

SCHOOL-BASED PHYSICAL EDUCATION



Working with Schools to Increase Physical Activity Among Children and Adolescents in Physical Education Classes AN ACTION GUIDE

 **Partnership
for Prevention[®]**
Shaping Policies • Improving Health



This publication was developed and produced with funding from the Centers for Disease Control and Prevention (CDC) under cooperative agreement U58CCU322077. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Division of Adult and Community Health
Steps Program
4770 Buford Highway, NE, Mailstop K-93
Atlanta, GA 30341
PHONE: 770.488.6452 FAX: 770.488.8488 E-MAIL: nccdodsteps@cdc.gov
<http://www.cdc.gov/steps>

This publication and the other titles in *The Community Health Promotion Handbook* are available on the Internet to download or order at <http://www.prevent.org/actionguides>.

Diabetes Management

- *Diabetes Self-Management Education (DSME): Establishing a Community-Based DSME Program for Adults with Type 2 Diabetes to Improve Glycemic Control—An Action Guide*

Physical Activity

- *Places for Physical Activity: Facilitating Development of a Community Trail and Promoting Its Use to Increase Physical Activity Among Youth and Adults—An Action Guide*
- *School-Based Physical Education: Working with Schools to Increase Physical Activity Among Children and Adolescents in Physical Education Classes—An Action Guide*
- *Social Support for Physical Activity: Establishing a Community-Based Walking Group Program to Increase Physical Activity Among Youth and Adults—An Action Guide*

Tobacco-Use Treatment

- *Healthcare Provider Reminder Systems, Provider Education, and Patient Education: Working with Healthcare Delivery Systems to Improve the Delivery of Tobacco-Use Treatment to Patients—An Action Guide*

Suggested citation

Partnership for Prevention. *School-Based Physical Education: Working with Schools to Increase Physical Activity Among Children and Adolescents in Physical Education Classes—An Action Guide*. *The Community Health Promotion Handbook: Action Guides to Improve Community Health*. Washington, DC: Partnership for Prevention; 2008.

April 2008
(Updated April 2009)

SCHOOL-BASED PHYSICAL EDUCATION

Working with Schools to Increase Physical Activity Among Children and Adolescents in Physical Education Classes

AN ACTION GUIDE

Partnership for Prevention® is a nonprofit organization dedicated to preventing illness and injury and promoting health. Partnership's programs reach policy makers, a wide range of public health and healthcare professionals, businesses, and others who can emphasize prevention.

Partnership for Prevention®
1015 18th Street, NW, Suite 300
Washington, DC 20036
PHONE: 202.833.0009 FAX: 202.833.0113
<http://www.prevent.org>



Project Advisory Committee

Partnership for Prevention expresses sincere appreciation to the members of its Project Advisory Committee for their expert guidance in developing *The Community Health Promotion Handbook* and for their ongoing support of the organization. The Committee's time and expertise contributed significantly to the vision and content of this publication.

Georges C. Benjamin, MD, FACP, Chair

Executive Director
American Public Health Association

The Honorable Roderick L. Bremby

Secretary
Kansas Department of Health and Environment

Ned Calonge, MD, MPH

Chief Medical Officer
Colorado Department of Public Health and
Environment

Larry Cohen, MSW

Executive Director
Prevention Institute

Jonathan E. Fielding, MD, MPH, MBA

Director and Health Officer
Los Angeles County Department of Public Health

Paul K. Halverson, DrPH, MHSA

Director and State Health Officer
Arkansas Department of Health

Tom Kean, MPH

Executive Director
C-Change

Michelle Kegler, DrPH, MPH

Deputy Director
Emory Prevention Research Center
Associate Professor
Rollins School of Public Health
Emory University

Amy Friedman Milanovich, MPH

Deputy Director
Allies Against Asthma
Center for Managing Chronic Disease
University of Michigan

Marcus Plescia, MD, MPH

Chief
Chronic Disease and Injury Section
North Carolina Division of Public Health

Stephanie Zaza, MD, MPH

Captain, U.S. Public Health Service
Strategy and Innovation Officer
Coordinating Center for Terrorism Preparedness and
Emergency Response
Steps Program Director (2003–2006)
National Center for Chronic Disease Prevention and
Health Promotion
Centers for Disease Control and Prevention

Contributors

Partnership for Prevention recognizes the following individuals who contributed extensive knowledge and expertise as key informants and reviewers of *School-Based Physical Education: Working with Schools to Increase Physical Activity Among Children and Adolescents in Physical Education Classes—An Action Guide*, one of five Action Guides that make up *The Community Health Promotion Handbook*.

Kymm Ballard, MA

Physical Education Consultant
North Carolina Department of Public Instruction

Erica Barrett, MOT, MBA

The Ginn Group
Steps Program
Division of Adult and Community Health
National Center for Chronic Disease Prevention and
Health Promotion
Centers for Disease Control and Prevention

Charlene R. Burgeson, MA

Executive Director
National Association for Sport and Physical Education

Karen Cowan, MS

Coordinator of Fitness and Health
K-12 Student Activities
Spokane Public Schools

Alyssa Easton, PhD, MPH

Steps Program Director
Division of Adult and Community Health
National Center for Chronic Disease Prevention and
Health Promotion
Centers for Disease Control and Prevention

Jacqueline N. Epping, MEd

Health Scientist
Physical Activity and Health Branch
Division of Nutrition, Physical Activity, and Obesity
National Center for Chronic Disease Prevention and
Health Promotion
Centers for Disease Control and Prevention

Gregory W. Heath, DHSc, MPH

Professor
Department of Health and Human Performance
University of Tennessee at Chattanooga
Office of Research
University of Tennessee College of Medicine,
Chattanooga

Tracy Ingraham

Northrop Grumman Corporation
Steps Program
Division of Adult and Community Health
National Center for Chronic Disease Prevention and
Health Promotion
Centers for Disease Control and Prevention

Sarah M. Lee, PhD

Health Scientist
Research Application Branch
Division of Adolescent and School Health
National Center for Chronic Disease Prevention and
Health Promotion
Centers for Disease Control and Prevention

Thomas L. McKenzie, PhD

Professor Emeritus
School of Exercise and Nutritional Sciences
San Diego State University

Erica L. Odom, MPH

Education Program Specialist
Research Application Branch
Division of Adolescent and School Health
National Center for Chronic Disease Prevention and
Health Promotion
Centers for Disease Control and Prevention

James F. Sallis, PhD

Director
Active Living Research Program
Professor
Department of Psychology
San Diego State University

Stephen Silverman, EdD

Professor of Education
Teachers College
Columbia University

Francesca Zavacky, MEd

Senior Manager
National Association for Sport and Physical Education

Acknowledgments

Principal authors from Partnership for Prevention are Mamta Gakhar, MPH; Alyson Hazen, MPH; Hema Khanchandani, MPH, MA; and Amy Stitche, MPH.

Partnership for Prevention would like to thank Stephanie Jacks; Michelle Marzullo, MA; and Molly Rauch, MPH, for providing research support and thoughtful feedback throughout development of *The Community Health Promotion Handbook*.

Robert Harmon, MD, MPH, and Susan K. Maloney, MHS, served as advisors to this project.

Special thanks to EEI Communications for editorial and production support.

Partnership for Prevention is especially grateful for the funding support from the Centers for Disease Control and Prevention and extends thanks to experts from the National Center for Chronic Disease Prevention and Health Promotion and the Community Guide Branch, National Center for Health Marketing, who participated in the development and technical review of *The Community Health Promotion Handbook*.

Table of Contents

Introduction	1
Section 1: Overview of the Approach	3
Section 2: Implementing the Approach	6
Getting Started	
Action Step 1—Conduct a preliminary assessment to understand the current environment surrounding school-based PE in your school district	8
Action Step 2—Begin organizing the human, material, and financial resources that you will need to work with schools to implement more active PE classes	9
Action Step 3—Engage existing partners and key stakeholders by informing them about your plans to work with schools to implement more active PE classes and educating them about the benefits	9
Action Step 4—Bring together committed partners and stakeholders in the form of a working group to create an outreach campaign for more active PE classes (and to later support schools in implementing this approach), and begin planning for the evaluation component	11
Action Step 5—Find a champion in the school system to lead the outreach campaign	11
Action Step 6—Develop the outreach campaign messages that will build school and community support for more active PE classes	12
Action Step 7—Finalize the list of schools that will receive the initial outreach campaign	14
Action Step 8—Deliver the outreach campaign to school administrators, teachers responsible for PE, and students’ families to gain school support for more active PE classes	14
Action Step 9—Deliver the outreach campaign to local businesses and community organizations to raise awareness about the need for more active PE classes	15
Action Step 10—Agree on the school that will serve as the pilot location for implementing more active PE classes	16
Moving Forward	
Action Step 11—Work with the pilot school to informally assess its PE practices and to begin making plans and decisions about the implementation process	16
Action Step 12—Collaborate with the working group and pilot school to review and refine your project evaluation activities	18
Action Step 13—Assemble a team to develop the instructional practices necessary to teach more active PE classes in the pilot school	18
Action Step 14—Work alongside the champion, working group, teachers responsible for PE, and principal to obtain the necessary funding, equipment, and supplies to implement more active PE classes in the pilot school	19
Action Step 15—Inform the pilot school about training options; once training is complete, assist as needed while more active PE classes are implemented	19
Looking Beyond	
Action Step 16—Continue to assist the pilot school while you begin to promote districtwide expansion of more active PE classes	20

Table of Contents

Action Step 17—Publicize the success of the outreach campaign and the pilot school’s PE teachers	21
Action Step 18—Ensure that the school district provides booster training sessions and staff development opportunities to PE teachers who have implemented more active PE classes	22
Action Step 19—Encourage the school board to pass policies requiring that schools in the district implement more active PE classes	22
Appendix A: Determining Your Resource Needs	23
Appendix B: Evaluating Your Activities	26
Appendix C: References and Resources	29
Appendix D: Glossary of Selected Terms	35
Feedback Form	37

The Community Health Promotion Handbook: Action Guides to Improve Community Health is an important tool, composed of five Action Guides, that translates evidence-based recommendations into the necessary “how to” guidance for implementation of effective community-level health promotion strategies. Although *The Community Health Promotion Handbook* is designed primarily to assist public health practitioners in implementing evidence-based practices, additional audiences who may benefit from using this resource include local planners, advocates, policy makers, community and business leaders, community-based organizations, educators, healthcare providers, and others interested in improving health in their communities.

The Community Health Promotion Handbook was developed through a collaborative effort between Partnership for Prevention®—a national membership organization dedicated to building evidence of sound disease prevention and health promotion policies and practices and advocating their adoption by public and private sectors—and the Centers for Disease Control and Prevention (CDC). These implementation guidelines have emerged from the experiences of the 40 communities supported by CDC’s Steps Program, which is creating models for how local communities can act to address chronic diseases. The Steps Program’s current focus areas are obesity, diabetes, and asthma, as well as the related risk factors of physical inactivity, poor nutrition, and tobacco use.

All five Action Guides are based on specific health promotion recommendations from *The Guide to Community Preventive Services (Community Guide)*, which is published by the Task Force on Community Preventive Services. This independent decision-making body makes recommendations for the use of various public health interventions on the basis of the evidence of effectiveness gathered in the rigorous and systematic scientific reviews of published studies. Although these recommendations advise on “what to do,” they do not provide the guidance needed to successfully take the interventions “from the page to the field.” Partnership for Prevention and CDC have worked together to bridge this gap between research and practice by developing *The Community Health Promotion Handbook*.

