

ENACTING EIGHT POLICIES TO PREVENT CHILDHOOD OBESITY: PROJECTED OUTCOMES FOR LOUISIANA

This brief reports the projected reduction in Louisiana’s childhood obesity prevalence if eight nutrition and physical activity policies are enacted, comparing the outcomes at maximum or moderate strength if they are implemented within the upcoming year or in four years.

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Policy Goals

- Prevent children from becoming overweight or obese.
- Facilitate healthy eating habits.
- Promote physical activity and active transportation.

What Does the Research Tell Us?

- Obese children are likely to become obese adults and to develop serious chronic diseases, like heart disease or diabetes, that may decrease the quality and length of their lives.²⁶
- Without policy interventions, the prevalence of obesity is expected to either plateau or continually increase in the forthcoming decades.

Current Policy Environment in Louisiana

- The nutrition and physical activity policies were chosen based on their potential impact to reduce childhood obesity, their feasibility to implement before 2020, and existing legislative momentum in the state.
- There are very few existing policies that are implemented and enforced that may help reduce the rate of childhood obesity.

Achieving Maximum Intervention Results

- A maximum intervention scenario would reflect a comprehensive, strategic, multi-faceted statewide movement to enact and implement legislation related to the highlighted nutrition and physical activity policies (see individual policy briefs for more detailed information).

Policy Interventions

Nutrition	Physical Activity
1. Junk Food Relative Pricing	5. Physical Activity Access
2. Junk Food Counter-marketing	6. Physical Activity Promotion
3. Fruit and Vegetable Access	7. Physical Activity in Schools
4. Fruit and Vegetable Promotion	8. Physical Activity in Child Care

WAYS TO SUPPORT: Nutrition and Physical Activity Policies

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- Become involved in the legislative process by keeping up to date with the current legislative agenda; make your opinion heard by calling or emailing your legislators’ offices asking them to support policies that promote healthy lifestyles for all residents.
- Express concerns and wishes to promote health at your neighborhood and civic association gatherings, city council and town hall meetings, and your state and local government representatives’ meetings.
- Get involved in your child’s School Wellness Council. Talk to school administrators about starting a Wellness Council if your child’s school doesn’t have one.
- Support local biking and pedestrian advocacy groups; participate in their physical activity and safety awareness events.
- Volunteer with organizations that provide healthy foods to those in need.

Projected Effect on Louisiana's Childhood Obesity Prevalence

The results in the table below show the reduction in childhood obesity with the enactment of eight nutrition and physical activity policy areas and illustrates four contrasting scenarios: prevalence if maximum policy conditions begin immediately as opposed to four years and prevalence if moderate conditions begin immediately versus in four years.

PRISM Results: Percent Change in Childhood Obesity if All Policies are Implemented Simultaneously				
Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU [^]]	↓ 26% [20-33%]	↓ 19% [14-24%]	↓ 12% [8-15%]	↓ 9% [6-11%]

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis.

Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- Within the PRISM model, implementing all policies at maximum strength in 2013 would have achieved the greatest reduction in childhood obesity prevalence in the model.
- As the legislative regular session for 2013 has passed, it is beneficial to aim for policy implementation in 2016 to see a 19% [Range of Uncertainty: 14-24%] decrease in childhood obesity.

Implementing the Policy

In combination with personal responsibility for maintaining a healthy lifestyle, supporting and enacting policies that facilitate healthy eating choices and physical activity for youth and adults may positively affect population-level health outcomes. Many community organizations, faith-based organizations, schools, and local governments have already taken steps to improve and increase the quality and quantity of health-promotion opportunities within their authority. Currently, not all of Louisiana's children receive the benefits of these programs and interventions. Therefore, in order to maximize the reach of health-promoting policies, statewide legislation is recommended.

The negative economic, societal, and personal costs of childhood obesity are significant consequences that cannot be underestimated. Too many children are overweight or obese now, and too many of Louisiana's children will be overweight or obese in the future if a strategic, comprehensive, multi-faceted prevention plan is not enacted. Curbing the obesity trend will require long-term commitment and resources from supporters, and the models suggest that it would be advantageous to take more time to build support and increase buy-in for stronger policies. It is important to reiterate that policy interventions might not produce immediate results but may ultimately demonstrate long-term benefits when looking at health outcomes related to childhood obesity and the associated healthcare costs.

! *"Policy has an integral role in community-based obesity prevention. With the increasing availability and quality of evidence of the obesity epidemic and effective interventions to tackle this epidemic, there are ongoing calls for government action to translate the evidence into policy and practice. Policy demonstrates government commitment to obesity prevention and provides a road map for planning, implementing, and evaluating interventions."⁶⁷*
~Lawrence & Swinburn, 2010

! *"While the magnitude of the [obesity] problem is great, the range of potential solutions is even greater. The design of successful interventions and actions for prevention and management of overweight and obesity will require the careful attention of many individuals and organizations working together through multiple spheres of influence."⁶⁶*
~The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity, 2001

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POLICY INTERVENTION BRIEFS > NUTRITION INTERVENTION: JUNK FOOD RELATIVE PRICING

- The following brief reports the effects of junk food relative pricing policies on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- This policy intervention represents a relative price increase for junk food in places where people typically purchase and consume food and beverages, or a price decrease for healthy food options.
- Policies may include: taxing sales of potato chips, baked goods, candy, chocolate, or ice cream; taxing sales of soda and sugar-sweetened beverages; or subsidies and reduced prices for fresh produce.

Policy Goals

- Replace junk foods with healthy alternatives and reduce overall consumption of junk food.
- Make healthy foods more **available, affordable, and desirable** for everyone in Louisiana.
- Provide support for stores and schools that offer healthy foods as competitive food options.

What Does the Research Tell Us?

- Subsidizing fruit and vegetable purchases is related to lower body weight in adults and children, suggesting that reduced prices for healthy foods may help reduce weight.⁶⁸
- Creating or increasing taxes on junk foods effectively reduced junk food consumption⁶⁹ and slightly improved fruit and vegetable consumption.⁷⁰
- There is evidence that adjusting the relative price of junk food through junk food taxes or healthy food subsidies can promote healthy eating behaviors.^{71,72}

Current Policy Environment in Louisiana

- Louisiana does not have any statewide or local legislation that permits taxation of any category of junk food.^{73,74} On the contrary: some junk foods, including soda, are exempted from taxation.⁷⁵ Louisiana halved the soda tax in 1993, then the Louisiana State Legislature completely repealed the soda tax law in 1997.⁷⁶ More recently, the Louisiana State Legislature specifically prohibited local governments from levying soda taxes.⁷⁷
- There are no state policies currently in place that make healthy foods more competitively priced compared to unhealthy foods at grocery stores, convenience stores, and other food retailers.
- The Louisiana Board of Elementary and Secondary Education (BESE) enforces regulations on vending machines and competitive foods, but these policies are not consistent across all grade levels.⁷⁸⁻⁸⁰

What is Junk Food?

