

# Reaching All Children by Going Where They Are, In School

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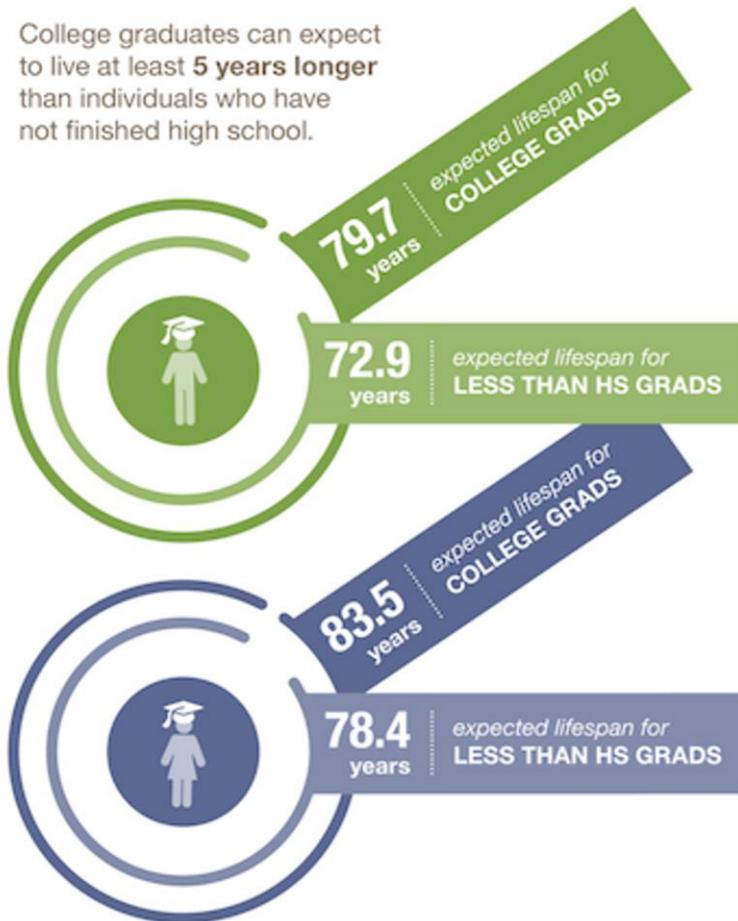
Boeing Center for Children's Wellness



# Education and Health Must go Hand-in-Hand

## LIVING LONGER

College graduates can expect to live at least **5 years longer** than individuals who have not finished high school.



## REDUCED RISKS

An additional four years of education reduces a range of health risks.

DIABETES  
↓1.3%



HEART DISEASE  
↓2.2%



OVERWEIGHT  
↓5%



SMOKING  
↓12%



SOURCES: "Exploring the Social Determinants of Health: Education and Health" created through the Robert Wood Johnson Foundation Commission to Build a Healthier America, April 2011; and "Healthier Students Are Better Learners: A Missing Link in School Reforms to Close the Achievement Gap" from the Campaign for Educational Equality, March 2010



# Education and Health Must go Hand-in-Hand

More education leads to better health, but the flipside is also true. Kids who are healthier tend to do better in school.

Lowered student motivation and decreased ability to learn have been linked with:



