HAWAII: Active Physical Education (Active PE)

CHOICES
Learning Collaborative Partnership

This brief summarizes the findings from a CHOICES Learning Collaborative Partnership simulation model of statewide implementation of the Hawaii State Department of Education (DOE) "Active PE" Wellness Guideline that requires 50% of physical education (PE) class be dedicated to moderate-to-vigorous physical activity (MVPA).

The Issue

Every child deserves the opportunity to be healthy. Research shows that physical activity helps kids grow up at a healthy weight and reduces risk of future chronic disease.[1] If current trends continue in the United States, more than half of today's children will have obesity at age 35.[2] Health care costs for treating obesity-related health conditions such as heart disease and diabetes were $147 billion in 2008.[3] The best chance we have to make sure kids grow up to be healthy is while they are still growing.

Although participation in physical education (PE) can help students meet the national recommendation of 60 minutes of physical activity per day,[1] less than half of PE minutes are typically active.[4] Hawaii DOE wellness guidelines say that elementary school students in DOE schools should receive at least 45 minutes of PE per week.[5] The purpose of this study is to estimate the cost-effectiveness of implementing the Active PE guideline, which requires that at least 50% of PE time be spent in MVPA.

About Active PE

The hypothetical statewide implementation of the Active PE wellness guideline would include dissemination of the evidence-based program SPARK PE to elementary schools in Hawaii. SPARK is a widely used program that has been found to increase MVPA time in PE class.[6]

District PE Resource Teachers would receive professional development to become SPARK certified trainers, and then would train elementary PE teachers in subsequent years. All trained teachers would receive SPARK curricula and instructional materials, and all eligible schools would receive SPARK equipment. Implementation would include a state-level PE Educational Specialist to provide oversight and monitoring of policy implementation, as well as ongoing training and support for teachers and schools each year.

Comparing Costs and Outcomes

CHOICES cost-effectiveness analysis compared the costs and outcomes over a 10-year time horizon (2017-2027) of the statewide implementation of the Active PE wellness guideline with the costs and outcomes associated with not developing a comprehensive plan to fully implement the guideline. We assumed that all designated PE specialists, who are employed in 65% of schools, would be trained in SPARK. In schools without a PE specialist, one general classroom teacher per grade would be trained. Using this approach, 58% of students in grades K-6 would benefit from this intervention.

Implementing Active PE is an investment in the future. By the end of 2027:

126,000 CHILDREN REACHED

$4.67 MILLION

to implement Active PE over 10 years

COST PER CHILD

to implement Active PE over 10 years

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Conclusions and Implications

The statewide implementation of the Active PE guideline, using the evidence-based program SPARK, is projected to have a widespread reach and positive impact, at an investment cost that appears reasonable compared to alternative approaches for increasing physical activity among children.[7] The intervention would reach 126,000 children and would cost $37.10 per child to implement over 10 years. We project that Active PE implementation would increase MVPA by nearly 3 minutes per PE class for each child. We estimate there will be 19 fewer cases of childhood obesity in the final year of the model as a result of implementation of the Active PE guideline.

If Hawaii DOE schools were able to offer 150 minutes per week for elementary school students,[8] we project the health benefits for children to be even higher. MVPA would increase by over 9 minutes per week per child and 65 cases of childhood obesity would be prevented in the final year of the model.

SPARK training offers a professional development opportunity for teachers to learn new instructional strategies to foster a fun and enjoyable environment where children can gain lifelong skills to engage in physical activity.[9] There are likely positive benefits from physical activity related to improved bone health, aerobic and muscular fitness, cognition and academic performance[1] that are not quantified in this analysis, but are important outcomes for children's education and well-being.

While evidence is growing about how to help children achieve a healthy weight, there is currently not one single strategy that will reverse the obesity epidemic on its own. Active PE is one evidence-based strategy that can benefit the majority of students and can be incorporated into a comprehensive plan to address childhood obesity. Leaders at the state level should use the best available evidence to select strategies to help children be more active.

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