"Junk" food refers to foods that have low nutritional value and are calorically dense, meaning they are high in solid fat and/or added sugar. Soda and sugar-sweetened beverages are also considered junk foods.



SODA



BAKED GOODS & PASTRIES



MILKSHAKES



CHIPS & SNACK MIXES



ICE CREAM & POPSICLES



CANDY, GUM & CHOCOLATE

Junk foods are appealing for their taste and because they are often cheaper and more readily available compared to snacks with lower fat, sodium, and/or sugar. Soda and junk foods have been linked to higher risks of obesity, diabetes, heart disease, and lower intake of important nutrients.⁸¹⁻⁸³

WAYS TO SUPPORT

Junk Food Relative Pricing

- Subsidize or provide coupons for fresh produce items in WIC, EBT, and SNAP programs.
- Reduce participation barriers for school breakfast, lunch, and summer meal programs.
- Support legislation to tax junk food and ask your legislators to reinstate the soda tax.
- Alter the relative pricing of health versus junk foods in school food stores/cafeterias and in vending machines available to students.
- Implement and enforce school wellness policies that require that free water is available to students at all times and that healthy food options are served during all school events.
- Support school fundraisers that do not involve candy or other unhealthy foods.
- Propose that sports complexes and event concessions carry healthy snack options.
- Provide incentives to store owners who provide and promote healthier snack foods and beverages.

Achieving Maximum Intervention Results

- Within the PRISM model, the initial conditions for the junk food relative pricing policy intervention was set at the lowest value (0%) because Louisiana has no applicable junk food taxes or policies influencing the relative price of healthy foods.
- Maximum intervention represents a junk food relative price increase of 20%, which is the maximum rate allowed by PRISM, with a moderate intervention level set at 10%. These rates are based on economic impact studies⁸⁴ and reported data of current tax rates in neighboring states and communities.



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention Changing the Relative Price of Junk Food Versus Healthy Food Reduce the Prevalence of Childhood Obesity?

Policy Strength	Maximum (20%)	Maximum (20%)	Moderate (10%)	Moderate (10%)
Year Implemented	2013	2016	2013	2016
% Change [ROU [^]]	↓ 8% [6-10%]	↓ 6% [5-7%]	↓ 4% [3-5%]	↓ 3% [3-5%]

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis.

Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- Implementing policies that change the relative pricing of junk foods may reduce the childhood obesity prevalence in Louisiana by up to 6% [Range of Uncertainty: 5-7%] if strong policies are enacted by 2016.

Implementing the Policy

Although obesity prevalence has been linked to state-level soft drink and snack taxes, additional evaluation and research is needed to demonstrate a solid association between intentional, economically-derived taxes or subsidies and the reduction in obesity at the population-level. A recent study suggested that small changes in pricing regulations are unlikely to decrease a community's obesity prevalence, but nontrivial taxes or subsidies may show measureable effects.⁷⁰ Junk food taxes are not widely supported by the public⁸⁵ and face opposition from lobbyists and industry leaders.⁸⁶ Since Louisiana enacted laws exempting soda from taxation by local governments, does not collect sales tax for other junk foods, and does not have any statewide programs to facilitate competitive pricing for healthy food options, it would be extremely difficult to immediately propose an intervention that increases the relative price of soda by 20%. Therefore, it may be more feasible for Louisiana to gather support for policies that reduce the price of healthy foods to make them more competitive options in food retail stores and schools.

Schools can be very effective points for obesity prevention efforts, and the Louisiana BESE has made headway in reducing the amount of junk food available to students by



"The growing evidence base...indicates that changes in the relative prices of less healthy and healthier foods and beverages can significantly change consumption patterns and may have significant impacts on weight outcomes at the population level, particularly among populations most at risk for obesity and its consequences. Raising the prices of less healthy options by taxing them has the added benefit of generating considerable revenues that can be used to support costly programmes and other interventions aimed at improving diets, increasing activity and reducing obesity, including subsidies for healthier foods and beverages."⁷⁰ ~Powell et al., 2013

implementing vending machine regulations and enforcing school meal nutrition requirements. While it may take many years for a maximum intervention to occur statewide with regard to the sale of junk food, the LA Department of Education and BESE can take additional steps by enhancing the language in their current nutrition policies and developing new policies and programs to ensure that students in all grade levels have healthy food options available at affordable prices.

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- The following brief reports the effects of junk food counter-marketing policies on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- This policy intervention reflects a well-planned statewide effort to deter junk food consumption through adjustments in product marketing.
- Policies primarily encompass one or more of these counter-marketing strategies:
 - anti-junk food media campaigns
 - less prominent product placement of junk foods
 - local communication, such as point-of-purchase signage and nutrition or menu labeling to promote healthy foods

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Policy Goals

- Replace junk foods with healthy alternatives and reduce overall consumption of junk food.
- Make healthy foods more appealing beverage and snack options.
- Provide support for food stores and schools that remove junk food advertising and increase healthy food marketing through media and high-visibility product placement.

What Does the Research Tell Us?

- Evidence has linked junk food advertising exposure to children's junk food preferences, purchases, and consumption,^{87,88} as well as overweight status.⁸⁹
- Advertising for junk food on television^{87,90-94} and on outdoor billboards⁹⁵ has been associated with obesity.
- Interventions at the point-of-purchase (e.g. unfavorable signage and nutrition labeling) have reduced junk food consumption.^{5,96}
- Evidence is needed to establish a link between junk food counter-marketing and junk food consumption.

Current Policy Environment in Louisiana

- There are no state-endorsed mass media campaigns or social marketing strategies employed to discourage junk food consumption in Louisiana.
- Louisiana does not have any laws or policies that restrict junk food placement or that promote healthy food messages in grocery stores, schools, or restaurants.^{97,98}

What is Food Marketing?

Food marketing/promotion: any activity conducted by a company in the food, beverage, or restaurant industry to encourage purchase of its products.⁹⁹

\$10,000,000,000

Food companies spend \$10 billion *per year* marketing foods and beverages to children and adolescents in the United States.⁸⁷

A high percent (up to 90%) of foods advertised during children's television shows are for convenience/fast foods and for foods high in fat, sodium, sugar or low in nutrients.¹⁰⁰⁻¹⁰³

American children spend nearly \$30 billion of their own money on junk food every year.¹⁰³

WAYS TO SUPPORT

Junk Food Counter-Marketing

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- Designate healthy restaurants and/or healthy menu options.
- Encourage menu nutrition labeling.
- Promote mass media campaigns about health effects of junk foods.
- Discourage junk food signage, promotions, and placement at points-of-purchase.
- Regulate the amount of advertising children are exposed to in their schools and neighborhood.
- Ban junk food advertisements during prime children's television watching hours and during children's shows.