This Action Guide focuses on a specific approach for implementation of its related *Community Guide* recommendation. When selecting among effective interventions to improve health outcomes, you should first assess your resources and health priorities. After this up-front analysis is completed and this approach is deemed appropriate and viable for your community’s needs, this Action Guide can be used to facilitate your activities.



The information within this Action Guide is intended to be generalizable to a range of communities, but you will need to determine what modifications may be necessary to meet your local health objectives. Rather than a prescriptive list of required actions, general steps and suggestions are provided in this guide to accommodate the unique aspects of communities and their resources. This Action Guide should be used along with technical assistance offered by experienced organizations, local or state health experts, public health program managers, researchers, or others with relevant expertise.

Introduction

Information in this Action Guide is organized under the following sections and appendixes:

■ **Section 1: Overview of the Approach**

This section provides information on the *Community Guide*'s recommendation and the supporting evidence, presents the specific approach used in this Action Guide, describes expected outcomes from implementing the approach, and suggests a role for the reader that both is feasible and maximizes the ability to effect change.

■ **Section 2: Implementing the Approach**

This section of the Action Guide provides the bulk of implementation guidance by addressing the “who,” “what,” “when,” “where,” and “how” of the activities. Key stakeholders you may want to engage are listed within this section, as well as their related interests and potential roles as partners. Action steps are laid out to follow a general progression, from *Getting Started* to *Moving Forward* to *Looking Beyond*. Although the action steps are numbered to suggest an order of activity you might consider, in practice, many steps will likely occur simultaneously or may occur in a sequence different from what appears in this Action Guide.

■ **Appendix A: Determining Your Resource Needs**

Personnel, material, and financial resources that may be needed to successfully plan, implement, and sustain the approach are suggested here. You must determine what resources are necessary, ways to obtain those resources, and their costs. In the personnel resources subsection, a table presents a summary of tasks to allocate or assign among the main individuals and groups involved. The material and financial resources subsections each contain a list of items to consider based on the activities described in this Action Guide.

■ **Appendix B: Evaluating Your Activities**

Evaluation is a crucial component of public health practice and should begin to be addressed during the planning stage. Although it is outside the scope of this Action Guide to provide specific guidance on how to conduct an evaluation, this appendix does provide questions to help you collect data for process and outcome evaluations. Potential sources of data relevant to the approach are also included.

■ **Appendix C: References and Resources**

Here you will find a list—by topic—of references used in the development of this Action Guide and resources that provide information on similar approaches; tools for planning, implementation, and evaluation; and general guidance.

■ **Appendix D: Glossary of Selected Terms**

Words that are listed in this appendix are *italicized* in the guide's text whenever they are used in order to alert you that a definition is provided.

Overview of the Approach

The Evidence

School-based physical education (PE) implements physical education curricula and instruction that emphasizes enjoyable participation in physical activity and helps students develop the knowledge, attitudes, motor and behavioral skills, and confidence needed to improve *physical fitness* and adopt and maintain physically active lifestyles. Research has shown that specific enhancements to PE classes can effectively increase levels of physical activity and improve *physical fitness* among children and adolescents. Additional benefits may include improved flexibility, muscular endurance, and exercise-related knowledge and motivation.

The activity levels of PE classes can be enhanced by changing curricula, teaching practices, or policies. Specific strategies for creating more active PE classes include increasing the duration or level of physical activity in existing classes by altering the rules of games or using teaching techniques to keep all students engaged and active; adding PE classes to the school day or week; or extending the length of PE class time. The goal is to improve the quantity and quality of physical activity within the instructional setting and to build a foundation for lifelong physical activity. With adequate tailoring to accommodate age and developmental differences, these strategies can be implemented at all grade levels.

The *childhood overweight* epidemic is helping to shift the focus of PE classes from traditional sports toward health and physical activity, particularly *moderate-to-vigorous physical activity*. Health authorities recommend that children and adolescents engage in at least 60 minutes of *moderate-to-vigorous physical activity* on most or all days, but many fall short of this goal. Although most physical activity may occur outside the school, increasing levels of physical activity in PE classes helps children and adolescents to meet the recommendation, particularly among those with few community opportunities for physical activity. Current school health initiatives such as *local wellness policies* and *coordinated school health programs* can support more active PE classes.

The Task Force on Community Preventive Services (TFCPS) recommends that PE classes be modified to increase levels of physical activity and improve *physical fitness* among children and adolescents. This recommendation is based on strong evidence of effectiveness found through a systematic review of published studies conducted by a team of experts on behalf of the TFCPS. Information on their recommendation, published in *The Guide to Community Preventive Services: What Works to Promote Health? (Community Guide)*, is presented in Table 1 on page 5. Related publications by the TFCPS and reviews by other organizations are listed under “Evidence-Based Reviews of Physical Activity Interventions in Schools” in Appendix C: References and Resources.

The Approach

This Action Guide focuses on assisting local public health practitioners in increasing levels of physical activity and improving *physical fitness* among children and adolescents through the following approach: **working with elementary, middle, and high schools to implement more active PE classes**. On the basis of an assessment of their resources and community’s needs, public health practitioners committed to improving the health of students in their community may find this approach to be appropriate and viable.

It is important to note that although the outreach campaign—an organized set of educational and advocacy activities to raise awareness of and gain school and community support for enhanced PE classes—can be conducted at all three school levels, it is recommended that one level be initially selected. Then, rather than working with all schools at that level in an entire school district, implement changes at a pilot school and gradually expand activities to other schools after the desired changes are achieved. The steps in this Action Guide are based on taking this more focused approach.

Section 1—Overview of the Approach

Expected Outcomes

Communities that successfully work with schools to provide more active PE classes can expect to see the following results:

- Schools will enhance PE classes by altering curricula, teaching practices, policies on the amount of time spent in PE, or all three.
- These enhanced classes will increase students' physical activity levels; teach motor and movement skills through student participation in a variety of enjoyable, appropriate activities; and improve students' *physical fitness*.

Implementing this approach can be useful in addressing physical activity and *physical fitness* objectives of the national Healthy People 2010 initiative, such as increasing the proportion of adolescents 1) who participate in daily school PE and 2) who engage in *moderate-to-vigorous physical activity*.

Your Role

As a public health practitioner, your role in working with schools to implement more active PE classes will depend on the needs of the schools and the resources and capacity you have to conduct an outreach campaign and facilitate the implementation of these enhanced PE classes. Schools may lack the knowledge on how to best approach making PE classes more active; therefore, one option for you to consider is to coordinate outreach activities to advocate change in PE classes within schools, and later to assist schools with the implementation process. **The role of project coordinator is the focus of this Action Guide.**

Table 1: Highlights of *Community Guide's* Recommendation**Recommendation**

School-Based Physical Education—Strong Evidence of Effectiveness

Findings

These programs modify school-based physical education (PE) classes by increasing the amount of time students spend in PE class, the amount of time they are active during PE classes, or the amount of *moderate-to-vigorous physical activity* they engage in during PE classes. Most studies reviewed increased the amount of physical activity during already-scheduled PE classes by changing the activities taught (e.g., substituting soccer for softball) or modifying the rules of the game so that students are more active (e.g., the entire team runs the bases together if the batter makes a base hit). Health education was often part of the program as well.

Effectiveness

- School-based PE is effective in increasing levels of physical activity and improving *physical fitness*.
- Time spent in PE classes increased by approximately 10%, and time spent in *moderate-to-vigorous physical activity* in PE classes increased by approximately 50%.
- Aerobic capacity increased by approximately 8%.

Applicability

These findings should be generally applicable to elementary, middle, and high school students if the program is adapted to the students receiving it.

Additional Considerations

- School-based PE produced small improvements in flexibility and muscular endurance, as well as increases in knowledge about exercise, *physical fitness*, nutrition, general health, and personal motivation to exercise.
- TFCPS found no evidence to support the perception that time spent in PE classes harms academic performance.
- School systems present the primary barriers to implementing these programs. Although PE is mandated in almost every state, requirements for the amount of PE instruction are generally low. Few middle and high schools require daily PE, and schools face increasing pressure to eliminate PE to make more time available for academic subjects.

Source

Excerpts taken from Task Force on Community Preventive Services. *The Guide to Community Preventive Services: What Works to Promote Health?* New York, NY: Oxford University Press; 2005:91–92. Available at: <http://www.thecommunityguide.org/library/book> (Chapter 2: Physical Activity).

Section 2

Implementing the Approach

Table 2 summarizes the action steps that are recommended for successfully working with schools to implement more active PE classes in your community. The numbering of action steps is meant only to suggest an order of activity you might consider; in practice, there is no exact order to the steps—many steps will likely occur simultaneously or may occur in a sequence different from what appears in this Action Guide. In addition, the timeline for completing each step is highly dependent on a community's particular circumstances. Use this Action Guide to inform and direct your activities, making sure to seek additional technical assistance with your efforts and realizing that you will need to determine how these steps best fit your community.

Table 2: Action Steps for Working with Schools to Increase Physical Activity Among Children and Adolescents in Physical Education Classes

Getting Started

- Action Step 1— Conduct a preliminary assessment to understand the current environment surrounding school-based PE in your school district.
- Action Step 2— Begin organizing the human, material, and financial resources that you will need to work with schools to implement more active PE classes.
- Action Step 3— Engage existing partners and key stakeholders by informing them about your plans to work with schools to implement more active PE classes and educating them about the benefits.
- Action Step 4— Bring together committed partners and stakeholders in the form of a working group to create an outreach campaign for more active PE classes (and to later support schools in implementing this approach), and begin planning for the evaluation component.
- Action Step 5— Find a champion in the school system to lead the outreach campaign.
- Action Step 6— Develop the outreach campaign messages that will build school and community support for more active PE classes.
- Action Step 7— Finalize the list of schools that will receive the initial outreach campaign.
- Action Step 8— Deliver the outreach campaign to school administrators, teachers responsible for PE, and students' families to gain school support for more active PE classes.
- Action Step 9— Deliver the outreach campaign to local businesses and community organizations to raise awareness about the need for more active PE classes.
- Action Step 10— Agree on the school that will serve as the pilot location for implementing more active PE classes.

Moving Forward

- Action Step 11— Work with the pilot school to informally assess its PE practices and to begin making plans and decisions about the implementation process.
- Action Step 12— Collaborate with the working group and pilot school to review and refine your project evaluation activities.
- Action Step 13— Assemble a team to develop the instructional practices necessary to teach more active PE classes in the pilot school.
- Action Step 14— Work alongside the champion, working group, teachers responsible for PE, and principal to obtain the necessary funding, equipment, and supplies to implement more active PE classes in the pilot school.
- Action Step 15— Inform the pilot school about training options; once training is complete, assist as needed while more active PE classes are implemented.

Looking Beyond

- Action Step 16— Continue to assist the pilot school while you begin to promote districtwide expansion of more active PE classes.
- Action Step 17— Publicize the success of the outreach campaign and the pilot school's PE teachers.

continued on next page

Section 2—Implementing the Approach

- Action Step 18—Ensure that the school district provides booster training sessions and staff development opportunities to PE teachers who have implemented more active PE classes.
- Action Step 19—Encourage the school board to pass policies requiring that schools in the district implement more active PE classes.