POOR VISION



ASTHMA



AGGRESSION  
& VIOLENCE



LACK OF  
EXERCISE



LACK OF  
BREAKFAST



INATTENTION &  
HYPERACTIVITY

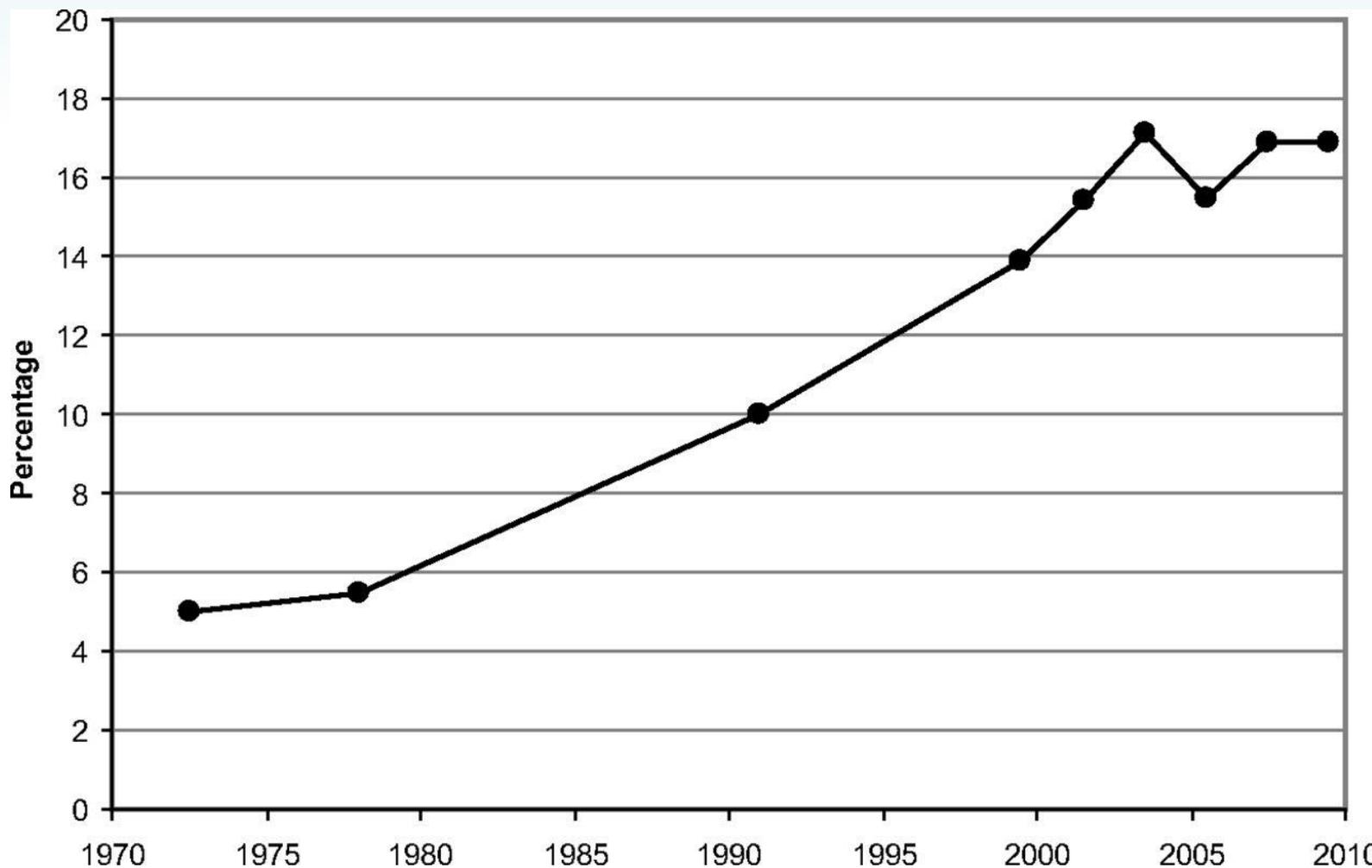
- Healthy students are better learners.
- Healthy, successful students help build strong communities

Schools, public health agencies, community organizations and more can all play a role in creating healthier, safer communities to give kids a better shot at a healthy start in life.

SOURCES: "Exploring the Social Determinants of Health: Education and Health" created through the Robert Wood Johnson Foundation Commission to Build a Healthier America, April 2011; and "Healthier Students Are Better Learners: A Missing Link in School Reforms to Close the Achievement Gap" from the Campaign for Educational Equality, March 2010



Prevalence of obesity (body mass index >95th percentile) among children and adolescents 2 to 19 years of age in the United States between 1971 to 1974 and 2009 to 2010 shows a recent plateau from 2003 to 2004 on.