Achieving Maximum Intervention Results

- The initial conditions in Louisiana were estimated by gauging the strength of placement restrictions and local marketing in schools, food stores, and restaurants. Because Louisiana does not have any policies or laws supporting junk food counter-marketing measures, the initial conditions were set to the lowest value (0%).
- Maximum intervention (100%) entails an effective, extensive, focused, an ongoing mass media counter-marketing campaign; local communication in schools, food stores, and restaurants; and less prominent product placement of junk food in these settings.



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention Reducing the Marketing Power of Junk Foods Reduce the Prevalence of Childhood Obesity?				
Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU [^]]	↓ 4% [2-7%]	↓ 3% [2-5%]	↓ 2% [1-4%]	↓ 2% [1-3%]

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis.

Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- Small reductions in the childhood obesity prevalence may be possible with effective junk food counter-marketing interventions.
- A 2-4% reduction in the childhood obesity prevalence may not seem substantial, but any decrease means that a number of children may be protected from the effects of overweight/obesity.

Implementing the Policy

Junk food counter-marketing is a relatively new policy intervention that communities are implementing. It is no secret that children and adolescents are major targets for food and beverage marketing campaigns, especially for fast food, sugary cereals, soda, and other junk foods. And it is known that food and beverage advertising affects children's food preferences and purchase requests, short-term consumption habits, and contributes to less-healthy diets and an environment that puts kids' health at risk.⁸⁷ While food companies have decreased the money spent on traditional television advertising, strategies have evolved to include the Internet and other forms of technology and social media (e.g. text messaging, social networking sites/apps) to attract and retain young customers.¹⁰⁴ Although some companies have pledged to self-regulate and have taken positive action in terms of marketing foods to children,¹⁰⁵ as businesses, their main priority is profit, not public health.

In accordance with the U.S. Congress passing Section 204 of Public Law 108-265, of the Child Nutrition and WIC Reauthorization Act of 2004,¹⁰⁶ some school districts in Louisiana have adopted language in their mandatory wellness policy that "strongly discourages" marketing of low-nutrition foods and beverages at school.¹⁰⁷

! A ban on marketing obesogenic foods (i.e. junk foods) to children is one of the single most effective and cost-saving policy strategies a government can implement.¹¹⁰

! Section 4205 of the Patient Protection and Affordable Care Act requires chain restaurants to post calorie information for menu items and the level of recommended daily calories that should be eaten.⁶

However, the policies are voluntarily adopted on a district-by-district basis, and only **discourage** marketing, but do not **prohibit** it. According to a CDC report in 2010, 61.6% of schools in Louisiana completely prohibit the selling of unhealthy foods (e.g. candy, fast food, and soft drinks) in all locations affiliated with the schools (school grounds, gymnasiums, school buses, sports fields).¹⁰⁸ As schools face budget cuts and seek additional revenue, they are caught in a dilemma, as competitive food and beverage sponsorships can be difficult to turn down.¹⁰⁹ With the help of policy makers and industry leaders, schools can be important places to market nutritious foods and healthy diets.

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POLICY INTERVENTION BRIEFS > NUTRITION INTERVENTION: FRUIT & VEGETABLE ACCESS

- The following brief reports the effects of fruit and vegetable access policies on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- The fruit and vegetable access policy intervention refers to policies and built environment improvements that increase a local population's accessibility to affordable fruits and vegetables.

Policy Goals

- Increase fruit and vegetable consumption by ensuring that all residents have access to fresh, good-quality, affordable produce.
- Encourage *replacing* unhealthy food options with fruits and vegetables.
- Support schools and food stores who increase the accessibility and affordability of fresh fruits and vegetables in their communities.
- Eliminate food deserts and stimulate economic development in these areas.

What Does the Research Tell Us?

- An evaluation of Louisiana children's eating habits gave the state a "D-" for Fruit and Vegetable Consumption, as only 5.9% of youth eat ≥ 4 fruits and 11.7% eat ≥ 3 vegetables per day, which is the recommended amount.¹¹¹
- A diet high in fruits and vegetables is associated with a decreased risk of serious chronic diseases, including some types of cancer and cardiovascular disease.^{112,113}
- Replacing foods of high caloric density with foods of lesser density, such as fruits and vegetables, can be a significant part of an effective weight management strategy.^{114,115}
- Supporting increased access, availability, and reduced price are key strategies to increase fruit and vegetable consumption and thus improve nutrition.^{116,117}
- Gaining additional fruit and vegetable access is estimated to reduce the likelihood of a fruit and vegetable-poor diet by about 40%¹¹⁸ and within a range of 11–32% in cases where affordability may be an issue.¹¹⁹

Current Policy Environment in Louisiana

- Louisiana currently authorizes the inclusion of fruits and vegetables in the state's Special Supplemental Nutrition Program (SNAP) and Women, Infants, and Children (WIC) programs.¹²⁰
- The Louisiana Healthy Food Retail Act promotes financing for healthy food retailers like grocery stores (non-restaurants) in underserved communities in an effort to increase healthy food accessibility and promote the sale and consumption of fresh fruits and vegetables.¹²¹
- In 2010, the state established a Sustainable Local Food Policy Council with "the purpose of building a local food economy benefitting Louisiana by creating jobs, stimulating statewide economic development, preservation of farmlands and water resources, increasing consumer access to

What is a Food Desert?

Food deserts are areas where people have limited access to a variety of healthy and affordable food. These areas are more likely to have high poverty rates; small populations (rural); high rates of abandoned and vacant homes; and residents with lower levels of education, lower income, and higher unemployment rates.¹²²

Across Louisiana, 10% of residents are low income and do not live close to a grocery store.¹²³



WAYS TO SUPPORT

Fruit & Vegetable Access

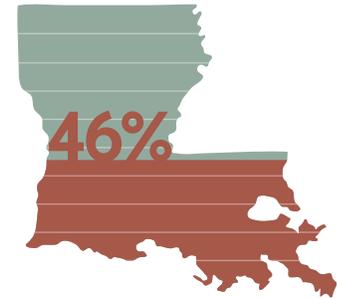
- Improve fruit and vegetable availability in corner or convenience stores.
- Increase the percentage of local farmers markets that accept WIC, EBT, and SNAP.
- Discount or subsidize fresh produce for all WIC, EBT, and SNAP programs.
- Establish and maintain community/school gardens.
- Implement policies for farm-to-school, -worksite, -hospital, and -restaurant programs.
- Enforce nutrition standards in school nutrition programs.
- Utilize mobile fresh food delivery units for areas with low accessibility.

fresh and nutritious foods, and providing greater food security for all Louisianians".¹²⁴ In 2012, among other proposals, the Council recommended increasing the amount of sustainable local foods available through school and public assistance nutrition programs and promoting home and community gardens to increase access to fresh fruits and vegetables.¹²⁵ However, to date no related bills were passed as a result of the Council's findings, and the Council is currently disbanded.