Boxes marked with this lightbulb icon present tips, ideas, and additional information on implementing an action step and may also provide Web site links to helpful resources.



Boxes marked with this hurdler icon describe possible obstacles that may occur during implementation and offer suggestions for successfully overcoming those hurdles.

Getting Started



As you progress through the steps in this Action Guide, you may wish to consult experienced organizations—such as the ones noted here—for additional information about building support for more active PE classes and to learn more about PE, physical activity, and school health issues.

- Action for Healthy Kids is a nonprofit organization addressing the epidemic of overweight and sedentary children and adolescents by focusing on changes at school. Visit <http://www.actionforhealthykids.org> for resources on PE, *local wellness policies*, *coordinated school health programs*, and *school health advisory councils*. Examples of successful programs and model *local wellness policies* are also available.
- Division of Adolescent and School Health (DASH) at the Centers for Disease Control and Prevention provides resources, publications, data, statistics, and tools for improving school health, analyzing physical education curricula, and increasing physical activity. Visit <http://www.cdc.gov/HealthyYouth> for more information.
- Evidence-based programs such as CATCH PE (Coordinated Approach to Child Health’s PE component) and SPARK (Sports, Play, and Active Recreation for Kids) provide both PE and classroom teachers with the tools, knowledge, and support to effectively increase *moderate-to-vigorous physical activity* in PE classes. Visit http://www.sph.uth.tmc.edu/catch/curriculum_pe.htm for information about CATCH’s PE component for elementary and middle school students. (CATCH’s components can also be purchased together as a *coordinated school health program*.) Visit <http://www.sparkpe.org> for information about SPARK for elementary, middle, and high school students.
- National Association for Sport and Physical Education (NASPE) is a membership organization that sets the national standards for PE. Its Web site at <http://www.aahperd.org/naspe> offers position statements and guidance documents on pertinent PE issues, information on training workshops and conferences, and a large selection of publications including a book to help physical educators write successful grant proposals.
- National Association of State Boards of Education (NASBE) produces a variety of school health publications that are useful for health professionals and maintains a database of state school health policies. Visit <http://www.nasbe.org> for more information.
- PE Central at <http://www.pecentral.org> is a national Web site for K-12 physical educators that provides numerous instructional resources, links to PE equipment and supplies, and ideas on best practices, lesson plans, and assessments.

Section 2—Implementing the Approach

- **Action Step 1—Conduct a preliminary assessment to understand the current environment surrounding school-based PE in your school district.** Through this activity, you may identify schools interested in enhancing PE classes to increase students’ physical activity levels, as well as potential partnerships and allies to support your initiative.
 - Learn about the state-level physical education policies that affect your school district. Information from CDC’s School Health Policies and Programs Study (SHPPS)—a periodic national survey that assesses school health policies and practices at the state, district, school, and classroom levels—can get you started. Visit <http://www.cdc.gov/HealthyYouth/shpps/2006/summaries/index.htm> for recently published SHPPS 2006 state-level summaries of the physical education component of the survey.
 - Contact your district superintendent’s *central office* to examine your school district’s written PE curriculum and also to inquire whether an assessment of the curriculum has been conducted (using CDC’s Physical Education Curriculum Analysis Tool—PECAT—for example). Review the written curriculum and assessments to learn about the PE program offered at your targeted grade levels.
 - As part of your assessment, develop a set of criteria for determining which schools could benefit from an outreach campaign that advocates more active PE classes. Criteria you develop for identifying schools may include such factors as a documented low percentage of time that students are engaged in physical activity during PE classes; student populations having low *physical fitness* scores or at high risk for *childhood overweight*; and resources (e.g., gymnasium, written PE curriculum, *coordinated school health program*) to support a pilot program of more active PE classes.
 - Find out from your district superintendent’s *central office* what data are available for analyzing your criteria, such as school-specific data on height and weight (or body mass index) and *physical fitness* scores of students, existing PE facilities and equipment, amount of PE provided each week and time spent engaged in physical activity, and whether or not a *coordinated school health program* is in place. You may also need to contact schools in your community directly for data that are not tracked at the district level. If additional information is required, be prepared to conduct your own assessment of school PE programs in your community. The National Association for Sport and Physical Education (NASPE) provides “Tools for Observing Physical Education” at <http://www.aahperd.org/naspe/template.cfm?template=observePE/main.html>.
 - Determine which schools meet your established criteria for outreach. Initiate preliminary conversations with principals and teachers responsible for PE at the schools that meet your criteria. Talk to principals about the emphasis they place on PE, their educational priorities, and their level of interest in participating in a pilot program. Ask teachers about their goals for PE classes, interest and willingness to teach more active PE classes, and perceived level of support from administrators. Determine who has the authority to make decisions about the PE curriculum at each school. The list of schools to receive the initial outreach campaign will be finalized in Action Step 7.



Working with schools may be challenging for non-education professionals. Schools operate within a complex organizational structure, work with tight budgets, and may be reluctant to collaborate with community members not involved in education. A publication of the National Association of State Boards of Education entitled *How Schools Work & How to Work With Schools: A Primer for Non-Education Professionals Who Serve Children and Youth* provides information on building positive relationships with educators, school administrators, and policy makers, as well as ways to overcome challenges. To learn more about this publication, go to <http://www.nasbe.org/bookstore/category/path/20>.

Section 2—Implementing the Approach

- **Action Step 2—Begin organizing the human, material, and financial resources that you will need to work with schools to implement more active PE classes.**
 - Refer to Appendix A: Determining Your Resource Needs for information on personnel, material, and financial resources that you may need to successfully perform outreach and support activities. Make these determinations during the upcoming action steps as you establish the scope of your activities. Resource needs of a pilot school to implement more active PE classes (also discussed in Appendix A) will be determined during the “moving forward” stage.

- **Action Step 3—Engage existing partners and key stakeholders by informing them about your plans to work with schools to implement more active PE classes and educating them about the benefits.**
 - Success in implementing this approach will depend on forming good relationships with various stakeholders who are invested in school-based PE and increasing physical activity among children and adolescents. Certain partners and stakeholders may be key decision makers whose influence within and understanding of the community are essential throughout project planning, implementation, and evaluation. Types of stakeholders that you may choose to partner with are listed in Table 3. Some communities may have many stakeholders and others may have only a few. When deciding how to engage different types of stakeholders, consider the potential role that each can and will want to play on the basis of their interests relating to school-based PE.

Table 3: Stakeholders’ Related Interests and Their Possible Roles as Partners		
Stakeholders	Related Interests	Roles as a Partner
Principals and school administrators	<ul style="list-style-type: none"> ■ Appropriate balance of academics and physical activity in the curriculum ■ Adequacy of resources, time, and training for more active PE classes 	<ul style="list-style-type: none"> ■ Gain staff support and commitment ■ Allocate resources to enhance PE classes (e.g., time, funds, staff)
Teachers responsible for PE (including classroom teachers and <i>PE specialists</i>)	<ul style="list-style-type: none"> ■ Adequacy of resources, time, and training to teach more active PE classes ■ Attainment of educational objectives for PE classes 	<ul style="list-style-type: none"> ■ Plan and teach more active PE classes ■ Advocate more active PE classes
Students	<ul style="list-style-type: none"> ■ Enjoyment of PE classes ■ Development of lifelong positive physical activity behaviors and practices 	<ul style="list-style-type: none"> ■ Suggest enjoyable activities during planning of more active PE classes
Parents, parent groups, parent-teacher organizations, and interested community residents	<ul style="list-style-type: none"> ■ Academic success of students ■ Healthy school environments ■ Increased physical activity opportunities at school 	<ul style="list-style-type: none"> ■ Serve as role models for children and encourage physical activity ■ Raise funds to support implementation of more active PE classes ■ Encourage principals to support and fund more active PE classes in schools

continued on next page

Section 2—Implementing the Approach

Table 3: Stakeholders' Related Interests and Their Possible Roles as Partners, cont'd		
Stakeholders	Related Interests	Roles as a Partner
<i>School health advisory council</i>	<ul style="list-style-type: none"> ■ School health programs and policies 	<ul style="list-style-type: none"> ■ Promotes the importance of more active PE classes to decision makers and other stakeholders ■ Develops <i>local wellness policy</i> and supports <i>coordinated school health programs</i>
District's superintendent of schools and <i>central office staff</i> , including <i>PE coordinator</i>	<ul style="list-style-type: none"> ■ Feasibility and cost of implementing more active PE classes ■ Alignment of more active PE classes within district educational objectives 	<ul style="list-style-type: none"> ■ Offer educational expertise in planning more active PE classes ■ Support districtwide expansion of more active PE classes ■ Coordinate and manage districtwide PE program
School board	<ul style="list-style-type: none"> ■ Governance of public schools 	<ul style="list-style-type: none"> ■ Approves <i>local wellness policy</i> ■ Allocates schools' funds and resources ■ Supports the need for more active PE classes
Healthcare providers	<ul style="list-style-type: none"> ■ Improved patient health 	<ul style="list-style-type: none"> ■ Fund school and community initiatives ■ Lend credibility to outreach campaign
Local and state health departments	<ul style="list-style-type: none"> ■ Improved public health 	<ul style="list-style-type: none"> ■ Provide support, resources, and leadership to working group and schools ■ Educate key stakeholders and gain their support ■ Provide local data on <i>childhood overweight</i> and physical inactivity ■ Assist with acquiring funding for more active PE classes
Community leaders	<ul style="list-style-type: none"> ■ Community health promotion ■ Recognition for role in supporting more active PE classes 	<ul style="list-style-type: none"> ■ Provide material resources to support more active PE classes ■ Help to promote more active PE classes
Universities and colleges	<ul style="list-style-type: none"> ■ Training and preparation of future <i>PE specialists</i> 	<ul style="list-style-type: none"> ■ Conduct training workshops and seminars ■ Offer continuing education opportunities ■ Provide technical support to the pilot school ■ Assist with evaluation of the pilot program
Local businesses	<ul style="list-style-type: none"> ■ Good community relations ■ Promotion of products and services 	<ul style="list-style-type: none"> ■ Donate equipment and supplies to the pilot school ■ Fund school and community initiatives
Local media (television, radio, newspaper, Internet)	<ul style="list-style-type: none"> ■ News coverage of local issues ■ Public service announcements 	<ul style="list-style-type: none"> ■ Inform the public about the benefits of more active PE classes ■ Highlight schools' successes

Section 2—Implementing the Approach

■ Action Step 4—Bring together committed partners and stakeholders in the form of a working group to create an outreach campaign for more active PE classes (and to later support schools in implementing this approach), and begin planning for the evaluation component.

- Determine whether there is an active group representing the health and education segments of your school district or community already in existence or a PE-related committee in the school district. If so, investigate whether enhancing school PE classes to increase students' physical activity is high on its agenda and whether it would be appropriate for you to work within that group as it spearheads the outreach campaign.



Look into working with your community's *school health advisory council* (SHAC), if there is one. A SHAC usually represents many important stakeholders; council members may be parents, students, school personnel, health professionals, and business and community leaders. Many districts have a SHAC, but yours may not have one or it may be inactive. Although a SHAC can be an excellent partner, it is not crucial for success in your activities.