Lakshman R et al. *Circulation*. 2012;126:1770-1779

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Changing What's Possible

[MUSCkids.org](http://MUSCkids.org)



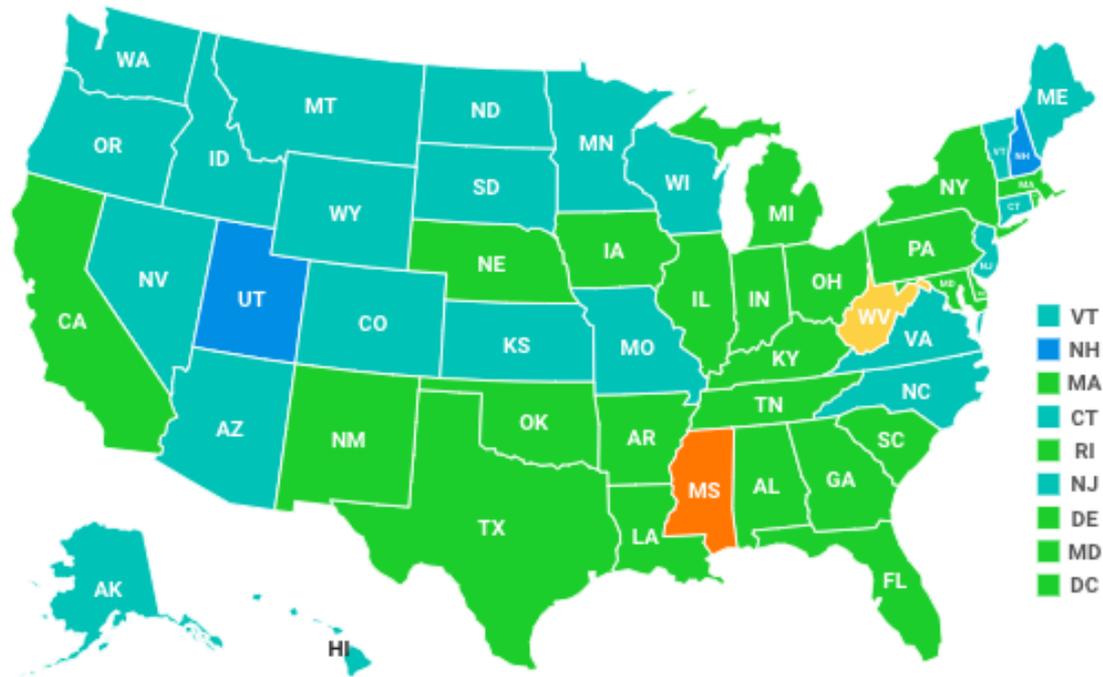
# Childhood Obesity Nationwide

## Obesity Rate, Youth Ages 10-17, 2016-2017

Select years with the slider to see historical data. Hover over states for more information. Click a state to lock the selection. Click again to unlock.

### Obesity rates, children ages 10 to 17

0 - 9.9%   10 - 14.9%   15 - 19.9%   20 - 24.9%   25 - 29.9%   30 - 34.9%   35%+



# South Carolina Health Factors

## Adult Obesity New Data

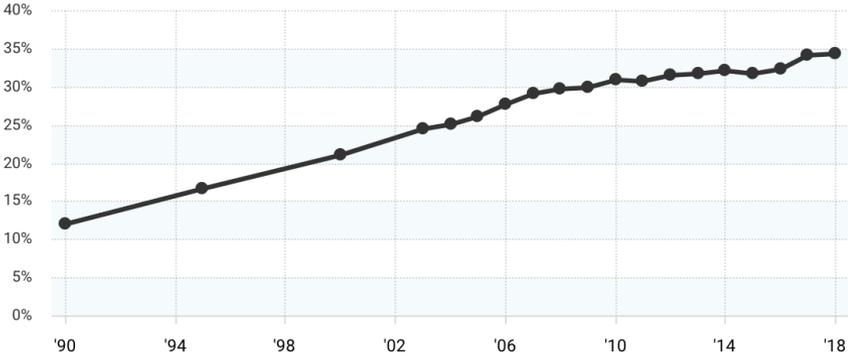
Current adult obesity rate (2018)