- School policy in Louisiana also established specific legislated guidelines regarding nutrition, restricting both the sales and availability of food "minimal in nutritional value" during school hours, as well as authorizing the Louisiana Department of Education to implement the regulations of the US Department of Agriculture's (USDA) nutritional programs.¹²⁶

Achieving Maximum Intervention Results

- Many Louisiana residents have access to affordable fruits and vegetables,^{115,127} but not all students may have optimal access in schools.^{115,128,129} The initial conditions level was set to reflect the overall level of children's access, which amounted to 46%.
- The maximum intervention conditions (100%) within PRISM represent an expanded presence of supermarkets and produce stands; increased access in worksite, school, and restaurant settings; and price discounts for low-income populations.



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention that Increases Fruit and Vegetable Access Reduce the Prevalence of Childhood Obesity?				
Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU^]	0%	0%	0%	0%

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis.

Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- PRISM estimated no effect of policies to increase access to fruits and vegetables, reflecting current research that demonstrates that increased access to fresh produce alone does not decrease the prevalence of obesity unless concurrent measures are taken to reduce junk food intake.
- Adding fruits and vegetables to a diet will not improve the energy density of a diet unless healthy food calories *replaces* junk food calories.

Implementing the Policy

Although it seems counter-intuitive that policies aiming to increase residents' access to affordable fresh fruits and vegetables are not predicted to make an impact on the prevalence of obesity, these findings are consistent with the most up-to-date data. This suggests that access to fruits and vegetables does not guarantee that the fruits and vegetables are affordable, of good quality, or prepared in a way that preserves and retains their nutrition.¹¹³ Access is just one piece of the puzzle in terms of promoting a well-rounded nutritious diet.

Louisiana has already enacted policies that promote fruit and vegetable consumption in schools and for low-income residents receiving SNAP benefits. Schools must adhere to the United States Department of Agriculture guidelines for providing fruits and vegetables to students enrolled in breakfast, lunch, and summer meal programs. Schools also limit the types of competitive foods sold outside of meal programs. Additionally, SNAP benefits are accepted at some farmers markets and produce stands, which can assist low-income families to obtain fresh produce.

! "The evidence is clear that many communities - predominantly low-income, urban communities of color and rural areas - lack adequate access to healthy food, and the evidence also suggests that the lack of access negatively impacts the health of residents and neighborhoods... policy interventions to increase access to healthy food in 'food deserts' will help people eat a healthy diet, while contributing to community economic development."¹³⁰ ~The Grocery Gap, 2010

With the knowledge that improving access cannot ensure that all of Louisiana's residents are meeting recommendations set by the USDA Dietary Guidelines for Americans, community organizations are increasingly incorporating multi-faceted plans that not only tackle the issue of access, but also teach residents how to prepare unfamiliar produce and adjust unhealthy recipes to make them more nutritious, help set up school and community gardens, and provide educational classes and materials to help families eat better.

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POLICY INTERVENTION BRIEFS > NUTRITION INTERVENTION: FRUIT & VEGETABLE PROMOTION

- The following brief reports the effects of fruit and vegetable promotion policies on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- Fruit and vegetable promotion policies include media campaigns, local communication, and placement strategies to promote diets rich in fruits and vegetables in order to improve health.

Policy Goals

- Increase fruit and vegetable consumption by making fruits and vegetables more appealing options.
- Encourage *replacing* unhealthy foods for fruits and vegetables.
- Support schools and food retailers that take measures to promote fresh fruits and vegetables.

What Does the Research Tell Us?

- A healthy diet inclusive of fruits and vegetables is important for optimal child growth, weight management, and chronic disease prevention.¹³¹
- Promotion strategies such as nutrition labeling at restaurants, point-of-purchase nutrition information, healthy food marketing, and school-based nutrition education programs show promise to improve healthful diets.¹³²⁻¹³³
- Changing the types of advertising from junk food to healthy food during children's TV programming reinforces healthy eating.¹³⁶

Current Policy Environment in Louisiana

- There are no laws or policies that support statewide mass media campaigns, improve communication, or encourage favorable placement of fruits and vegetables.
- Some school districts have established School Wellness policies that emphasize nutritional education for elementary students. LA Department of Education programs are designed to enhance student wellness, advance nutrition education school-wide, and optimize student exposure to fruit and vegetable promotion.¹⁰⁷

If marketing works for unhealthy foods,⁸⁷ shouldn't communities and industry make a better effort to advertise healthy foods?

The average young person is exposed to 20,00-40,000 ads per year on TV.¹³⁷ TV commercials account for 95% of fast food companies' advertising budgets.¹³⁸

Increased television viewing by children has been linked to lower levels of fruit and vegetable consumption.^{139,140}

In a recent study of children and adolescents in Louisiana, 31.4% of youth reported watching 3-4 hours of TV a day, and 33.3% watched ≥5 hours of TV a day. Higher television viewing time was related to higher obesity and greater cardiometabolic risk.¹⁴¹

WAYS TO SUPPORT

Fruit & Vegetable Promotion

- Increase campaigns that emphasize nutrition education.
- Promote the implementation and use of community and school gardens.
- Implement "healthy restaurant designation" media campaigns.
- Utilize mass media social marketing campaigns to promote fruit and vegetable consumption.
- Emphasize menu labeling in restaurants.
- Utilize effective placement and pricing strategies in grocery stores, convenience stores, schools.
- Support farm-to-table programs and local farmers markets.

Achieving Maximum Intervention Results

- Taking into consideration state policies in place regarding fruit and vegetable promotion in schools, food stores, and restaurants, Louisiana's initial conditions level (0.8%) was determined.⁹⁷
- Maximum intervention (100%) entails a highly effective statewide mass media campaign, attractive point-of-purchase product placement in stores and schools, and marketing efforts for fruits and vegetables in groceries, schools, and restaurant settings.