- If the best course of action is to form your own working group, then select members who are knowledgeable about PE, public health, school health, PE policies, parents' concerns, community resources, and school issues (e.g., schedules, budgets, teacher incentives). Working group members may include parents, PE teachers, the district *PE coordinator*, school nurses, pediatricians, and other community stakeholders listed earlier in Table 3.
- Work with the group to establish a regular meeting schedule, to set goals and objectives, and to delegate roles and responsibilities among members. Identify people with experience in project planning, implementation, and evaluation who may be able to serve in leadership roles in the working group. Appendix A: Determining Your Resource Needs provides you with a basic list of working group tasks that are identified in the action steps of this guide.
- Start to draft an evaluation plan with the working group for assessing your project and the outcomes of using this approach to increase physical activity among students. Action Step 12 addresses the need to review and refine your evaluation activities during the “moving forward” stage. Although specific guidance on conducting an evaluation is outside the scope of this Action Guide, you will find information within this guide to help you prepare for and develop an evaluation plan. Review Appendix B: Evaluating Your Activities for the types of questions to ask to guide you in gathering process and outcome data for project evaluation needs. Refer also to “Resources for Developing an Evaluation Plan” in Appendix C: References and Resources.

■ Action Step 5—Find a champion in the school system to lead the outreach campaign.

- A champion can be instrumental in overcoming any school resistance to perceived outside pressure and in bringing about change more quickly. He or she should have the ear of decision makers; be persuasive and able to motivate others; understand the educational system; and lend leadership, credibility, and problem-solving skills to the outreach campaign. The district superintendent, district *PE coordinator*, principals, assistant principals, and school board members are possible champions, as are school nurses and PE teachers. A community leader, parent, or medical professional can be a co-champion to provide an external source of influence.

Section 2—Implementing the Approach

- A champion will have likely emerged through your preliminary assessment in Action Step 1 or engagement of stakeholders in Action Step 3 but, if necessary, the working group can identify potential champions. Determine how the champion will collaborate with the working group. Ideally, the champion will join the working group; however, he or she may decide to wait until the outreach campaign is ready to begin before becoming actively involved (especially if a full schedule does not permit earlier participation).

- **Action Step 6—Develop the outreach campaign messages that will build school and community support for more active PE classes.** A primary goal of this outreach campaign is to secure participation of a pilot school.

- So the working group can develop a clear message for the outreach campaign, ensure that its members understand the benefits of physical activity for children and adolescents and the evidence-based strategies for creating more active PE classes.



Review effective evidence-based strategies for creating more active PE classes, which include the following:

1. Implement an evidence-based PE curriculum that increases students' physical activity levels.
2. Incorporate cardiovascular *physical fitness* activities into current lessons (e.g., step aerobics).
3. Adopt new techniques for teaching current lessons to increase students' physical activity levels (e.g., small-sided games of 3-on-3).
4. Extend length of PE classes (e.g., 45 minutes instead of 30 minutes).
5. Add extra PE classes to the school week (e.g., daily PE instead of three times per week).

Strategy 1: Purchasing an evidence-based PE curriculum may be a worthwhile investment. Strategies 2 and 3 (i.e., adding cardiovascular activities and adopting teaching techniques that increase physical activity) will already be incorporated into evidence-based PE curricula. Curricula such as the Coordinated Approach to Child Health in PE (CATCH PE); Sports, Play, and Active Recreation for Kids (SPARK); and Planet Health have been rigorously evaluated and shown to produce specific outcomes, including increased physical activity in PE classes or reduced *childhood overweight*.

Strategies 2 and 3: Enhancing a current curriculum by incorporating cardiovascular activities and adopting new teaching techniques may be the most feasible options for increasing levels of physical activity in existing PE classes for schools that are unable to purchase an evidence-based PE curriculum.

Strategies 4 and 5: Altering the school day to add extra minutes or classes can be especially difficult and usually requires changes to school policy.

Your outreach campaign's message should recommend that schools focus on the first three strategies to create more active PE classes while supporting the option of adopting additional strategies. Be sure not to give the impression that schools must implement all the strategies to see an increase in physical activity.

continued on next page

Learn more about the evidence-based curricula mentioned in strategy 1 at

- http://www.sph.uth.tmc.edu/catch/curriculum_pe.htm for CATCH PE.
- <http://www.sparkpe.org> for SPARK.
- http://www.hsph.harvard.edu/prc/proj_planet.html for Planet Health.

CDC’s Physical Education Curriculum Analysis Tool (PECAT) can help with implementing strategies 1–3; you can use PECAT to compare strengths and weaknesses of various published PE curricula under consideration or to identify areas for revision in a locally developed PE curriculum. In addition, PECAT can provide a vision for a high-quality written PE curriculum for districts lacking one. Refer to <http://www.cdc.gov/HealthyYouth/PECAT/index.htm> for further information.

- Refer to Table 4 for items that should be covered when making the case for increasing physical activity in PE classes. CDC’s Division of Adolescent and School Health provides resources and data on physical activity at <http://www.cdc.gov/HealthyYouth>. To further make your case, gather any available data on students’ height and weight (or body mass index) from your district superintendent’s *central office* or your local health department in order to provide specific evidence on the prevalence and trends of *childhood overweight* in your community. (Note: You may have already collected this information during your preliminary assessment in Action Step 1.)

Table 4: Checklist of Important Issues to Cover When Making the Case for More Active Physical Education Classes

☑	Important benefits of physical activity (e.g., improves strength and endurance; helps build healthy bones and muscles; helps control weight; reduces anxiety and stress; increases self-esteem, mood, and concentration; may improve blood pressure and cholesterol levels)
☑	Immediate and long-term physical health effects of physical inactivity
☑	Prevalence of and trends in <i>childhood overweight</i> at the state and local levels
☑	Mental health, emotional, and social issues associated with <i>childhood overweight</i>
☑	Effective strategies for enhancing PE classes and increasing physical activity
☑	Resources needed to implement and maintain more active PE classes
☑	Benefits of more active PE classes to student health

- Develop messages that explain to your audiences why regular physical activity is an important component of a healthy lifestyle, and why *childhood overweight* and physical inactivity are important concerns and what can be done about it. Focus on solutions and explain how PE can be enhanced to increase levels of physical activity. Support your arguments with best practices and information gathered from credible sources such as peer-reviewed journals, the CDC, or your state or local health department. Although there is no conclusive evidence that PE improves academic performance, there is evidence that it does not detract from academic performance, even when additional minutes are devoted to PE classes (refer to Sallis et al., 1999 in Appendix C: References and Resources under “Research Articles”).

Section 2—Implementing the Approach

- Use the diverse perspectives of working group members and the champion to tailor messages to different audiences. Audiences may include school administrators, teachers responsible for PE (classroom teachers and *PE specialists*), students' families, and local businesses and community organizations. From your assessment conducted during Action Step 1, use districtwide and school-specific data, along with information obtained from preliminary conversations with schools' administrators and teachers, to also help tailor messages.
- Use these messages to develop written educational materials (e.g., fact sheets, pamphlets) and brief PowerPoint presentations (5–7 minutes). Present data in easy-to-understand charts and graphs, using local or state data when possible. Avoid jargon and technical language or acronyms that may be unfamiliar to the audience.
- Gather evidence from schools or school districts that have successfully implemented more active PE classes to share when delivering the outreach campaign's message. Success stories and related data from other schools or school districts may help motivate your targeted schools to enhance their PE classes.

■ Action Step 7—Finalize the list of schools that will receive the initial outreach campaign.

- Use the results of your preliminary assessment conducted in Action Step 1 to help determine which schools will receive the outreach campaign. Be sure to include the schools where the champion and working group members are employed or have close affiliations. Also, keep in mind that the champion's role and level of influence in the school system may help determine which schools are selected. For example, the district's superintendent or *PE coordinator* would have considerable leverage in selecting which schools receive the outreach campaign if one of these individuals championed your campaign for more active PE classes.

■ Action Step 8—Deliver the outreach campaign to school administrators, teachers responsible for PE, and students' families to gain school support for more active PE classes.

Support and commitment is needed from both PE teachers and school administrators, especially the principal. Commitment to this initiative can start at either the administrator or teacher level. The outreach campaign should be appropriately targeted to gain support from both groups.

- Meet with the principal, assistant principal, and other administrators at schools targeted by your outreach campaign. Ideally, the champion will lead these presentations. Emphasize the benefits of physical activity on children's school attendance, behavior, and concentration. Discuss community partnerships that were initiated during earlier stakeholder engagement in Action Step 3 for assisting with financial or material resource needs, and find out from schools which other community or business organizations may be able to contribute resources. (In Action Step 9, you will deliver your outreach campaign to potential contributors.) Discuss the feasibility of implementing more active PE classes, as well as potential obstacles and possible ways to overcome them. If the principal agrees, schedule dates and times for follow-up discussions as needed.
- Seek permission to meet with all teachers responsible for PE and other interested school staff. Again, the champion should lead the presentations, allowing time afterward to gather suggestions and address questions and concerns. Encourage teachers to ask for their principal's support to create more active PE classes. Principals will be more supportive if teachers endorse the outreach campaign's goals.



Although most PE teachers will likely support more active PE classes, some may not. Inadequate space or preparation time, large class sizes, and adherence to more traditional approaches to teaching PE are reasons some PE teachers may not be supportive. Gaining the principal's backing is critical to enlisting the support of these teachers. Listen to PE teachers' ideas and concerns, and work with the principal to address them.

Also, it may be challenging to gain support from classroom teachers who have been assigned the additional role of teaching PE. They may be unfamiliar with the teaching techniques and activities associated with more active PE classes. To address these concerns, it will be important to provide teachers with training and technical assistance to support them in teaching these classes.

- Maintain communication with the district superintendent's *central office* while delivering your outreach to ensure that all parties stay informed and to promote collaboration.
- Get to know the leaders of each school's parent-teacher organization (PTO) and work with them to build support among PTO members. Attend family nights, open houses, and other school events to talk to families and distribute educational materials. Ask families to encourage the principal of their child's school to increase physical activity levels in PE classes. PTOs can also help organize equipment drives or fundraisers to support the resource needs of more active PE classes.

■ **Action Step 9—Deliver the outreach campaign to local businesses and community organizations to raise awareness about the need for more active PE classes.** These organizations can contribute financial or material support—or both—to help the pilot school implement enhanced PE classes.

- In addition to potential contributors identified in Action Step 3 and cited by schools in Action Step 8, research potential sources of local financial and material support and develop a list of key contacts at each source. Focus on organizations with a history of funding educational projects, an interest in *physical fitness*, or both.



Consider approaching the following types of organizations for financial or material support:

- | | | |
|---------------------------------|-----------------------------|---------------------------|
| ■ Local businesses | ■ Community foundations | ■ Physical activity clubs |
| ■ Newspapers and radio stations | ■ Nonprofit health agencies | ■ Health clubs and gyms |
| ■ Professional sports teams | ■ Hospitals | ■ Insurance companies |

- Prepare a short proposal for key contacts at each organization. Identify the goals of the outreach campaign and provide information on how each organization can contribute to more active PE classes. Sporting goods stores may provide discounted or donated equipment, and insurance companies or local businesses may contribute financially. The champion and the working group can help garner community support by meeting with key contacts to discuss the proposal and distribute educational materials or give brief presentations. Obtain written statements of support whenever possible to demonstrate to schools receiving the outreach campaign that community support is available. Later, after a pilot school is selected, additional outreach by school representatives to the community for financial or material support may be appropriate.

Section 2—Implementing the Approach

■ Action Step 10—Agree on the school that will serve as the pilot location for implementing more active PE classes.