# 34.3%

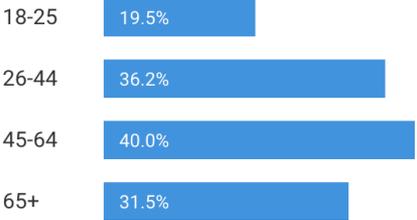
Rank among states (2018)

# 14 /51

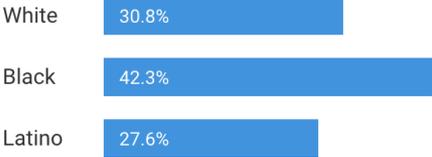
Adult obesity rate in South Carolina (1990-2018)



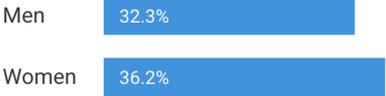
Obesity rate by age (2018)



Obesity rate by race (2018)



Obesity rate by gender (2018)



# South Carolina Health Factors

## 2- to 4-year-old WIC participants

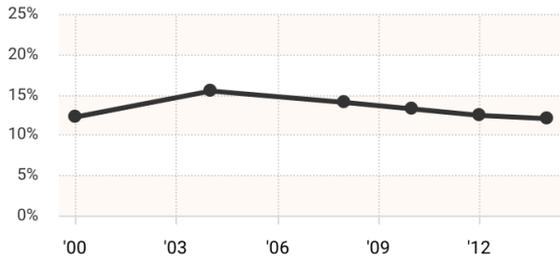
Current obesity rate (2014)

**12.0%**

Rank among states (2014)

**45** /51

Historical rates (2000-2014)



## 10- to 17-year-olds

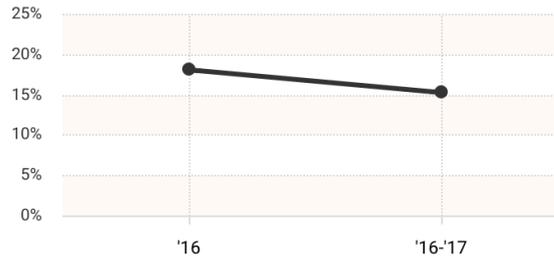
Current obesity rate (2016-2017)

**15.4%**

Rank among states (2016-2017)

**24** /51

Historical rates (2016-2017)



## High school students

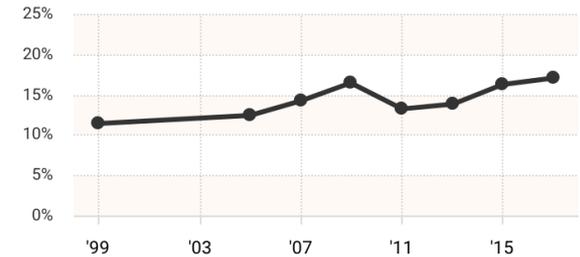
Current obesity rate (2017)

**17.2%**

Rank among states (2017)

**6** /43

Historical rates (1999-2017)



# Tri-County Health Outcomes

	South Carolina	Berkeley (BK), SC X	Charleston (CH), SC X	Dorchester (DO), SC X PEER COUNTY
<b>Health Outcomes</b>		<b>7</b>	<b>3</b>	<b>8</b>
<b>Length of Life</b>		<b>7</b>	<b>4</b>	<b>6</b>
Premature death	8,700	7,500	7,200	7,500
<b>Quality of Life</b>		<b>8</b>	<b>5</b>	<b>11</b>
Poor or fair health	19%	17%	15%	16%
Poor physical health days	4.2	3.8	3.8	4.2
Poor mental health days	4.4	4.4	4.2	4.6
Low birthweight	10%	8%	9%	8%
<b>Health Factors</b>		<b>10</b>	<b>3</b>	<b>5</b>
<b>Health Behaviors</b>		<b>17</b>	<b>5</b>	<b>4</b>
Adult smoking	20%	18%	16%	15%
Adult obesity	<i>i</i> 32%	35%	27%	33%
Food environment index	<i>i</i> 6.3	7.8	7.6	8.1
Physical inactivity	<i>i</i> 25%	24%	20%	24%
Access to exercise opportunities	69%	77%	80%	77%
Excessive drinking	18%	22%	22%	18%
Alcohol-impaired driving deaths	35%	35%	35%	35%
Sexually transmitted infections	<i>i</i> 575.5	273.2	746.5	491.2
Teen births	30	27	20	23



