



Do Health Policies Aimed at School Children Lower Childhood Obesity Rates?

Researchers look at California's childhood obesity rates from 2005–2010 to see if changes in health policy had an effect

SUMMARY

Responding to studies documenting high levels of childhood obesity in California, state and local officials in recent years have implemented a series of reforms aimed at improving the nutrition and physical activity environment to which school children in the state are exposed.

From January of 2011 through August of 2012, a team of researchers under the auspices of the California Center for Public Health Advocacy studied data on childhood obesity in the state to determine whether rates had declined from 2005 to 2010, and, if they had, whether the decline was associated with changes in health policy.

Key Findings

- Some 38 percent of 5th, 7th, and 9th graders in California were overweight or obese in 2010.
- The rate of obesity declined 1.1 percent from 2005 to 2010.
- Rates of childhood obesity in California varied significantly between counties, cities, and racial and ethnic populations.

Funding

RWJF provided \$398,417 for this project from January 2011 through August 2012.

CONTEXT

In 2002 and 2005 the California Center for Public Health Advocacy released two studies,¹ the first funded by RWJF,² documenting an epidemic of childhood obesity in

¹ *An Epidemic: Overweight and Unfit Children In California Assembly Districts*. 2002; *The Growing Epidemic: Child Overweight Rates on the Rise in California Assembly Districts*. 2005.

² Grant ID # 38118

California cities, counties, and legislative districts. Statewide findings were consistent with reports throughout the nation. See [Program Results](#) for more information about the RWJF-funded project.

Following the release of the second report, the state of California prohibited the sale of all soda and junk food on K–12 school campuses in the state. Many California cities and school districts adopted policies promoting access to healthier foods and expanding opportunities for physical activity, according to the center’s staff.

By 2010 preliminary evidence began to appear suggesting that levels of childhood obesity in California had declined over the previous five years.

RWJF’s Interest in This Area

RWJF’s Childhood Obesity team’s goal is to reverse the childhood obesity epidemic by 2015 by improving access to affordable healthy foods and increasing opportunities for physical activity in schools and communities across the nation. The Foundation focuses on six policy priorities that evidence suggests will have the greatest and longest-lasting impact on our children.

One of these priorities is ensuring that all foods and beverages served and sold in schools meet or exceed the most recent Dietary Guidelines for Americans. Children and adolescents consume more than 35 percent of their daily calories at school, which is why RWJF program staff places a priority on policies that replace junk foods, sugary drinks and high-fat milks with healthier options and considers such policies to be a critical strategy for improving children’s diets and reversing the childhood obesity epidemic.

Another of the six priorities is increasing the time, intensity and duration of physical activity during the school day and out-of-school programs. Schools play a critical role in helping children lead active, healthy lives. By requiring active participation in daily physical education classes, providing activity breaks throughout the day, and supporting walking and bicycling to school, schools can increase students’ physical activity.

THE PROJECT

The preliminary data suggesting a decline in California’s rates of childhood obesity prompted two important questions:

- Was the decline genuine?
- If so, was it linked to the state’s legislative and policy reforms?

A research team under the direction of Harold Goldstein, DrPH, MSPH, executive director of the California Center for Public Health Advocacy, set out to document what changes actually occurred in California’s childhood obesity levels between 2005 and

2010. The team then compared those changes to the enactment of state and local policies on nutrition and physical activity to see if links could be established between the two. If links appeared, the researchers further sought to determine which policies seemed to be most responsible.

The California Center for Public Health Advocacy is a nonprofit, nonpartisan organization based in Davis. Its mission is to raise public awareness about critical public health issues in order to promote the establishment of effective state and local health policies.

Obesity data for 2005 and 2010 were derived from the California Physical Fitness Test, which annually measures the height and weight of all students in grades 5, 7, and 9. The research team also:

- Collected school wellness policies implemented between 2006 and 2010 in 81 local school districts.³ These policies included those relating to nutrition education and wellness promotion, limits on the availability of unhealthy foods, and physical education requirements and availability.
- Surveyed nutrition and physical activity policies implemented in 68 California cities. These policies included those related to the availability of farmers' markets, zoning of fast food outlets, nutrition standards regarding foods offered for sale at city facilities, and availability of parks, sidewalks, and bike paths. The analysis included the number of policies related to nutrition and physical activity for each city to determine whether a cumulative effect might be revealed.

Statistical analysis of the obesity data was provided by the UCLA Center for Health Policy Research under the direction of senior research scientist Susan H. Babey, PhD. Survey design and analysis of school and community health policies was provided by Samuels and Associates, a health policy research firm based in Oakland, Calif.

A national panel of nutrition experts offered advice on refining data analysis and perspective on how the California results compared to the findings of similar research being done nationwide. (See the [Appendix](#) for advisory panel members.)

FINDINGS

The research team produced two reports on its findings.