- Continue communicating with the schools targeted for your outreach campaign until a principal decides to participate in the pilot program. Agreement to participate may depend on the condition that only certain strategies are implemented. Ask the principal for a written statement to solidify the agreement. Determine how the school works best with outside partners, and use this information to gauge your level of involvement in upcoming steps.



The principal's support is required for a pilot program to be conducted at a school. If the principal's support cannot be attained at any school targeted by the outreach campaign, reassess your outreach efforts. Analyze the outreach messages and delivery method to determine where adjustments are needed. Ask principals what their reservations are, resolve specific issues where possible, and incorporate their feedback into the outreach. If needed, identify other schools that may be interested in increasing physical activity in PE classes and continue your outreach.

Moving Forward

Now that you have engaged stakeholders, formed a working group that developed the outreach campaign for more active PE classes, found a project champion who helped deliver the outreach campaign, and identified a pilot school, what's next? Look at the activities outlined below to gain insight into how to move forward. Although school educators will direct many of the remaining steps, your continued involvement will be critical to the planning and implementation process of the pilot program.

■ Action Step 11—Work with the pilot school to informally assess its PE practices and to begin making plans and decisions about the implementation process.

- Conduct an informal assessment of the pilot school's PE practices to guide the planning for more active PE classes. Gather any pertinent information about the pilot school's PE classes that was not collected in the preliminary assessment of targeted schools in your community in Action Step 1. Working group members knowledgeable about PE should seek permission to observe PE classes to understand current teaching practices and to estimate levels of physical activity. Consider class size, proportion of time devoted to class management or transitions between activities, use and layout of equipment, and whether students appear to be enjoying themselves and are fully participating in activities. Capture this information by using a short questionnaire or checklist. Talk afterward with PE teachers about their classes and about what these teachers believe they need in training and resources to teach a more physically active class.
- When the assessment is completed, convene a meeting that includes the principal, working group, champion, teachers responsible for PE, student representatives, and the district *PE coordinator*. Also invite your key contact(s) from the *school health advisory council* if you are collaborating with one. Provide the group with the informal assessment of the pilot school's PE practices to use in identifying areas to focus on for PE improvement.

Section 2—Implementing the Approach

- ▶ Assist this group in selecting which strategies for increasing students' physical activity to implement during the pilot program, if these decisions have not already been made. Start with the strategies promoted in the outreach campaign (i.e., purchasing an evidence-based curriculum or incorporating cardiovascular activities and new teaching techniques into current lesson plans—as discussed in Action Step 6), and consider additional strategies that the pilot school may be interested in, such as extending the length of PE class time. If the decision is to enhance current lesson plans, facilitate discussion until consensus is reached on which cardiovascular activities to include (e.g., aerobic games, step aerobics) and how best to add them to the curriculum. Encourage the group to choose age-appropriate and developmentally appropriate activities that allow full student participation, regardless of sex, weight, or physical or athletic ability. Consult student representatives for suggestions on activities they enjoy, and be sure to also learn about their dislikes; student feedback is critical in determining physical activities that will best engage them. Ask the group to think about the resources needed to implement each strategy, factoring in existing school or district resources and community partnerships, and ways to obtain those resources.



Resource-poor schools may want to focus on strategies to increase physical activity that do not require expensive additional equipment. Examples include aerobic games using flying discs, jump ropes, or hula hoops; aerobic dance; and class management techniques such as small-sided games (e.g., 3-on-3 instead of 10-on-10) and circuits (e.g., push-up, sit-up, and jumping jack stations).



If the pilot school chooses strategies that alter PE class length or frequency, policy changes may need to occur at the state, district, or school levels. School administrators should work with school PE staff and parents to draft new policies addressing minutes of PE class and frequency of PE classes per week and work through advocacy channels to obtain approval of these policies.

- ▶ Begin to discuss the format and timing of training sessions for teachers to learn to implement more active PE classes. This information will help guide the development of instructional practices in the next action step. Recommend training formats that allow teachers to observe and practice these techniques and provide follow-up support to work through issues that could arise during implementation. Although the school or school district will select and organize the teacher training sessions, your input can influence training decisions.
- ▶ Ascertain who in the school or in the district superintendent's *central office* will manage equipment and financial donations, arrange teacher training sessions, contribute relevant educational expertise, and provide other assistance necessary to ensure a successful pilot program.

Section 2—Implementing the Approach

■ Action Step 12—Collaborate with the working group and pilot school to review and refine your project evaluation activities.

- Complete the development of your evaluation plan that was begun in Action Step 4 by addressing evaluation of the pilot program, even though you may need to continue to refine certain aspects as the overall project progresses. In addition to your own health objectives, be sure that the evaluation plan also addresses educational objectives pertaining to the more active PE classes that are of interest to the pilot school. As discussed earlier in Action Step 4, review Appendix B: Evaluating Your Activities for the types of questions to ask to guide you in gathering process and outcome data for project evaluation needs. Refer also to “Resources for Developing an Evaluation Plan” in Appendix C: References and Resources.
- With the principal and teachers who are responsible for PE, begin to discuss the collection of baseline and post-test data (such as assessing the cardiovascular endurance of students and the amount of PE class time allotted for *moderate-to-vigorous physical activity* before and after implementing enhanced PE classes) and the appropriate data collection tools. Examples of ways to evaluate the enhanced PE classes include 1) developing a checklist that will indicate whether all components of a lesson plan are being implemented, and 2) developing brief questionnaires to assess students’ knowledge, attitudes, and beliefs pertaining to physical activity and more active PE classes and to assess teachers’ attitudes toward the training that they received for providing more active PE classes. Discuss the assignment of responsibility for the overall evaluation plan and its components. Evaluation findings will be used to identify and address challenges that arise during implementation and to improve the enhanced PE classes.



Consider recommending that *SOFIT* (System for Observing Fitness Instruction Time) be used as an objective tool to measure the proportion of class time students are active and to evaluate lesson content and teacher behavior. (To view the *SOFIT* training manual, visit <http://www-rohan.sdsu.edu/faculty/sallis/sofitprotocol.pdf>.) A nearby university or health department may be able to provide evaluators trained in using this tool.

■ Action Step 13—Assemble a team to develop the instructional practices necessary to teach more active PE classes in the pilot school.



Planning and developing instructional practices is time consuming. Help this process along by coordinating the sessions and maintaining communication between members of this team. As discussed in Action Step 6, an alternative to this process is adoption of an evidence-based curriculum that can save the pilot school time and effort while ensuring that students receive PE classes with high levels of physical activity.

- Select people for this team who have the expertise to address physical activity levels in the school’s PE lesson plans, such as *PE specialists* at the pilot school, outstanding district or regional PE teachers, working group members knowledgeable about PE, relevant district administrators (e.g., director of instruction, district *PE coordinator*), and instructional specialists from a university. If additional help is needed, your state’s department of education may be able to provide technical assistance. It is recommended that *PE specialists* lead the planning and development of instructional practices.

Section 2—Implementing the Approach

- While the team develops the instructional practices for each enhanced lesson, including layout and use of equipment, new teaching techniques, and alterations to games to make them more physically active, document these changes. Package this information into a reference manual to assist teachers with teaching more active PE classes. This manual can be especially helpful to classroom teachers, who may need a guide for teaching these enhanced PE classes.



To assist with determining instructional practices for each enhanced lesson, visit the “Appropriate Practices for Physical Education” section of the National Association for Sport and Physical Education Web site at <http://www.aahperd.org/naspe/template.cfm?template=peappropriatepractice/index.html>. Three separate booklets for elementary, middle, and high school physical education include guidelines for curriculum design, learning experience, *physical fitness* activities and testing, assessment, participation levels, forming groups, and competition.

- Develop a list of necessary equipment and supplies for the more active PE classes. Equipment may range from jump ropes, various balls, cones, or plastic aerobic steppers to more expensive items such as stationary bicycles or treadmills, depending on the cardiovascular activities chosen. Supplies might be dance CDs, whistles, a portable radio, or other items to support the lessons.
- **Action Step 14—Work alongside the champion, working group, teachers responsible for PE, and principal to obtain the necessary funding, equipment, and supplies to implement more active PE classes in the pilot school.** The principal or designated school representative should follow up with organizations or businesses that expressed a willingness to contribute financial or material assistance (refer to Action Step 9).
- Iron out details for the transfer of donated funds, equipment, and supplies to the pilot school and for the management of these resources. Plan how each partner will be recognized for its donation.
 - Determine whether the school district maintains PE equipment and supplies and the process for requesting their use. Try to obtain items that are still needed from partnering organizations or businesses. Also consider searching the Internet for discounted PE equipment and supplies or organizing an equipment drive at the school with help from the parent-teacher organization.
 - Be sure that a portion of financial donations from community partnerships is earmarked for identified teacher training costs.
- **Action Step 15—Inform the pilot school about training options; once training is complete, assist as needed while more active PE classes are implemented.**
- Teachers will most likely need to learn new instructional and class management techniques to teach more active PE classes. Work with the pilot school as needed to help ensure that PE teachers are able to complete the necessary training according to the planned timetable.

Section 2—Implementing the Approach



Training can be provided by professional trainers, faculty or graduate students from universities, or local educators with expertise in the content area. Consult the following resources for information on teacher training and workshops:

- The National Association for Sport and Physical Education's PIPEline workshop series offers a training workshop on instructional practices. Visit <http://www.aahperd.org/NASPE/pipeline> for more information.
- SPARK PE workshops provide the organizational, management and instructional techniques necessary to teach active physical education. To learn more about these workshops, go to <http://www.sparkpe.org/workshops/about.jsp>.
- CATCH provides half- or full-day workshops and booster training sessions on using CATCH PE materials. CATCH also offers workshops in use of evaluation tools, including *SOFIT* and surveys. For information, go to <http://www.sph.uth.tmc.edu/catch/training.htm>.
- Universities with departments of kinesiology, exercise science, or physical education may provide workshops, training sessions, and courses to area school districts.
- Recipients of awards (e.g., Teacher of the Year) may work with schools to implement best teaching practices in PE. To find award recipients, consider contacting the National Association for Sport and Physical Education; your state Association for Health, Physical Education, Recreation and Dance; your Governor's Council on Physical Fitness and Sports; or your school district.



Inadequate training of physical education instructors may prevent the physical activity benefits of the enhanced PE classes from being fully attained. Technical assistance from working group members, lesson content experts, or mentors who observe classes can help teachers work through challenges in implementing more active PE classes. A mentor could be an outstanding PE teacher or someone from the local health department who is trained in PE.

Looking Beyond

You, your working group, and the pilot school have worked hard to begin implementing more active PE classes. Congratulations! But your work does not end here. While the pilot activities are being conducted, what steps should you take to expand implementation to additional schools and to institutionalize your efforts? Look at key strategies in the action steps below for suggestions.

- **Action Step 16—Continue to assist the pilot school while you begin to promote districtwide expansion of more active PE classes.**
 - Maintain school support by staying in communication with the principal and all teachers responsible for PE at the pilot school to discuss concerns and obstacles. Working group members should actively assist the pilot school in addressing any issues that pertain to increasing physical activity in PE classes.