# Why School-Based Wellness?

- Traditional health care of individual patients in a medical office setting cannot adequately address common conditions that are associated with large societal issues. A public health approach targeting schools can reach more children and address educational attainment, a very important contributing factor to health disparities.
- > 95% children in schools
- Large portion of daily food and exercise occurs at school
- Can enhance academic performance and behavioral improvements



# Whole School, Whole Community, Whole Child Model



# Docs Adopt School Health Initiative©

- Docs-Adopt
  - Matches healthcare professionals with individual schools to join school wellness committee
- School Wellness Checklist©
  - Action guide for implementing evidence-based strategies to improve overall school health environment
  - Basis of an annual contest that leads schools to improve nutrition and increase physical activity
  - Qualifying schools receive monetary award to use towards wellness projects of their own choosing



# School Wellness Checklist

1. Getting Started
  2. Nutrition
  3. Physical Activity
  4. Social-Emotional Wellbeing
  5. Establishing a Wellness Culture
  6. Employee Connections
  7. Sustainability
- Must log at least one point in each category
  - Minimum of 50 points
  - At least 3 wellness committee members
  - Minimum of 4 wellness committee meetings



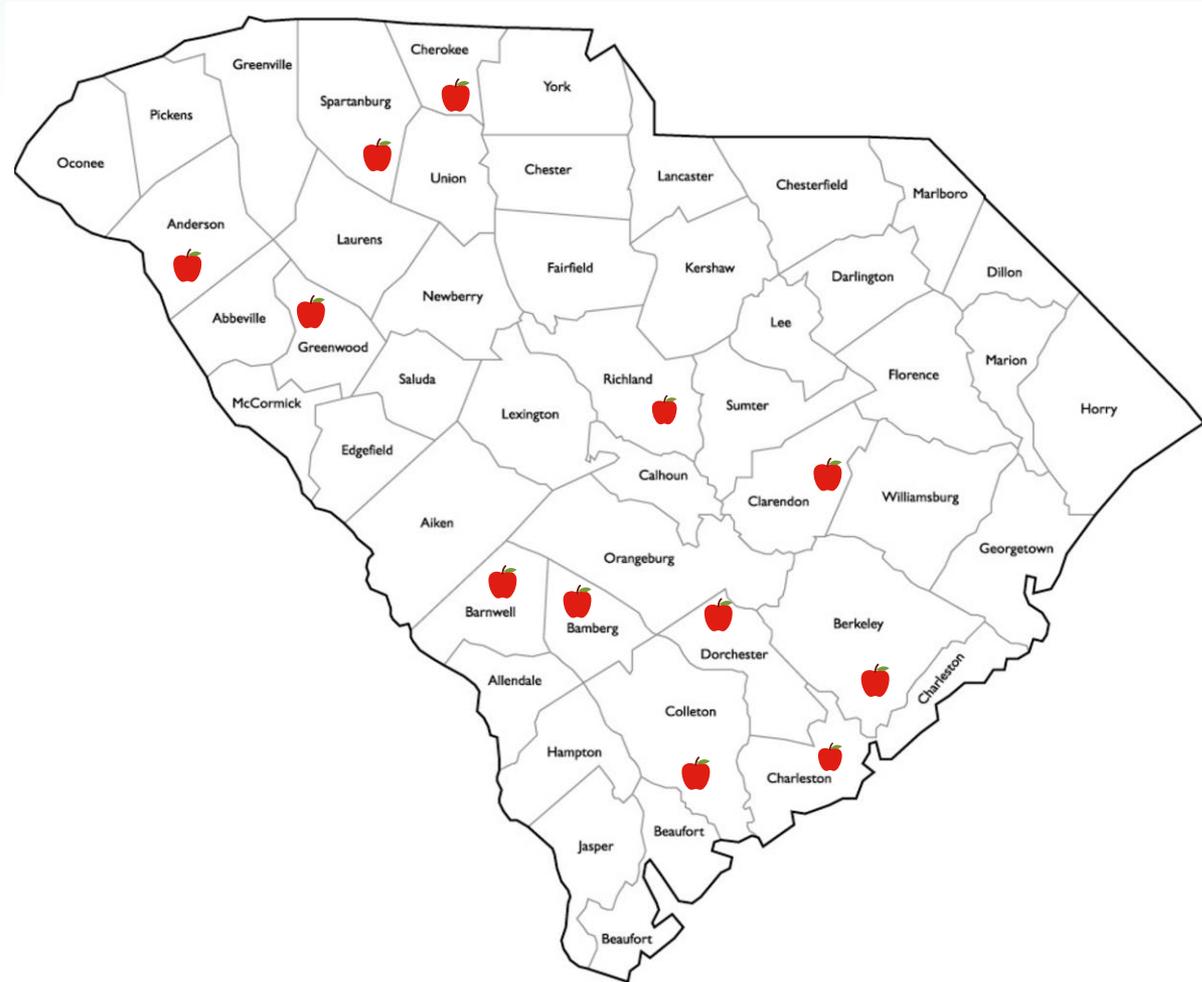
# Tri-County Community Partners

- Action for Healthy Kids
- American Heart Association
- Clemson Extension
- DHEC
- Eat Smart, Move More
- Girls on the Run
- Green Heart
- KidsFit Action Based Learning
- Lowcountry Food Bank
- Lowcountry Street Grocery
- Molina Healthcare
- MUSC Heart Health
- MUSC Safe Kids
- MUSC Telehealth
- Summerville YMCA
- The Dairy Alliance
- Tiger Corner Farms



# Outcomes

Process evaluation found sustained implementation



# Outcomes

Process evaluation found sustained implementation

**2007**



**1**

school districts

**17**

schools



**11,000**

K-12 students

**2019**



**13**

school districts

**200**

schools



**135,000**

K-12 students



# Outcomes

Process evaluation found sustained implementation

**89%**

community members on wellness committee



**72%**

participate in outdoor community physical activity events



**58%**

community partners implementing health promotion activities to students and families



