



### THE HEALTHY HARLEM EVALUATION

HCZ contracted with Mathematica Policy Research to design a comprehensive evaluation of Healthy Harlem, funded by The JPB Foundation. The implementation study examined program roll-out to help HCZ understand how activities and services were received by students, parents, and staff. The impact study assessed both short- and long-term impacts of Healthy Harlem across several sets of outcomes, including student body mass index (BMI) and fitness. The interim report, *The Impact of Healthy Harlem on the Prevalence of Child Overweight and Obesity and Contributing Factors: Interim Evaluation Report*, includes a detailed study description and a complete set of findings.

MARCH 2018

MATHEMATICA-MPR.COM

# Issue BRIEF

Martha Bleeker, James Mabli, Mary Kay Fox, Betina Jean-Louis, and Marlene Fox

## The Impact of Healthy Harlem on Student Fitness Outcomes after Two and Three Years

The Harlem Children's Zone (HCZ)<sup>®</sup> is a nonprofit organization that provides a comprehensive set of free programs to address the social, health, and educational development of children in Central Harlem in New York City. HCZ recognizes that childhood obesity is a critical public health problem that can limit children's abilities to reach their full potential. In 2011, HCZ found that nearly half of students 12 and older who participated in HCZ programs were overweight or obese. As a result, HCZ sought out and received funding from The JPB Foundation to design and implement Healthy Harlem, a comprehensive program for promoting healthy lifestyles. The multifaceted program, implemented in HCZ's charter schools, after-school sites, and early childhood centers, has three main components: Prevention, Get Fit, and Medical Support. Students receive services based on their age group and health needs, as described in the box below.

This issue brief focuses on fitness outcomes of overweight or obese middle and high school students who received both the Prevention and Get Fit components, after two and three years of Healthy Harlem participation.

### THE THREE COMPONENTS OF HEALTHY HARLEM

**Prevention.** All students attending HCZ after-school programs are exposed to this component, which includes 60 minutes of moderate-to-vigorous physical activity (MVPA) each day the student attends the program, healthy snacks, and nutrition education lessons. Parents of some students choose to participate in fitness activities and nutrition workshops, although their participation is not required.

**Get Fit.** Middle and high school students who are overweight or obese (with BMI measurements at or above the 85th percentile and less than the 99th percentile) are also asked to participate in an intensive, 12-week program in which students identify and work on specific goals for improving their eating and physical activity habits. Students participate in discussion sessions, one-on-one meetings with Healthy Harlem staff, activities with peers related to health and wellness, and daily physical activity. Students are expected to get five hours of MVPA per week. Families of students are also asked to participate in nutrition workshops, cooking demonstrations, family fitness activities, group counseling, and trips to farmers' markets and grocery stores.

**Medical Support.** HCZ staff provide families of students with BMI above the 99th percentile with health literacy workshops and tools to connect with their child's doctor. A medical provider is available to teach families how to speak with their doctors and develop an action plan.

## PACER FITNESS TEST

The study team used the PACER (Progressive Aerobic Cardiovascular Endurance Run) test to assess students' levels of aerobic fitness. This test uses a 20-meter shuttle run. Students continuously run laps in rhythm with recorded beeps, and the intensity of the required exertion increases as the test progresses and the recorded beeps become increasingly closer together. The goal is to run as many laps as possible; students continue running laps until they can no longer keep pace with the beeps.

## FITNESS GUIDELINES

The *US Department of Health and Human Services* recommends that children and adolescents get 60 minutes or more of physical activity each day.

## EVALUATION DESIGN AND SAMPLE

The evaluation builds on HCZ's three-year timeline for rolling out Healthy Harlem across its after-school sites, and measures both short- and longer-term impacts of the Prevention and Get Fit components. Healthy Harlem implementation began in some sites in fall 2012, and was rolled out to all HCZ sites by fall 2014.

The evaluation includes three cohorts of students, based on the year their after-school site first implemented Healthy Harlem. The study team collected baseline data for each cohort in the fall

of the first year of implementation and collected follow-up data in the spring of each following year. The table below provides information about each cohort, including the initial year of Healthy Harlem implementation and the timing of data collection periods. All students at each site were asked to participate in fitness data collection activities. Students were excluded from the analysis sample if they did not attend an after-school site in its initial implementation year.