Section 2—Implementing the Approach

- Reach out to schools that indicated interest in implementing more active PE classes during the initial outreach campaign but did not participate in the pilot program. Deliver the outreach campaign to other schools in the district to gain their support. Even though a full evaluation of the impact of increasing physical activity in PE classes has not been completed at the pilot school, use early findings gathered from the pilot school to illustrate the benefits of implementation. Encourage administrators and teachers in other schools to observe more active PE classes in the pilot school.
- Identify grant opportunities that support efforts to increase physical activity among students. Connect the district superintendent's *central office* staff to up-to-date resources such as listservs (electronic mailing lists) that carry information on grants, so that they can keep current on possible funding sources directly. If grant funding is secured, it may allow for expansion and incorporation of new innovations into the district's PE program, such as professional development opportunities and use of technology to monitor *physical fitness* levels.



Physical education in schools is highly underfunded. Be creative in looking for financial support at the national, state, and local levels.

- The federal Carol M. White Physical Education Program (PEP) provides grants to school districts to improve PE programs. Visit <http://www.ed.gov/programs/whitephised/index.html> for more information. For suggestions on writing a successful PEP grant proposal, go to <http://www.pecentral.org/professional/pepbill/pepwritingtips.html>.
- Some school districts have funded PE programs through Title I-A (Improving Basic Programs Operated by Local Educational Agencies) and Title IV-A (Safe and Drug-Free Schools and Communities) of the federal No Child Left Behind Act of 2001, which reauthorized the federal Elementary and Secondary Education Act. Visit <http://www.ed.gov/about/offices/list/oes/legislation.html> for more information.
- As discussed in Action Step 9, examples of other sources of financial support to consider include corporate sponsors, nonprofit health agencies, hospitals, community foundations, and local businesses.

- Discuss with district administrators the possibility of securing funding from sustainable sources to ensure the continuity of more active PE classes once expanded districtwide. Taxes are one potential source of such funding.

■ Action Step 17—Publicize the success of the outreach campaign and the pilot school's PE teachers.

- Recognize the efforts of the working group and PE teachers by bringing in the media, inviting the district superintendent to observe a class, or highlighting the changes to PE classes in the school and district newsletters and on their Web sites. School programs are more likely to continue when teachers receive recognition from superiors and the community is aware of and excited about what is going on in their local schools. Recognition can also promote expansion to other schools by generating new interest in more active PE classes.
- Enlist local media channels (i.e., television, newspaper, radio, and Internet sources) to help with promoting the outreach campaign's message and the successful implementation of more active PE classes at the pilot school. Prepare a press release to be distributed to the media. Encourage

Section 2—Implementing the Approach

newspapers to publish human interest stories about the importance of increased physical activity in schools and to show pictures of students participating in more active PE classes.



For suggestions on how to generate publicity for your outreach campaign, you can review the *Media Access Guide: A Resource for Community Health Promotion*, published by CDC's Steps Program, at <http://www.cdc.gov/steps/resources/pdf/StepsMAG.pdf>. Topic sections include instructions, tips, and templates for writing press releases, media advisories, and other media-related materials; methods for monitoring media coverage; and strategies for placing public service announcements (PSAs) and hosting press conferences.

■ Action Step 18—Ensure that the school district provides booster training sessions and staff development opportunities to PE teachers who have implemented more active PE classes.

- Emphasize to the district's *PE coordinator* and other key *central office* staff that booster sessions—such as in-service days devoted to PE training—offset teacher turnover and reinforce methods for previously trained teachers. Opportunities to attend local or regional conferences allow teachers to stay informed on current teaching practices and can be an incentive to continue teaching the more active PE classes.



Sustainability Tip: To help maintain the priority of increased physical activity in PE classes, teachers responsible for PE should learn to communicate their resource, training, and funding needs effectively to administrators and to educate parents on the importance of PE classes and physical activity in their children's lives. Ask your champion to encourage these teachers to become more vocal in schools and the community about the valuable contribution of PE in improving the health of children.

■ Action Step 19—Encourage the school board to pass policies requiring that schools in the district implement more active PE classes.

- Develop formal policies to fully institutionalize the enhancements to the PE curriculum and to ensure that all school-age children in the district participate in more active PE classes. A *local wellness policy* that includes the use of more active PE classes as a goal for increasing physical activity can be presented to the school board.
- Attend school board meetings to acquaint yourself with board members and to learn about the process for placing issues on the board's agenda. Ask the champion to briefly testify before the school board about the benefits of more active PE classes and to answer questions from the board by citing relevant data (e.g., implementation costs, outcomes). Expert opinions from *PE specialists* and testimonials from parents are also very persuasive. Try to fill the room with supporters of more active PE to demonstrate community and school support. School board members are sensitive to their constituents' concerns, so a large show of support for increasing physical activity of children and adolescents in PE classes may influence their vote.

Determining Your Resource Needs

Use the following lists of personnel, material, and financial resource needs to guide your planning activities when working with schools to implement more active PE classes. Remember, the resources needed by the group you represent will depend on the scope of project activities and the depth of your group's involvement. Available funding will determine what personnel and material resources you are able to secure to supplement your existing resources. The resources the school needs will depend on its capacity and the many decisions made by school and district administrators.

■ Personnel Resource Needs

The personnel you will need for working with schools to implement more active PE classes may include the following full-time or part-time staff and volunteers:

- A project coordinator to manage the activities of the outreach campaign, lead the working group's interactions with the school and school district, and help recruit a champion.
- Staff to provide administrative, logistical, and research support to the project coordinator and working group.
- Working group members composed of committed partners and stakeholders to support the goals of the project.
- A champion in the school system to promote more active PE classes.

The school will need the following personnel when implementing this approach (these individuals may come from inside or outside the school or school system):

- Individuals to participate in decision making and development of instructional practices for more active PE classes.
- Teachers of the more active PE classes.
- Individuals to arrange teacher training workshops, manage contributions, and sustain community partnerships.

Refer to Table 5 on the next page for a summary of the tasks that various personnel typically perform—use this list to guide discussions with the school and district administrators regarding personnel resources. An important function is determining who will be responsible for each activity. Some of these tasks may be interchanged between different people or groups when appropriate.

Table 5: Personnel and Their Typical Responsibilities

<p>Project coordinator</p> <ul style="list-style-type: none"> ■ Identifies potential members of the working group ■ Manages outreach campaign activities and working group activities ■ Maintains communication with the pilot school and working group members ■ Acts as point person for the working group ■ Oversees evaluation of the outreach campaign and the pilot program ■ Promotes districtwide expansion of increased physical activity in PE classes
<p>Working group</p> <ul style="list-style-type: none"> ■ Engages stakeholders and partners ■ Develops outreach campaign with the champion ■ Researches and initiates community partnerships to obtain funding and resources ■ Facilitates policy development and instructional practice planning sessions ■ Assists with evaluation of the outreach campaign and the pilot program ■ Helps school district to obtain funding for expansion of more active PE classes
<p>Champion</p> <ul style="list-style-type: none"> ■ Develops the outreach campaign with the working group ■ Leads the outreach campaign to build support among stakeholders and partners ■ Testifies before the school board for districtwide expansion of more active PE classes ■ Teaches advocacy skills to PE teachers to sustain teacher motivation and more active PE classes
<p>School and district administrators</p> <ul style="list-style-type: none"> ■ Manage the district’s PE program, including training, staff development, and oversight of funding and donated equipment ■ Follow up with community partners to obtain funding and resources ■ Sustain community partnerships ■ Collaborate with the working group to determine which school will participate in a pilot program ■ Participate in decision making and sessions to plan instructional practices of more active PE classes ■ Manages districtwide expansion of increased physical activity in PE classes

■ Material Resource Needs

The material resources you need to work with schools to implement more active PE classes will depend on the nature of your outreach campaign and school support activities. As you move forward with your activities, keep in mind ways you might help to acquire or develop some of these materials, using existing resources whenever possible. Basic material resource needs are detailed in the following list:

- Office space for staff
- Office equipment for conducting outreach campaign and research (e.g., computers, printers, fax machine, copier, telephones)
- Meeting space, audiovisual equipment, and materials for working group
- Hard-copy materials for outreach to stakeholders and partners
- Materials for interviews, surveys, and other modes of evaluation

Appendix A—Determining Your Resource Needs

The school, too, will need a variety of material resources when implementing this approach. Basic resources are detailed in the following list:

- Meeting space for decision making and for sessions to plan instructional practices
- Adequate gymnasium facilities for PE classes and teacher training sessions
- Additional equipment and supplies (e.g., jump ropes, hula hoops, cones, plastic aerobic steppers)
- Storage space for equipment and supplies
- Revised or new PE curriculum materials for more active PE classes
- Materials for interviews, surveys, and other modes of evaluation

■ Financial Resource Needs

General, administrative, and personnel costs are the primary expenses for which you will need funds to work with schools to implement more active PE classes. Be sure to budget for all components of your activities, such as the following items:

- Personnel salaries and benefits
- Office overhead
- Office and audiovisual equipment and materials
- Development, printing, and distribution of outreach campaign materials
- Project evaluation
- Telephone and Internet access for outreach and research
- Miscellaneous items such as refreshments during meetings

The financial resources the school may need to implement more active PE classes include funds for the following:

- Personnel salaries and benefits
- Additional PE equipment and supplies
- Printing and distribution of revised PE curriculum or purchase of new PE curriculum
- Teacher training and staff development (including pay for substitute teachers during scheduled trainings)
- Project evaluation
- Building of adequate facilities or renovation or modification of current facilities (if needed)
- Miscellaneous items such as refreshments during meetings

Appendix B

Evaluating Your Activities

Evaluation is a key component of your project and should be conducted before, during, and after project implementation. You can use evaluation data to plan community-specific projects, to assess the effectiveness of the implemented project in achieving its objectives, and to modify current activities where necessary for project improvement.

Evaluation data can also be used to keep stakeholders updated on the project's progress; show participants the benefits of their active involvement in facilitating an outreach campaign and creating more active PE classes; describe the project when applying for or securing additional support through partner funding, grant opportunities, and other methods; and provide other community groups with information as they consider creating more active PE classes in their school districts.

Although specific guidance on conducting an evaluation is outside the scope of this Action Guide, you will find suggested questions below to guide you in collecting data for process and outcome evaluations; the specific questions you ultimately develop will depend on the objectives you have set and will be unique to your project. Potential sources of data are also listed to help you answer these questions. In addition, refer to “Resources for Developing an Evaluation Plan” in Appendix C: References and Resources.

Questions to Guide Data Collection

As a public health practitioner working with schools to implement more active PE classes, your evaluation will not only assess the working group's activities to advocate increased physical activity in PE classes through an outreach campaign and to support the implementation of more active PE classes in the pilot school, but will also assess the implementation activities of the pilot school itself.

■ Process Evaluation

To assess whether the project was implemented as intended, you will need to collect data on the quality and effectiveness of your activities. Questions helpful in this assessment of the outreach campaign and implementation activities include the following:

Assessing the Working Group's Activities

- Was your planned format for the outreach campaign followed (e.g., champion leading the presentations, adequate time for questions and answers)? How many presentations were given?
- Did the working group adequately address audience concerns (e.g., parents' concerns about issues facing schools)?
- How many schools received the outreach campaign? What obstacles to participating in a pilot program were cited? Were solutions to those obstacles incorporated into the outreach campaign?
- Did the working group collaborate with other groups such as the *school health advisory council*? What were the results of the collaboration?
- How many community partnerships were formed? What was the result of those partnerships?
- Were follow-up visits made to the pilot school during implementation? Were these visits successful in addressing any implementation issues?