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention that Promotes Fruit and Vegetable Access Reduce the Prevalence of Childhood Obesity?				
Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU [^]]	0%	0%	0%	0%

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis.
 Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- When fruit and vegetable promotion policies are implemented singularly, there is not projected to be a decrease in the level of childhood obesity prevalence.
- Promoting fruits and vegetables will not be an effective policy strategy if measures are not taken to improve the nutritional quality of residents' diets. Simultaneous policies that reduce the amount of junk food purchased and consumed may improve the effectiveness of this type of policy intervention.

Implementing the Policy

It may be surprising that enacting a policy intervention focused on promoting fruits and vegetables is not projected to have an impact on the childhood obesity prevalence in the state. However, this projection demonstrates the need for research of population-level interventions that promote fruit and vegetable consumption while simultaneously making efforts to reduce consumption of unhealthy foods: **replacement** is the critical factor.

Communities across Louisiana are already making significant efforts to increase fruit and vegetable consumption. Along with tackling issues affecting access, many initiatives are multi-faceted in that they provide recipes and cooking instructions for unfamiliar produce. Community and school gardens are becoming more common. Plans for farmers markets are making headway. Initiatives to work with local corner stores by providing economic and infrastructure support to sell and promote produce are materializing. There are many strategies for food retailers to implement the product, price, placement, and promotion framework into marketing healthy foods in their stores.¹⁴² Restaurateurs can also assist in increasing fruit and vegetable consumption of their customers, especially their young customers, by making fresh fruits and vegetables the standard options.

! "...marketers and policy makers who are concerned about consumer welfare need to manage product offerings to make it easier for consumers to make better choices...The approach does not generally recommend banning products or eliminating choices. Consumer freedom is preserved, but an understanding of the limitations in consumers' beliefs, preferences, and decisions leads the marketer or policy maker to devise displays, tools, incentives, and promotions that make it easier for consumers to make consumption decisions that support long-term health."¹⁴³ ~Behavioral Economics and the Psychology of Fruit and Vegetable Consumption: A Scientific Overview, 2012

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POLICY INTERVENTION BRIEFS › PHYSICAL ACTIVITY INTERVENTION: ACCESS TO PHYSICAL ACTIVITY SPACES

- The following brief reports the effects of policies that increase access to physical activity spaces on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- This intervention represents policies that increase and improve access to spaces that provide adults and kids with opportunities for safe and affordable options for walking, biking, social, and green space physical activity in community, school, and in work settings.
- This intervention also represents changes to the built environment, including renovating or redesigning existing facilities, or creating new infrastructure that supports physical activity.



Children and adults living in neighborhoods with greater availability and accessibility of parks and recreation centers have higher physical activity levels.^{149,150,157,158}

Children from low-income and minority households have disproportionately less access to recreational facilities.⁵³

Policy Goals

- Increase levels of physical activity for all residents.
- Reduce the amount of sedentary time for all residents.
- Provide safe, affordable, well-designed spaces where all residents can participate in physical activity.

What Does the Research Tell Us?

- An evaluation of Louisiana's children's access to physical activity spaces gave the state a "D" for the Built Environment and Community Design. Only 62.0% of children have access to sidewalks or walking paths, and 65.5% of children have parks/playgrounds in their neighborhoods.¹⁴⁴
- There is **irrefutable evidence** of the effectiveness of regular physical activity to prevent chronic diseases (e.g. cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis) and premature death.¹⁴⁵ Physical activity promotes better general health and well-being, improves health-related quality of life, helps control weight, reduces the risk of some forms of cancer, and improves mental health and mood.¹⁴⁶⁻¹⁴⁹
- Physical activity levels decline as young people age.¹¹¹
- Many studies have shown an association between the built environment, physical activity, and obesity.^{14,150-152}
- Strong evidence supports enhancing access to physical activity spaces in conjunction with promotions to increase physical activity.¹⁵³

Current Policy Environment in Louisiana

- The Louisiana House of Representatives signed a bill in 2011 that encourages schools to enter into joint-use agreements by limiting the liability of school boards. This can inspire community groups to use school facilities for recreation and physical activity.¹⁵⁴
- A House Concurrent Resolution (HCR) creating a Complete Streets work group was passed in 2010 that recognizes the need for Louisiana transportation authorities to assume responsibility for creating safer, more accessible roadways for pedestrians and cyclists.¹⁵⁵ This workgroup published a detailed report with recommendations in 2010¹⁵⁶ and was re-created by a HCR in 2012.¹⁵⁷ By creating and continuing a state-endorsed Complete Streets Workgroup, Louisiana has taken a significant step in recognizing the need to improve the built environment to promote biking and walking.¹⁵⁵

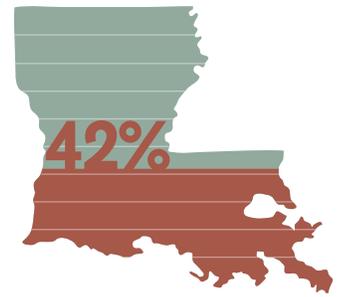
WAYS TO SUPPORT

Access to Physical Activity Spaces

- Promote Safe Routes to School, Complete Streets, and active transportation to ensure pedestrian/cyclist safety and accessibility to roads and paths.
- Create joint-use agreements that allow residents to use school facilities during non-school hours.
- Support land use incentives that promote physical activity opportunities.
- Initiate a subsidy program for low-income residents wanting to use pay-for-use facilities.
- Form worksite, school, church, or neighborhood physical activity groups.

Achieving Maximum Intervention Results

- Initial conditions (42%) reflect:
 - Low scores on www.walkscore.com, a public access website that created an index of walkability, bikeability, based on amenities available within walking distance (one mile) from most locations nationwide. This means that Louisiana, with the exception of the largest urban areas such as New Orleans, is generally not suited for walking or biking for transportation or physical activity.¹⁶⁰
 - Large disparities between rural and urban areas in terms of the number of recreational facilities available to residents. Many rural parishes have no facilities while East Baton Rouge Parish has over 50 facilities.¹²⁷ Overall, only 23% of Louisiana residents live within half a mile of a park.¹²⁶
 - At least 56% of adults in Louisiana participate in regular physical activity.¹⁶¹
- Maximum intervention (100%) would represent ideal conditions where all residents, regardless of income or geographic region, have reasonable access to places where they could participate in individual physical activity opportunities or social recreation (e.g. gyms, basketball and tennis courts, soccer fields).



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention to Improve Access to Physical Activity Spaces Reduce the Prevalence of Childhood Obesity?				
Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU [^]]	↓ 5% [3-8%]	↓ 4% [2-8%]	↓ 1% [0-1%]	↓ 1% [0-1%]

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis

Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- Implementing policies that increase access to physical activity places and opportunities may slightly reduce the level of childhood obesity.
- Greater potential for effectiveness is seen if policies are set to the maximum level, which would mean that all residents have access to safe, affordable places to exercise and participate in physical activity.

