of assessment kits and software. The outcome would be an increase in the percent of public school children meeting minimum fitness standards for most of the subtests on the fitness assessment. Currently, based on the fitness assessment of 16,000 Louisiana children, 30% are able to achieve the healthy fitness zone on four of the five sub tests; the target is to increase the number of students achieving the healthy fitness zone in 4 out of 5 sub test by 5% annually.

Coordinated school-based models, such as a comprehensive school physical activity program (CSPAP), continue to be recognized as ideal agents for building healthier generations of K-12 youth (Institute of Medicine, 2005; National Association for Sport and Physical Education [NASPE], 2008; USDHHS, 2009). The goal of a CSPAP is to develop a school culture conducive to promoting lifelong physical activity across five integral components: Physical Education; Physical Activity during School; Physical Activity Before and After School; Staff Involvement; Family and Community Involvement. In order for CSPAP to meet its full potential, a school-based champion for physical activity, or a **Director of Physical Activity** (DPA), is needed. To train physical educators for this new role a task force has been assembled to develop a National Association for Sport and Physical Education (NASPE)-endorsed, professional development (PD) program that certifies current teachers as DPAs, beginning in August 2011. Certified DPAs should be physical educators who have a shared technical culture, access to necessary resources, and the ability to champion policy change.

- **Increase the use of school nurses to decrease the number of chronic childhood diseases related to childhood obesity (establish baseline data during the 2011-12 school year)**. It is recommended that necessary changes be made to the current State Medicaid Plan to assist local education agencies in the **placement of a school nurse in every school.** This will ensure a knowledgeable individual is on campus during school time to provide care coordination and disease management for students identified as obese. School nurses should be required to conduct additional screenings on the 31% of the students currently being identified as obese. In doing so, it is expected there will be a reduction in chronic childhood illnesses related to obesity such as high blood pressure, type 2 diabetes, early symptoms of hardening of the arteries, nonalcoholic fatty liver disease, polycystic ovary disorder, and disordered breathing during sleep.

- **Continue to expand the surveillance of the status of students across Louisiana through the health related physical fitness assessment, including increasing BMI assessments from approximately 25,000 children to 700,000 children within three years.** As outlined in Act 256, dollars should be allocated from the state budget to allow the Picard Center, University of Louisiana at Lafayette, and their university partners, to **continue to maintain surveillance of the status of school children across Louisiana.**

This will be accomplished by: expanding the number of children currently administered the fitness assessments; establishing the metrics necessary to measure the progress toward reducing obesity; increasing fitness levels, health status and nutrition through a process of data collection; analyzing and reporting from the university partners and local education agencies receiving dollars for this obesity initiative. As part of the annual report, the Picard Center will include a proposed budget analysis by means of finance for each of the recommendations presented.

- **Provide information regarding health related physical fitness assessment results by local education agencies (LEAs). This would include aggregate results to district School Health Advisory Councils and School Boards, Louisiana Departments' of Education and Health and Hospitals, and individual student written reports provided to parents/families.** This information can be used in a variety of ways both for program implementation and policy decisions. It is advisable that a whole community approach be developed by School Health Advisory Councils (SHAC)per Act 286 (2009 regular session) to address the issue of childhood obesity. Currently, the Louisiana School Board Association is working with 27 local educational agencies, on contract with DHH, to develop and implement comprehensive School Wellness Policies. It is recommended that by December 1, 2013 all local education agencies will have **active implementation of their School Wellness Policy**. Progress toward implementation and effectiveness of the School Wellness Policies will be evaluated by the Cecil J. Picard Center, University of Louisiana Lafayette and the Louisiana Departments' of Education and Health and Hospitals.

- **Combine the Act 256 September and December annual reports into one annual December report.** The Act requires an annual report in September and December. The Louisiana Obesity Council, in consultation with the Department of Education, the Department of Health and Hospitals, and the Cecil J. Picard Center work on developing both of these reports. It is recommended that the September and December report be combined into one annual report to better organize the reported information and avoid repetition.

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