Assessing the School's Activities

- Were the strategies for more active PE classes implemented as planned? Were the new or revised lessons followed? Were any portions of the lessons skipped? Why were these portions skipped?
- What was the process for implementing these changes to classes? Who was responsible for key actions?

- Did teacher training sessions take place? What was the participation rate of teachers? How prepared do classroom teachers and *PE specialists* believe they are to teach more active PE classes?
- Was there sufficient equipment to support more active PE classes? How was this equipment acquired? What equipment was lacking?
- How long and at what level were the students physically active during the class period? Did the students find the activities enjoyable?
- Did classes maximize participation of all students, including those with physical disabilities? Are some students participating less than others (for example, are girls participating less than boys)?
- Are staff training and professional development opportunities offered to maintain teacher training? How many opportunities are offered per year?
- Is technical assistance available throughout the year to PE teachers as they implement more active PE classes? If so, what types of assistance are available?

■ Outcome Evaluation

To assess the project's influence and make recommendations for future project direction and improvement, you will need to collect data on the expected outcomes of using this approach to increase physical activity among students. In addition to focusing on health outcomes in the evaluation plan, be sure to address educational outcomes of the enhanced PE classes that are of interest to the pilot school. Although long-term health outcomes—such as reduced incidence of *childhood overweight*—are hard to attribute to any one project, asking the following questions may help you determine whether this approach was successful:

- Has the level of physical activity increased in PE classes?
- Have selected indicators of *physical fitness* improved (e.g., cardiovascular endurance)?
- Have other effects been observed among students (e.g., improved academic performance, classroom behavior, or attendance)?
- Were local, district, or state PE policies affected? If so, in what way?

Potential Sources of Data

There are many ways to collect data on process and outcome evaluation indicators. The data you use should address and answer the questions outlined in the evaluation plan that was developed in collaboration with the working group and the pilot school. You may need to develop data sources, or you may adapt data sources already in existence. The following partial list of data sources may help you get started:

- Records of outreach campaign activities
- Records of participation for teacher training sessions
- Pilot school's budget allocation for PE
- Questionnaires of students' knowledge, attitudes, and beliefs regarding PE in school
- Questionnaires of teachers' attitudes toward training that they received for increasing physical activity in their classes
- List of new or revised PE lessons used by the pilot school to increase physical activity
- Checklist indicating whether all components of a new or revised PE lesson plan were implemented

Appendix B—Evaluating Your Activities

- Data collection tools used to measure students' *physical fitness* levels (e.g., cardiovascular endurance) at baseline and in later assessments
- *SOFIT* data, if this evaluation tool was used (refer to Action Step 12)
- CDC's School Health Policies and Programs Study results (refer to discussion of SHPPS at the beginning of Action Step 1)

Appendix C

References and Resources

Evidence-Based Reviews of Physical Activity Interventions in Schools

Institute of Medicine

Institute of Medicine. *Preventing Childhood Obesity: Health in the Balance*. Washington, DC: National Academies Press; 2005. Available at: http://www.nap.edu/catalog.php?record_id=11015.

Institute of Medicine. *Progress in Preventing Childhood Obesity: How Do We Measure Up?* Washington, DC: National Academies Press; 2006. Available at: http://www.nap.edu/catalog.php?record_id=11722.

Task Force on Community Preventive Services

Kahn EB, Ramsey LT, Brownson RC, et al. The effectiveness of interventions to increase physical activity: a systematic review. *Am J Prev Med*. 2002;22(4 Suppl):73–107. Available at: <http://www.thecommunityguide.org/pa/pa-ajpm-evrev.pdf>.

Task Force on Community Preventive Services. Increasing physical activity: a report on recommendations from the Task Force on Community Preventive Services. *MMWR*. 2001;50(RR18):1–16. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5018a1.htm>.

Task Force on Community Preventive Services. Recommendations to increase physical activity in communities. *Am J Prev Med*. 2002;22(4 Suppl):67–72. Available at: <http://www.thecommunityguide.org/pa/pa-ajpm-recs.pdf>.

Task Force on Community Preventive Services. *The Guide to Community Preventive Services: What Works to Promote Health?* New York: Oxford University Press; 2005:91–92. Available at: <http://www.thecommunityguide.org/library/book> (Chapter 2: Physical Activity).

U.S. Surgeon General

U.S. Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 1996. Available at: <http://www.surgeongeneral.gov/library/reports/index.html>.

Other

Stone EJ, McKenzie TL, Welk GJ, Booth ML. Effects of physical activity interventions in youth: review and synthesis. *Am J Prev Med*. 1998;15(4):298–315. Available at: [http://www.ajpm-online.net/article/S0749-3797\(98\)00082-8/abstract](http://www.ajpm-online.net/article/S0749-3797(98)00082-8/abstract).

Strong WB, Malina RM, Blimkie CJ, et al. Evidence-based physical activity for school-age youth. *J Pediatr*. 2005;146:732–737. Available at: [http://www.jpeds.com/article/S0022-3476\(05\)00100-9/abstract](http://www.jpeds.com/article/S0022-3476(05)00100-9/abstract).

Schools and Physical Activity

Action for Healthy Kids. *The Learning Connection: The Value of Improving Nutrition and Physical Activity in Our Schools*. 2004. Available at: <http://www.actionforhealthykids.org/pdf/Learning%20Connection%20-%20Full%20Report%20011006.pdf>.

Bogden JF. *How Schools Work & How to Work with Schools. A Primer for Professionals Who Serve Children and Youth*. Alexandria, VA: National Association of State Boards of Education; 2003.

Burgeson CR. Physical education's critical role in educating the whole child and reducing childhood obesity. *The State Education Standard*. December 2004;27–32. Available at: http://www.aahperd.org/naspe/pdf_files/EducatingtheWholeChild_NASBE.pdf.

Appendix C—References and Resources

Centers for Disease Control and Prevention. Guidelines for school and community programs to promote lifelong physical activity among young people. *MMWR*. 1997;46(RR-6):1–36. Available at: <http://www.cdc.gov/HealthyYouth/physicalactivity/guidelines/index.htm>.

Centers for Disease Control and Prevention. Participation in high school physical education—United States, 1991–2003. *MMWR*. 2004;53(36):844–847. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5336a5.htm>.

Centers for Disease Control and Prevention. *Physical Education Curriculum Analysis Tool (PECAT)*. Atlanta, GA: U.S. Department of Health and Human Services; 2006. Available at: <http://www.cdc.gov/HealthyYouth/PECAT/index.htm>.

Central Washington University—pelinks4u.org staff. Writing a Successful PEP Grant. Available at: http://www.aahperd.org/naspe/template.cfm?template=pep_tips.html.

Connecticut State Board of Education. *Physical Education. A Guide to K-12 Program Development*. Hartford, CT: Connecticut State Board of Education; 2000. Available at: <http://www.sde.ct.gov/sde/cwp/view.asp?a=2618&q=320982>.

Rhiner D. Healthy policies for healthy kids. *The State Education Standard*. December 2004;21–26.

Robert Wood Johnson Foundation and Pyramid Communications. *Healthy Schools for Healthy Kids*. 2003. Available at: <http://rwjf.org/pr/product.jsp?id=15595&topicid=1300>.

Wechsler H, McKenna ML, Lee SM, Dietz WH. The role of schools in preventing childhood obesity. *The State Education Standard*. December 2004;4–12. Available at: http://www.cdc.gov/HealthyYouth/physicalactivity/pdf/roleofschools_obesity.pdf.

Resources for Developing an Evaluation Plan

Association for Community Health Improvement. Planning, Assessment, Outcomes, and Evaluation Resources. Available at: <http://www.communityhlth.org/communityhlth/resources/planning.html>.

Centers for Disease Control and Prevention. CDC Evaluation Working Group. Available at: <http://www.cdc.gov/eval/over.htm>.

Centers for Disease Control and Prevention. Framework for program evaluation in public health. *MMWR*. 1999;48(RR-11):1–40. Available at: <http://www.cdc.gov/mmwr/PDF/RR/RR4811.pdf>.

Centers for Disease Control and Prevention and the University of Texas-Houston Health Science Center. *Practical Evaluation of Public Health Programs*. PHTN course VC-0017 [workbook]. Available at <http://www.cdc.gov/eval/workbook.pdf>.

Issel LM. *Health Program Planning and Evaluation: A Practical, Systematic Approach for Community Health*. Sudbury, MA: Jones and Bartlett Publishers; 2004.

MacDonald G, Garcia D, Zaza S, Schooley M, Compton D, Bryant T, et al. Steps Program: foundational elements for program evaluation planning, implementation, and use of findings. *Prev Chronic Dis* [serial online]. 2006 Jan. Available at: http://www.cdc.gov/pcd/issues/2006/jan/05_0136.htm.

McKenzie TL. *SOFIT (System for Observing Fitness Instruction Time) Overview and Training Manual*. Department of Exercise and Nutritional Sciences, San Diego State University; 2002. Available at: <http://www-rohan.sdsu.edu/faculty/sallis/sofitprotocol.pdf>.

RE-AIM. Overview. Available at: <http://www.re-aim.org>.

Steckler A, Linnan L, eds. *Process Evaluation for Public Health Interventions and Research*. San Francisco, CA: Jossey-Bass; 2002.

U.S. Department of Health and Human Services. *Physical Activity Evaluation Handbook*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2002. Available at: <http://www.cdc.gov/nccdphp/dnpa/physical/handbook/pdf/handbook.pdf>.

Research Articles

Barroso CS, McCullum-Gomez C, Hoelscher DM, Kelder SH, Murray NG. Self-reported barriers to quality physical education by physical education specialists in Texas. *J Sch Health*. 2005;75(8):313–319.

Donnelly JE, Jacobsen DJ, Whatley JE, et al. Nutrition and physical activity program to attenuate obesity and promote physical and metabolic fitness in elementary school children. *Obes Res*. 1996;4(3):229–243.

Dowda M, Sallis JF, McKenzie TL, Rosengard P, Kohl HW III. Evaluating the sustainability of SPARK physical education: a case study of translating research into practice. *Res Q Exerc Sport*. 2005;79(1):11–19.

Dwyer T, Coonan WE, Leitch DR, Hetzel BS, Baghurst RA. An investigation of the effects of daily physical activity on the health of primary school students in South Australia. *Int J Epidemiol*. 1983;12(3):308–313.

Ewart CK, Young DR, Hagberg JM. Effects of school-based aerobic exercise on blood pressure in adolescent girls at risk for hypertension. *Am J Public Health*. 1998;88(6):949–951.

Heath EM, Coleman KJ. Evaluation of the institutionalization of the Coordinated Approach to Child Health (CATCH) in a U.S./Mexico border community. *Health Educ Behav*. 2002;29(4):444–460.

Kelder SH, Mitchell PD, McKenzie TL, et al. Long-term implementation of the CATCH physical education program. *Health Educ Behav*. 2003;30(4):463–475.

McGraw SA, Sellers D, Stone E, et al. Measuring implementation of school programs and policies to promote healthy eating and physical activity among youth. *Prev Med*. 2000;31:S86–S97.

McKenzie TL, Li D, Derby CA, Webber LS, Luepker RV, Cribb P. Maintenance of effects of the CATCH physical education program: results from the CATCH-ON study. *Health Educ Behav*. 2003;30(4):447–462.