Implementing the Policy

Because there is current movement in Louisiana to build bike paths, improve playgrounds, and increase the acreage of green space available to residents across the state, it appears that obtaining statewide support for this policy intervention is plausible and should be pursued. There are 40 State Parks and Historical Sites managed by the Louisiana Office of State Parks; 5 National Parks; Tammany Trace, a beautiful rail-to-trail project on the North Shore of Lake Pontchartrain; and numerous city-parish and neighborhood parks and open green spaces. Many new projects are underway to create and improve biking and walking trails, and build playgrounds and sports facilities. Ensuring access to these spaces is a critical component of this policy intervention. Special attention should be paid to physical activity opportunities in rural communities, many of which do not have access to safe, well-maintained recreation facilities. Capitalizing on the state's endorsement of joint-use agreements with schools may be a critical way to close gaps in access for rural residents. A statewide policy that aims to increase access to recreational and physical activity opportunities could leverage funds to create new infrastructure or enhance existing recreational areas in rural communities.

! "Individuals may have the necessary knowledge, skills, attitudes, and motivation to be physically active; however, if they do not have access to the necessary opportunities, they may be restricted or prohibited from being active. Having access to places and opportunities for physical activity and knowing these opportunities exist is important in order to increase physical activity. Efforts to increase access may not lead to increased use, unless the community is involved and aware of the efforts. With community support and involvement, it is likely that increased access to physical activity opportunities will result in increased use."¹⁶²
 ~The CDC Guide to Strategies for Increasing Physical Activity in the Community, 2010

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POLICY INTERVENTION BRIEFS > PHYSICAL ACTIVITY INTERVENTION: PHYSICAL ACTIVITY PROMOTION



- The following brief reports the effects of physical activity promotion policies on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- The physical activity promotion policy intervention includes the placement, pricing, and targeted local advertising of physical activity (PA) opportunities in communities, as well as mass media and social marketing campaigns to promote PA and active transportation.

Policy Goals

- Increase awareness of PA opportunities and make them accessible, affordable, and safe for all residents.
- Promote active transportation to school and to nearby destinations.
- Increase the number of children and youth meeting PA recommendations.

What Does the Research Tell Us?

- Louisiana youth are falling short of federal guidelines for aerobic PA (24.4% meet recommendations),¹¹¹ vigorous PA (34.0%),¹⁴⁵ and muscle-strengthening activities (40.8%).¹¹¹
- Physically active children and youth have higher levels of cardiorespiratory endurance and muscular strength, lower body fatness, more favorable cardiovascular and metabolic disease risk profiles, enhanced bone health and reduced symptoms of anxiety and depression.¹⁴⁴
- Physical activity levels decline as young people age.¹¹¹
- There is a need for evaluation of PA promotion policies to determine their impact and effectiveness in reducing the prevalence of childhood obesity.^{39,153,163-165}

Current Policy Environment in Louisiana

- There are no active statewide policies that provide funds or personnel to design and implement a mass media campaign or other promotional/marketing strategy to promote PA opportunities.
- Measures to support active transportation, especially biking and walking, have made headway in the legislature.^{166,167}
 - A Senate Concurrent Resolution creating a Complete Streets work group was passed in 2009 that recognizes the need for Louisiana transportation authorities to assume responsibility for creating safer, more accessible roadways for pedestrians and cyclists.¹⁵⁵ This workgroup published a detailed report with recommendations in 2010¹⁵⁶ and was re-created in 2012.¹⁵⁷
 - House Bill No. 725 (2009) directed the Louisiana Highway Safety Commission to engage in a public awareness campaign to educate motorists and bicyclists of the 3-foot passing zone.^{168,169}
 - In the 2009 and 2010 Regular Session, legislators passed laws relating to bicycle safety (e.g. prohibiting harassment of bicyclists) and infrastructure funding.¹⁶⁹⁻¹⁷²

What is Active Transportation?

“Active transportation is any self-propelled, human-powered mode of transportation, such as walking or bicycling.”¹⁷³

Children who walk or bicycle to school have higher daily levels of physical activity and better cardiovascular fitness than do children who do not actively commute to school.¹⁷⁴

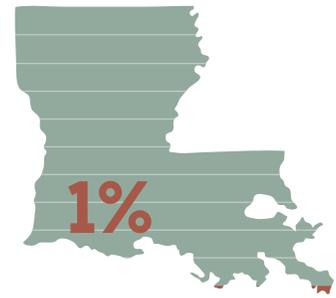
“Promotional and educational programs help increase rates of biking and walking to school.^{175-177[178]} Parental safety concerns about traffic tend to be a common obstacle to biking and walking to school,^{179-181[182]} but addressing safety behaviors and concerns through educational programs appears to be a promising strategy.”¹⁸³

WAYS TO SUPPORT Physical Activity Promotion

- Endorse school wellness by creating or implementing wellness programs and PA groups.
- Promote active transportation and host pedestrian/cyclist safety education events.
- Implement mass media campaigns to promote PA opportunities in communities.
- Increase signage in schools and communities to increase use of facilities, parks, and green space.
- Create incentives for using community park and recreation facilities, participating in competitive and non-competitive recreational activities, and using public or active transportation to/from home and school or nearby destinations.

Achieving Maximum Intervention Results

- Because Louisiana does not have state-specific data relating to physical activity promotion policies, the national level (1%) was used for the initial conditions setting. The national level reflects a severe lack of sustainable PA promotion policies across the United States.
- Maximum policy intervention (100%) would involve a sustained, targeted, highly visible media campaign; local communication to increase awareness of PA opportunities across the state; convenient and visible placement of options in communities; and affordable pricing to utilize the PA opportunities.



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention to Promote Physical Activity Reduce the Prevalence of Childhood Obesity?				
Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU [^]]	↓ 7% [3-12%]	↓ 5% [2-8%]	↓ 3% [2-7%]	↓ 3% [2-6%]

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis
 Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- Policies that promote PA may result in a 5% [Range of Uncertainty: 2-8%] drop in childhood obesity prevalence if the full intervention is implemented by 2016.
- There is a significant need to evaluate policies related to PA promotion beyond the school environment to determine long-term effects at the population-level.

Recommended amount of daily physical activity for children and adolescents^{144,184,185}

5-17 year olds: 60 minutes per day
 Youth should incorporate each of these activities at least 3 days per week:

- 20 minutes moderate- to vigorous-intensity
- muscle-strengthening
- bone-strengthening

Implementing the Policy

Although policies that promote PA are relatively new and will require extensive time and resources to remain sustainable, the health benefits of PA on children's health are continuously re-confirmed as a top priority.¹⁴⁹ There are many existing initiatives to promote PA statewide, and many community groups and government entities are actively working to spread the word about the benefits of regular PA. It may take a few years to gather support for a statewide PA marketing effort to materialize, but Louisianans appear to be on board in the promotion of PA, exercise, and fitness, especially for kids.