This issue brief focuses on overweight or obese students who received both the Prevention and Get Fit components, after two and three years of Healthy Harlem participation.

### Student Cohorts

Cohort	Initial Year of Implementation	Baseline	2-Year Impacts	3-Year Impacts
1	2012-2013	Fall 2012	Spring 2014	Spring 2015
2	2013-2014	Fall 2013	Spring 2015	Spring 2016
3	2014-2015	Fall 2014	Spring 2016	--

## MEASUREMENT OF FITNESS OUTCOMES

The study examined students' levels of fitness based on two outcomes constructed from PACER data:

1. The mean number of PACER laps (or shuttles) completed.
2. The percentage of students with fitness levels considered to be within the Harlem Fitness Zone (HFZ), based on completing a minimum number of PACER laps, defined for each age-and-gender subgroup.

## ANALYSIS

The impacts reported here examine the combined effect of participation in both Get Fit and Prevention. All students were eligible to receive Prevention, and middle and high school students who were overweight or obese were eligible to receive Get Fit, as well. Impacts were estimated only for students who received both components during their baseline year, by comparing baseline measurements with follow-up measurements collected in the spring, two and three years later (see table below). In years two and three, students in the analysis sample continued to receive Prevention and were offered Get Fit if they still

met BMI-eligibility requirements. Analyses were done using a pre-test/post-test framework. A detailed description of data collection procedures, analysis methods, and comprehensive findings are described in the full evaluation report.

A random assignment design was used in the full evaluation to measure one-year impacts of Get Fit. It was not possible to maintain the random assignment design when measuring the longer-term impacts reported here, as students assigned to the control group that received Prevention-only services in the first year were eligible to participate in Get Fit the following year if they still met BMI-eligibility requirements.

### Analysis Sample

Analysis	Cohorts	Grades at Baseline	Grades at Followup	Sample Size
2-Year Impacts	1, 2, and 3	6–11	7–12	168
3-Year Impacts	1 and 2	6–10	8–12	102

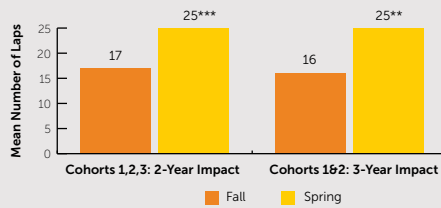
## THE LONG-TERM IMPACT OF HEALTHY HARLEM ON THE FITNESS OUTCOMES OF OVERWEIGHT OR OBESE STUDENTS

Students who were overweight or obese and participated in Get Fit and Prevention during their baseline year had large and statistically significant increases in PACER laps two and three years later.

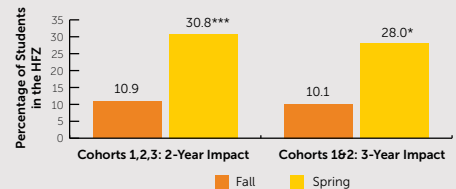
The percentage of students in the targeted Harlem Fitness Zone (HFZ) after two and three years of participation was significantly greater than at baseline.

The increased percentage of students in the HFZ was generally larger for boys than girls. After two years of participation, the percentage increased significantly for both boys and girls. This pattern continued for boys after three years, but not for girls.

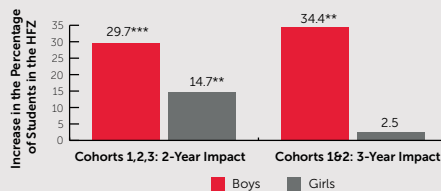
### Significant increases in PACER laps over two and three years



### Significant increases in % of students in the Harlem Fitness Zone (HFZ) over two and three years



### Increases in % of students in the Harlem Fitness Zone (HFZ) were much larger for boys than girls



\*\*\*Difference is statistically significant at the  $p < .001$  level.

\*\*Difference is statistically significant at the  $p < .01$  level.

\*Difference is statistically significant at the  $p < .05$  level.

For more information,  
contact Martha Bleeker  
at [mbleeker@mathematica-  
mpr.com](mailto:mbleeker@mathematica-mpr.com)

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