A Patchwork of Progress: Changes in Overweight and Obesity Among California 5th, 7th, and 9th Graders, 2005–2010 was released in November 2011, it summarizes the project's statistical findings on a statewide and county-by-county basis. More information

³ [Wikipedia](#) states that in the 2007–2008 school year, there were 560 elementary districts and 87 high school districts—in addition to 330 unified districts in California.

about this report is available [online](#). It, and accompanying materials, contain the following findings:

- **Some 38 percent of 5th, 7th, and 9th graders in California were overweight or obese in 2010.**
- **The rate of obesity declined 1.1 percent from 2005 to 2010.**
- **Childhood overweight and obesity vary from place to place in the state.** Of the state's 58 counties:
 - Ten had an overweight/obesity rate above 43 percent.
 - Nine had an overweight/obesity rate below 30 percent.

Similarly, changes in the rate of overweight and obesity varied considerably:

- Some 31 counties experienced an increase in the rate of overweight and obesity between 2005 and 2010. In five counties, the rate of increase exceeded 10 percent.
- Some 26 counties had a lower rate, with seven decreasing at least 5 percent.
- **Rates of overweight and obesity varied among racial and ethnic groups:**
 - 23.1 percent of Asians
 - 26.9 percent of Whites
 - 32.7 percent of Pacific Islanders
 - 39.3 percent of African Americans
 - 46.2 percent of Latinos

The second report is *Overweight and Obesity among Children by California Cities—2010*. Released in June 2012, it summarizes the project's statistical findings on a city-by-city basis. More information about this report is available [online](#). It contains the following findings:

- **Overweight and obesity rates ranged from 11.3 percent in Manhattan Beach to 53.0 percent in Huntington Park.**

The research team reported these additional findings to RWJF:

- **With two exceptions, the study did not produce clear evidence of correlations between policy changes and obesity rates.** Researchers found “small but statistically significant” correlations between:
 - **The presence of school nutrition policies and lower rates of overweight and obesity among seventh grade students.** The strongest correlation pertained to

the strength of school policies restricting the sale of foods that do not conform to federal nutrition standards.

- **The presence of city policies limiting the availability of fast foods and lower obesity levels among ninth grade students.** Correlations with lowered rates of obesity among ninth grade students were also noted in cities that had adopted a relatively high number of policies related to nutrition and physical activity.

RECOMMENDATIONS

As part of the release of its reports, the center offered the following recommendations for state and local policy-makers:

- Maintain the requirement for physical fitness testing for 5th, 7th, and 9th graders in California schools.
- Eliminate the sale and distribution of unhealthy (high-fat, high-sugar, high-calorie) foods and beverages in preschools, schools and after-school programs.
- Eliminate the sale of all sweetened beverages, including sports drinks, on city, county and school properties, and establish taxes on their sale elsewhere.
- Provide financial incentives for establishing grocery stores, farmers' markets, and physical activity facilities, and improve walkability and bikeability, especially in low-income neighborhoods.
- Ensure that all children receive quality physical education.
- Make school recreational facilities available for after-hours use.
- Eliminate advertising of unhealthy foods and beverages to children and youth.
- Implement policies to provide safe, convenient roadway access for pedestrians, bicyclists, and wheelchair users.
- Prioritize health goals, including access to healthy foods and physical activity, in city and county planning and policy-making activities.

COMMUNICATIONS

The researchers also posted the study data on www.kidsdata.org, maintained by the Lucile Packard Foundation for Children's Health to make data on child health in California accessible to policy-makers and the public. The site allows users to combine data from multiple sources and customize it for their particular needs.

The team held 25 meetings with local officials to present findings. It also trained [14 local health officials](#) to serve as volunteer spokespeople for the study.

[Brown-Miller Communications](#), a public relations firm based in Martinez, Calif., helped generate coverage by California media.

LESSONS LEARNED

1. **Reach out for assistance when needed.** When the research team’s initial analyses failed to produce significant findings, they turned for help to RWJF’s C. Tracy Orleans, PhD. She worked with the team to consider alternative analysis strategies and connected them with RWJF grantees working on similar projects who served as advisors. (Project Director)
2. **Keep track of policy developments in the field as they unfold.** The project staff found it necessary to retrospectively search out anti-obesity policies that had been adopted by local school districts and communities over a span of five years. It would have been easier and more effective, says project director Harold Goldstein, to keep track of policies as they were passed and to follow them as they were implemented.
3. **Don't underestimate the value of local data.** Researchers often think, the bigger the data set the better, Goldstein said, but much can be learned by focusing on smaller subsets. In this case, city-by-city and county-by-county analyses of statewide obesity data provided important perspectives on obesity patterns.

AFTERWARD

The California Center for Public Health Advocacy is pursuing funding to conduct more in-depth analyses of the factors that influence rates of obesity in the state. They also hope to examine the degree to which California communities have implemented obesity prevention policies and the impact of those policies.

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APPENDIX

Advisory Panel

(Current as of the time of the grant; provided by the grantee organization; not verified by RWJF.)

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