Schools and parents can be proactive in promoting PA for children in their neighborhoods. The Safe Routes to School Program exists within the LA Department of Transportation and Development. Although there are no policies endorsing or requiring schools to participate, the program provides grant money to schools who want to ensure that students of all abilities can safely walk or cycle to school. The goal of this program is to increase the number of students actively commuting to and from school.¹⁸⁶ Additionally, schools and parents can work with local parks and recreation departments to advertise competitive and non-competitive sports and recreation programs at schools, community centers, and libraries. Because parks, recreation departments, and commercial recreational facilities are responsible for their own marketing and advertising, many youth may not be aware of opportunities that exist in their neighborhoods.

! "To increase physical activity, today's children need safe routes to walk and bike ride to school, parks, playgrounds and community centers where they can play after school, and activities like sports, dance or fitness programs that are exciting and challenging enough to keep them engaged."¹⁸⁷
 ~Let's Move! (www.letsmove.gov)

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POLICY INTERVENTION BRIEFS > PHYSICAL ACTIVITY INTERVENTION: PHYSICAL ACTIVITY IN SCHOOLS

- The following brief reports the effects of policies that increase physical activity in schools on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- This policy intervention represents the establishment, implementation, and enforcement of physical activity (PA) and physical education (PE) requirements in schools, including before- and after-school programs.
- Policies may also limit school-based screen time.

Policy Goals

- Ensure that all students, including those in special education programs, in elementary, middle, and high schools meet daily PA guidelines.
- Assist schools in fulfilling the laws regarding PE and PA requirements.
- Minimize the amount of screen time children are exposed to while in class and during before- and after-school programs.
- Reduce the amount of time youth spend sitting.

What Does the Research Tell Us?

- Less than half (42.5%) of LA adolescents in grades 9-12 participate in daily PE at school.¹¹¹
- Consistent PA during childhood and adolescence improves strength and endurance, promotes bone and muscle growth, assists in weight-control, reduces overall anxiety and stress, promotes better self-esteem, and improves blood pressure and cholesterol levels.¹⁴⁴
- Quality PE classes that include PA are associated with the following: preventing disease, fighting obesity, promoting lifetime wellness and physical fitness, teaching self-management and motor skills, stimulating learning and a well-rounded education, and providing unique opportunities for activity and social development.¹⁸⁸⁻¹⁹⁰

Current Policy Environment in Louisiana

- In 2009, legislation was passed that expanded a prior bill that promoted improved PA programs in schools and mandated PA guidelines (for K-6). The amendment extended its PA mandates to grades 7 and 8 and required the establishment of local school health advisory councils to advise school boards on students' PA health education, and nutrition standards.¹⁹¹
- Additionally, in 2009, a policy enabled the implementation of state-wide health-related fitness assessments designed to determine the physical fitness levels of students in schools and to measure the effectiveness of PA interventions.¹⁹²
- In 2012, a Senate Resolution was adopted that requests state education agencies to conduct a study or survey to determine compliance with state law regarding vending machines and PA requirements in schools.¹⁹³

LA Dept of Education Guidelines:

Public schools¹⁹⁴

- Require elementary and middle schools to provide 150 minutes minimum of PE per week
- Require high school students to take at least 1.5 units of PE and 0.5 units of health education

Private schools¹⁹⁵

- Require 2 units of PE with at least 30 hours of daily health instruction taught in each unit

What is Screen Time?

“The number of minutes/hours that a child spends each day looking at a screen - TV, movie, cell phone or handheld/ personal computer.”¹⁹⁶

Recommended amount of screen time for children and youth is: **2 hours MAXIMUM**¹⁹⁷

WAYS TO SUPPORT

Physical Activity in Schools

- Enforce the PE and PA requirements for all grade levels.
- Regulate screen time limits of non-educational screen time (computer/television) during school hours and for before- and after-school programs.
- Develop school-based parent & child PA programs and groups.
- Join Safe Routes to School to promote walking and biking to school.
- Encourage students to spend breaks being physically active.
- Encourage children and adolescents to play sports and promote the formation of non-competitive (e.g. intramural) sports teams and leagues.

Achieving Maximum Intervention Results

- Initial conditions for this policy intervention were determined from estimates of the percentage of children meeting the recommended levels of PA and screen time daily, and based on the survey data reported in conjunction with established policy mandates.^{111,198} Because PA policies in Louisiana's elementary, middle, and high schools are not fully enforced, the initial conditions level was set at the lowest value (0%).
- Maximum intervention (100%) reflects a scenario where all Louisiana's children and adolescents are meeting recommended PA levels (60 minutes) and screen time limits (less than two hours) at school.



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention to Support Physical Activity in Schools Reduce the Prevalence of Childhood Obesity?

Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU [^]]	↓ 5% [3-7%]	↓ 4% [2-5%]	↓ 1% [0-2%]	↓ 1% [0-2%]

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis
 Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- Supporting and enforcing physical activity policies in schools may play a role in incrementally moving the needle to reduce childhood obesity.
- Maximum strength policy interventions project a higher reduction in childhood obesity prevalence in Louisiana.

Implementing the Policy

Recently enacted policies have established and re-defined guidelines for PE in Louisiana. However, these policies may not be implemented or enforced because children still are not participating in enough PA. While teachers and principals attempt to meet performance standards for statewide standardized testing, time allotted for PA or PE is often eliminated so students can concentrate on their academic studies.¹⁹⁹ However, many studies have shown that PE does **NOT** negatively affect academic performance, and actually has favorable effects on academic achievement.²⁰⁰⁻²⁰² As outlined by the National Association for Sport and Physical Fitness, there are many resources that assist teachers in finding ways to incorporate PA into their lesson plans.^{203,204}

Although schools bear the burden to offer comprehensive PE classes by qualified teachers, parents and community groups can assist schools in helping youth participate in out-of-school-time PA.²⁰⁵ Recreational organizations can promote or offer affordable sports activities at or near schools. Parents or caregivers can form a "walking school bus" to actively transport children to nearby schools.