# Outcomes

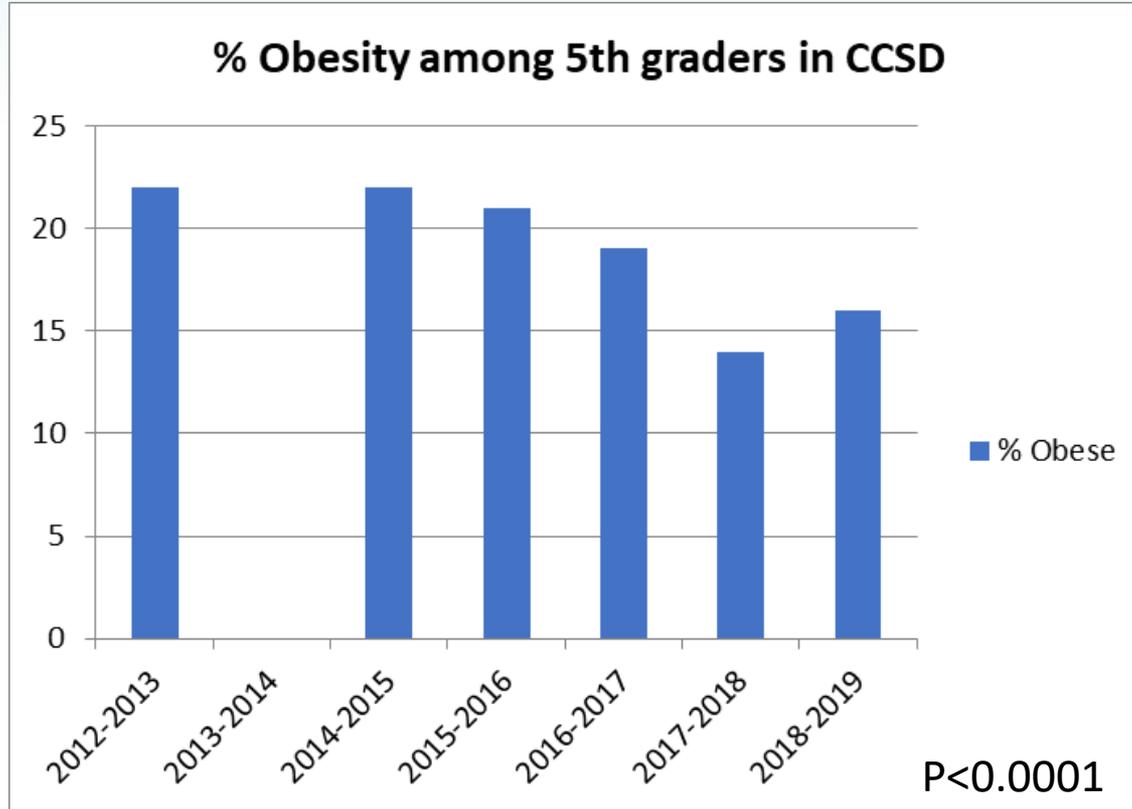
## School behavior and performance

Variable	Association
Attendance	4 years participation = 0.5% increase
Suspensions / Expulsions	1 year participation = 0.04% decrease
Grade Retention	1 year participation = 0.19% decrease
High School Graduation	SWC score associated with increase (50 point = 2 pt increase)



# Outcomes

## Reduction in prevalence of obesity



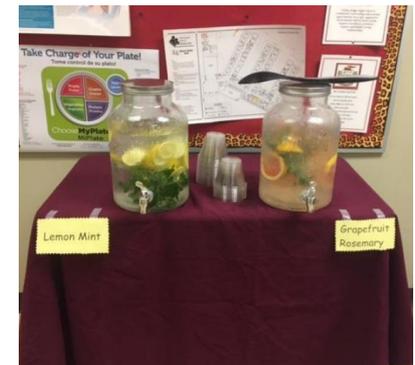
Since the start of this school based initiative in CCSD in 2008 there has been a 38% decrease in obesity among 5<sup>th</sup> graders.



# Outcomes

Title I schools participate equally

- Participation, winning of awards and SWC scores between Title 1 and Non-Title 1 schools did not vary after adjusting for:
  - Rural/urban status
  - School type (primary, elementary, middle, high, other)
- Limitations:
  - Single state, single program. Findings may not be generalizable
  - Could not adjust for race – data unavailable at the school level (working on compiling now)
  - Definition of rural versus urban status may vary based on defining institution

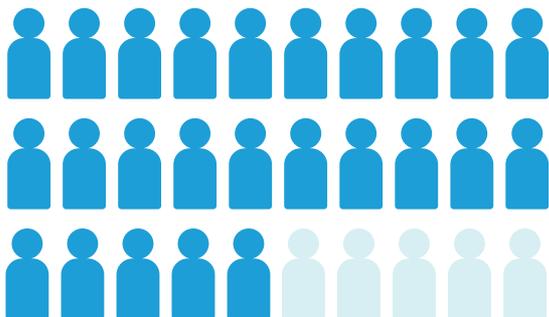


# Outcomes

## Improved High School Graduation Rate

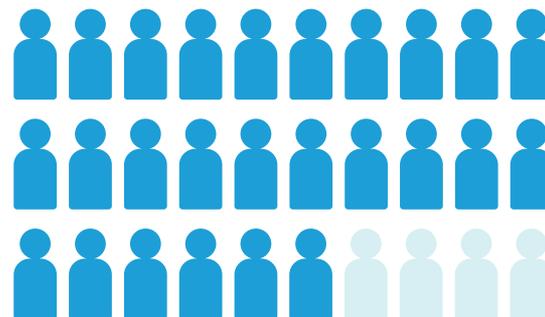
**83.8%**

On average, schools that achieved **50** points on the School Wellness Checklist© had a 83.8% graduation rate.



**87.1%**

On average, schools that achieved **150** points on the School Wellness Checklist© had a 87.1% graduation rate.



# Contact Us

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