

A University Health System Partners with Community Schools to Focus on Health and Wellness



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In medical school, the saying “an ounce of prevention is worth a pound of cure” is commonly used in lectures and among mentors, but this message dampens as trainees grow throughout their training. This gap in emphasis is most clearly illustrated in the epidemic of obese and overweight children in the United States, with growth up from 5% of children in 1974 to 16.9% in 2008.¹ This issue has brought about a high-value partnership between community schools and the University of Michigan Health System that has served more than 20,000 students in more than 40 schools from 2004 to the present.

The project, called “Project Healthy Schools” (PHS), began as a partnership between the Cardiovascular Center and the Health Promotion Division at the University of Michigan and one Ann Arbor Public School. It has grown into an initiative that spans many regions across the state of Michigan. The idea behind this partnership is to teach healthy lifestyle practices to sixth-grade children when habits are first being formed, and before the long-term consequences of poor lifestyle choices can be realized. The program’s record of early success has brought about a rapid expansion in interest across the state, and its use of an individualized, tailored model of rapid cycle improvement and balanced measurement has ensured its success.

The program focuses its intervention on 5 core aims for children: exercise at least 150 minutes per week, eat more

fruits and vegetables, drink fewer high-sugar beverages, reduce time spent in front of a screen, and eat less fatty and fast food.

The PHS uses an armament of ready-made instructive tools and programs for each aim that are at each school program’s disposal. However, because each school represents a microcosm of the health challenges facing its community, PHS has to work with individuals within the schools to uniquely design its intervention to fit community needs. Study is undertaken to characterize the challenges of each community; lower socioeconomic status commonly correlates with compromised health status.² Some schools in more rural areas represent more of an educational gap in the understanding of food choices. Interventions have involved vending machine choice redesign, enhancement of the nutritional value of school lunch and breakfast programs, and enhanced focus on reading nutrition labels and understanding the implications of sugary beverages.³ In the more urban environment serviced by Detroit schools, access to safe open space for outdoor activity may be less available; thus, partnerships with local Young Men’s Christian Associations are forged to help children get access to space for exercise, and vegetable gardens on school premises are created and tended to by children.

The program has a goal to achieve sustainability within each school in 3 years. In the first year, the culture of the community is evaluated, and a school wellness champion and wellness team are identified. Work focuses on implementing 10 educational lessons, enacting environmental change, including changing cafeteria and vending machine options, and formulating a measurement strategy. In year 2, the program message is consolidated, and synergies within the community are identified (eg, partnerships with healthy activity after school programs and sports teams). The third year focuses on empowering program volunteers within the school and community to take over program roles. The wellness champion, a member of the school’s faculty identified in year 1, serves as the leader moving forward, and PHS staff are available for consultation when needed.

In each program partner, a culture of continuous measurement involving a balanced set of measures is adopted.

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Continuous measurement allows programs to understand which interventions are working and which are not. Process measures, such as school lunch composition compliance and percent healthy vending machine composition, have been used, as well as harder outcome and clinical measurements, such as lipid profile and body mass index. As an example, a subset of schools in Ypsilanti involved in the study showed measurable and sustainable improvements in children's lipid profiles. Mean total cholesterol decreased from 172 to 153 mg/dL, with low-density lipoprotein decreasing from 100 to 85 mg/dL over the course of 3 years. Screen time in this community also saw an average reduction of 30 minutes daily over 1 year with a corresponding increase in sports team enrollment.⁴ These results correlate with the larger experience of PHS as reported by Eagle et al.⁵ Comparable but less drastic decreases were noted in the Ann Arbor public schools. A consistent trend observed in PHS is that although children attending schools in less affluent communities start with the most challenged metabolic profiles, they see the greatest improvement from participating in the program.

Funding the program currently involves investment from the University of Michigan Health System and other professional and community resources, such as the AstraZeneca HealthCare Foundation, Blue Cross Blue Shield of Michigan, the American Heart Association, and the Atkin's Foundation to name a few. As PHS continues to prove the value of this program, partnerships have continued to grow. In Michigan, Memorial Health System and William Beaumont Health System also have joined the effort, proving that this idea can easily be applied to other health systems. Having health systems invest in the active health education of children in the communities they serve is a natural opportunity to demonstrate their commitment to their communities.

PHS works to achieve the greatest yield in the value equation. By targeting lifestyle changes in the young, PHS seeks the greatest potential to improve overall community health. As health systems work to transition from "sick care" to goals of wellness and health, providers must apply their efforts outside hospital wards and move into the community.

Programs like PHS can be accomplished at a relatively low cost (the total cost of the program over 10 years has been less than \$2 million, equating to \$80 per student over a 3-year period). This demonstrates extremely high value, given heart disease is the number one killer in the expensive US health care system that already accounts for approximately 18% of Gross Domestic Product. We believe this model and its aims can be easily adapted in health systems and communities around our country using a set of core interventions that are easy to apply, as evidenced in our experience in Michigan. Since the inception of PHS in 2004, more than 20,000 students have participated in PHS. Although this is a small number when one thinks about the obesity epidemic in the United States, it is a sizeable start with a proven track record of success.

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