Additionally, physicians and nurses in clinics or in schools can support active school communities and be important advocates for policy changes that support healthy nutrition, increase PA levels, and reduce sedentary time, as well as provide information for families about regular PA and reduced sedentary time in their clinical practices and school based health centers.^{206,207}

! "Physical education is at the core of a comprehensive approach to promoting physical activity through schools. All children, from pre-kindergarten through grade 12, should participate in quality physical education classes every school day with a qualified and appropriately trained physical education specialist. Physical education has the potential to help students develop the knowledge, attitude, skills, behavior, and confidence needed to be physically active for life."²⁰⁸
 ~Bulletin 102: Louisiana Physical Education Content Standards: State Standards for Curriculum Development

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POLICY INTERVENTION BRIEFS > PHYSICAL ACTIVITY INTERVENTION: PHYSICAL ACTIVITY IN CHILD CARE

- The following brief reports the effects of policies that increase physical activity in child care on the reduction of childhood obesity prevalence in the state of Louisiana, from an evidence-based modeling program.
- This policy intervention represents enforced statewide guidelines that require licensed child care facilities to provide the recommended amount of physical activity for children less than five years old.
- Also, policies creating screen-time limits for children attending child care are included in this policy intervention.

Policy Goals

- Ensure that all children attending child care centers meet moderate- to vigorous-intensity physical activity daily goals appropriate for their age group.
- Minimize the amount of screen time for children.
- Reduce the amount of overall sitting time for children.

What Does the Research Tell Us?

- 12.9% of Louisiana children aged 2-5 years are obese.²⁰⁹
- Excess weight gain and obesity in early childhood predicts later obesity and cardiometabolic risk²¹⁰ and can alter developing neurological, metabolic, and behavioral systems in ways that increase the risk for obesity and chronic disease.⁵⁸
- Health and education are connected: learning and practicing healthy habits in child care is not only the best preparation for school, but can lay the foundation for developing a healthy lifestyle.^{211,212}
- Child care policies and practices can greatly influence activity levels, screen time exposure, and healthy weight gain during child maturation.²¹³

Current Policy Environment in Louisiana

- An evaluation of Louisiana's state child care policies gave the state an overall grade of "C," noting an absence of regulations requiring physical activity or limiting screen time.²¹⁴ While Louisiana's child care centers should provide children with daily physical activity and outdoor play time, and ensure that children are not seated for extended periods of time, the current regulations are not sufficient to meet national recommendations.
- In 2011, proposed legislation would have initiated changes in standards for physical activity and screen time for licensed child care facilities. The bill called for a requirement of 60 minutes of structured physical activity daily for all ages. It also prohibited screen time for children less than two years old and limited screen time to no more than one hour for children over two years old.^{215,216} The bill was ultimately deferred by the LA House Committee on Health and Welfare and was not signed into law.
- In 2011, a House Resolution (HR No. 154) was enacted requesting Louisiana Department of Child and Family Services to adopt physical fitness standards for child care facilities, citing the poor state grade on child care regulation and an increase in the state's obesity prevalence.²¹⁷

Recommended amount of daily structured physical activity by age group^{144,184,185}:

1-3 year olds: 30 minutes per day

3-5 year olds: 60 minutes per day

Each age group should participate in at least 60 minutes of unstructured physical play time per day.

What is Screen Time?

The number of minutes/hours that a child spends each day looking at a screen - TV, movie, cell phone or handheld/ personal computer.¹⁹⁶

Recommended amount of screen time by age group^{197,218}:

- 0-2 years: **NO SCREEN TIME**
- 2-5 years: 30 minutes a day **MAXIMUM**

WAYS TO SUPPORT

Physical Activity in Child Care

- Require physical activity in child care centers based on recommended levels for children.
- Specify and enforce age-appropriate screen time limits in child care facilities.
- Encourage unstructured free play that reduces overall sitting time.
- Provide children with ample, safe equipment to use while participating in physical activity.

Achieving Maximum Intervention Results

- Louisiana has no active policies that require child care facilities to provide opportunities for children to meet the recommended amount of physical activity levels and screen time limits.^{214,216} Therefore, the child care physical activity policy intervention initial setting reflects the lowest possible value (0%).
- Maximum intervention (100%) represents implemented requirements for: 60 minutes of unstructured physical play, 60 minutes of structured physical activity, and a maximum screen time limit of two hours for children aged two years or older, with no screen time for children less than two years old.



Projected Effect on Louisiana's Childhood Obesity Prevalence

PRISM Results: Can a Policy Intervention to Create Physical Activity and Screen Time Requirements for Child Care Facilities Reduce the Prevalence of Childhood Obesity?

Policy Strength	Maximum (100%)	Maximum (100%)	Moderate (50%)	Moderate (50%)
Year Implemented	2013	2016	2013	2016
% Change [ROU^]	↓ 2% [1-3%]	↓ 2% [1-3%]	↓ 1% [0-2%]	↓ 1% [0-2%]

[^] ROU refers to the Range of Uncertainty determined by the PRISM sensitivity analysis

Note: The symbol ↓ signifies that the percent change is negative, and the percent represents a decrease.

- Policy interventions targeting children in child care may have a minor effect on the prevalence of childhood obesity.
- Most research has focused on obesity prevention in schools rather than child care facilities. Child care centers are underutilized opportunities for obesity prevention interventions and research.^{211,219,220}

Implementing the Policy

Developing obesity in early childhood can be extremely detrimental in terms of long-term health and well-being.²²¹ With working families' increasing reliance on child care and the recognition of the untapped potential for child care facilities to make an impact to prevent childhood obesity, child care is an ideal environment to promote physical activity in structured programs and unstructured play, reduce young children's overall sedentary time, and therefore reduce their risk of obesity during their formative years.^{211,219,220}

When the Louisiana House passed HR No. 154 regarding child care physical activity requirements and screen time limits, this reflects potential for implementing future programs and policies authorizing the recommended guidelines set by medical associations and researchers. In addition, the School Readiness Report, a response to HCR No. 179 of the 2010 Regular Session,²²² recommends that all children participate in physical activity as a critical element to prepare to enter kindergarten.²²³ All states have minimum health, safety, and nutrition standards, but including physical activity requirements and screen time limits in the state licensing and certification procedures will require additional buy-in from central stakeholders. Licensed child care providers will be important participants in the policy development and will need to be consulted during every step of the process, from early discussions to implementation to evaluation. Additionally, support from parents and caregivers will be critical in creating new regulations for child care facilities, as they are the most invested and important figures that can affect and promote the health of their children.



About 60% of children less than 5 years of age with employed mothers are in some type child care arrangement for an average of 29 hours per week nationwide.²²⁴



"Child care settings can and should provide an environment in which young children are offered nutritious foods and regular physical activity through structured and unstructured play so that they learn these healthful lifestyle behaviors at an early age. Child care homes and centers offer many opportunities to form and support healthful eating habits and physical activity patterns in young children. Thus they can play a critical role in laying a foundation for healthy weight."²¹⁰ ~Story et al., 2006

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