McKenzie TL, Nader PR, Strikmiller PK, et al. School physical education: effect of the Child and Adolescent Trial for Cardiovascular Health. *Prev Med*. 1996;25:423–431.

McKenzie TL, Sallis JF, Faucette N, Roby JJ, Kolody B. Effects of a curriculum and inservice program on the quantity and quality of elementary physical education classes. *Res Q Exerc Sport*. 1993;64(2):178–187.

McKenzie TL, Sallis JF, Kolody B, Faucette FN. Long-term effects of a physical education curriculum and staff development program: SPARK. *Res Q Exerc Sport*. 1997;68(4):280–291.

McKenzie TL, Strikmiller PK, Stone EJ, et al. CATCH: physical activity process evaluation in a multicenter trial. *Health Educ Q*. 1994;Supplement 2:S73–S89.

Parcel GS, Simons-Morton BG, Kolbe LJ. Health promotion: integrating organizational change and student learning strategies. *Health Educ Q*. 1988;15(4):435–450.

Sallis JF, McKenzie TL. Physical education's role in public health. *Res Q Exerc Sport*. 1991;62(2):124–137.

Sallis JF, McKenzie TL, Alcaraz JE, Kolody B, Faucette N, Hovell MF. The effects of a 2-year physical education program (SPARK) on physical activity and fitness in elementary school students. *Sports, Play and Active Recreation for Kids*. *Am J Public Health*. 1997;87(8):1328–1334.

Appendix C—References and Resources

Sallis JF, McKenzie TL, Kolody B, Curtis P. Assessing district administrators' perceptions of elementary school physical education. *Journal of Physical Education, Recreation & Dance*. 1996;67(8):25–29.

Sallis JF, McKenzie TL, Kolody B, Lewis M, Marshall S, Rosengard P. Effects of health-related physical education on academic achievement: project SPARK. *Res Q Exerc Sport*. 1999;70(2):127–134.

Simons-Morton BG, Parcel GS, Baranowski T, Forthofer R, O'Hara NM. Promoting physical activity and a healthful diet among children: results of a school-based intervention study. *Am J Public Health*. 1991;81(8):986–991.

Simons-Morton BG, Parcel GS, O'Hara NM. Implementing organizational changes to promote healthful diet and physical activity at school. *Health Educ Q*. 1988;15(1):115–130.

Engaging Communities

Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry Committee on Community Engagement. Principles of Community Engagement. Available at: <http://www.cdc.gov/phppo/pce/index.htm>.

Cohen C, Chávez V, Chehimi S. *Prevention Is Primary*. San Francisco, CA: Jossey-Bass; 2007.

Minnesota Department of Health. Community Engagement. Available at: <http://www.health.state.mn.us/communityeng>.

Public Health Foundation. Action area: identifying and engaging community partners. In: *Healthy People 2010 Toolkit: A Field Guide to Health Planning*. Washington, DC: Public Health Foundation; 2002. Available at: <http://www.healthypeople.gov/state/toolkit/08Partners2002.pdf>.

Public Health Institute's Center for Civic Partnerships. Tips, Tools, and Resources. Available at: <http://www.civicpartnerships.org/toolsRes.htm>.

Assessing Community Health Promotion Needs

Centers for Disease Control and Prevention. National Public Health Performance Standards Program. Available at: <http://www.cdc.gov/od/ocphp/nphpsp>.

Health Canada. *Community Health Needs Assessment: A Guide for First Nations and Inuit Health Authorities*. Ottawa, Ontario: Minister of Public Works and Government Services Canada; 2000. Available at: http://www.hc-sc.gc.ca/fnih-spni/pubs/home-domicile/2000_comm_need-besoin/index_e.html.

National Association of County and City Health Officials and Centers for Disease Control and Prevention. Mobilizing for Action through Planning and Partnerships (MAPP): A Strategic Approach to Community Health Improvement. Available at: <http://www.naccho.org/topics/infrastructure/MAPP.cfm>.

New York State Department of Health. How-To Guide [for community health assessment]. Available at: <http://www.health.state.ny.us/statistics/chac/howto.htm>.

North Carolina Department of Health and Human Services. *Community Assessment Guidebook: North Carolina Community Health Assessment Process*. Raleigh, NC: North Carolina Department of Health and Human Services; 2002. Available at: <http://www.healthycarolinians.org/assess.htm>.

Peterson DJ, Alexander GR. *Needs Assessment in Public Health: A Practical Guide for Students and Professionals*. New York, NY: Kluwer Academic/Plenum; 2001.

Setting Health Priorities

New York State Department of Health. Setting Health Priorities. Available at: <http://www.health.state.ny.us/statistics/chac/priority.htm>.

Partners in Information Access for the Public Health Workforce. Healthy People 2010 Information Access Project. Available at: <http://phpartners.org/hp>.

Public Health Foundation. Action area: setting health priorities and establishing objectives. In: *Healthy People 2010 Toolkit: A Field Guide to Health Planning*. Washington, DC: Public Health Foundation; 2002. Available at: <http://www.healthypeople.gov/state/toolkit/09Priorities2002.pdf>.

Chronic Diseases, Risk Factors, and Related Data

Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System. Available at: <http://www.cdc.gov/brfss>.

Centers for Disease Control and Prevention. Steps Program's Information on Diseases and Risk Factors. Available at: http://www.cdc.gov/steps/disease_risk/index.htm.

Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance System. Available at: <http://www.cdc.gov/HealthyYouth/yrbs>.

McGinnis JM, Foege WH. Actual causes of death in the United States. *JAMA*. 1993;270(18):2207–2212. Available at <http://jama.ama-assn.org/cgi/content/abstract/270/18/2207>.

U.S. Department of Health and Human Services. Healthy People 2010 Data. Available at: <http://www.healthypeople.gov>.

Evidence-Based Guidelines and Systematic Reviews for Selecting Other Interventions

Agency for Healthcare Research and Quality. National Guideline Clearinghouse. Available at: <http://www.guideline.gov>.

Institute of Medicine. Reports by Topic. Available at: <http://www.iom.edu/CMS/2955.aspx?list=topic>.

Task Force on Community Preventive Services. *The Guide to Community Preventive Services: What Works to Promote Health?* New York, NY: Oxford University Press; 2005. Available at: <http://www.thecommunityguide.org>.

The Cochrane Collaboration. The Cochrane Library. Available at: <http://www.thecochranelibrary.com>.

U.S. Preventive Services Task Force. *The Guide to Clinical Preventive Services*. Rockville, MD: U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality; 2008. Available at: <http://www.ahrq.gov/clinic/pocketgd08/pocketgd08.pdf> (refer also to <http://www.ahrq.gov/clinic/cps3dix.htm>).

U.S. Surgeon General. Public Health Reports. Available at: <http://www.surgeongeneral.gov/library/reports.htm>.

Evidence-Based Practice

Anderson LM, Brownson RC, Fullilove MT, et al. Evidence-based public health policy and practice: promises and limits. *Am J Prev Med*. 2005;28(5 Suppl):226–230. Available at: <http://www.thecommunityguide.org/library/gen-AJPM-c-evidence-based-policy-promise&limits.pdf>.

Brownson RC, Baker EA, Leet TL, Gillespie KN. *Evidence-Based Public Health*. New York, NY: Oxford University Press; 2003.

Appendix C—References and Resources

University of Massachusetts Medical School. Evidence-Based Practice for Public Health. Available at: <http://library.umassmed.edu/ebpph/index.cfm>.

Program Planning

Issel LM. *Health Program Planning and Evaluation: A Practical, Systematic Approach for Community Health*. Sudbury, MA: Jones and Bartlett Publishers; 2004.

U.S. Department of Health and Human Services. *Healthy People in Healthy Communities: A Community Planning Guide Using Healthy People 2010*. Washington, DC: U.S. Department of Health and Human Services; 2001. Available at: <http://www.healthypeople.gov/Publications/HealthyCommunities2001/healthycom01hk.pdf>.

University of Toronto Centre for Health Promotion. *Introduction to Health Promotion Program Planning*. Toronto, Ontario: University of Toronto; 2001. Available at: <http://www.thcu.ca/infoandresources/publications/Planning.wkbk.content.apr01.format.oct06.pdf>.

Comprehensive Program Development Resources

Institute of Medicine. *The Future of the Public's Health in the 21st Century*. Washington, DC: National Academies Press; 2002. Available at: <http://www.iom.edu/?id=16741>.

Minnesota Department of Health. Community Health Promotion: Mobilizing Your Community to Promote Health. Available at: <http://www.health.state.mn.us/divs/hpcd/chp/hpkit>.

Prevention Institute. Tools. Available at: <http://www.preventioninstitute.org/tools.html>.

University of Kansas' Work Group for Community Health and Development. Community Toolbox. Available at: <http://ctb.ku.edu>.

Appendix D

Glossary of Selected Terms

This glossary defines several key terms and concepts used within the guide. Throughout the text, words that are listed in this appendix have been *italicized* whenever they are used to alert you that a definition is provided.

Central office—The district superintendent’s administrative and support personnel, such as the *PE coordinator* and director of instruction or curriculum, who help develop and implement school district policies and programs.

Childhood overweight—A body mass index (BMI) at or above the 95th percentile for a child’s age and sex. Although BMI is used to screen for overweight in children and teens, BMI is not a diagnostic tool.

Coordinated school health program—A program with eight interactive components that promotes collaboration between schools, communities, and families to improve student health. The eight components are 1) health education, 2) physical education, 3) health services, 4) nutrition services, 5) counseling and psychological services, 6) healthy school environment, 7) health promotion for staff, and 8) family and community involvement. For working descriptions of these components, refer to <http://www.cdc.gov/HealthyYouth/CSHP>.

Local wellness policy—A school district policy developed to improve student health. In Section 204 of the Child Nutrition and WIC Reauthorization Act of 2004, the U.S. Congress established a requirement that all local education agencies with a federally funded school meals program develop and implement wellness policies by the start of the 2006–2007 school year. This local wellness policy must include goals for nutrition education, physical activity, and other school-based activities that are designed to promote student wellness; plans for implementing and evaluating the policy; and involvement of parents, students, representatives of the school food authority, the school board, school administrators, and the public (in the form of a *school health advisory council*, for example).

Moderate-to-vigorous physical activity (MVPA)—Physical activity is any body movement produced by large muscle groups that results in expenditure of energy. Moderate-to-vigorous physical activity specifically refers to an activity that increases your heart rate and makes you breathe hard some of the time (e.g., swimming, jogging, dancing).

PE coordinator—A district administrator in the superintendent’s *central office* who manages and directs a school district’s physical education program.

PE specialist—An educator who holds a degree in PE and is licensed or certified by the state’s department of education to teach in this content area.

Physical fitness—A measure of one’s ability to perform physical activity, determined by a combination of regular physical activity and genetics. Overall fitness is made up of five main components: 1) cardiorespiratory endurance—the ability of the body’s circulatory and respiratory systems to supply fuel during sustained physical activity, 2) muscular strength—the ability of the muscle to exert force during an activity, 3) muscular endurance—the ability of the muscle to continue to perform without fatigue, 4) body composition—the relative amount of muscle, fat, bone, and other vital parts of the body, and 5) flexibility—the range of motion around a joint. For further information, refer to <http://www.cdc.gov/nccdphp/dnpa/physical/components>.

School health advisory council (SHAC)—A group of school and community members that advises schools or the school district on development of policies (such as a *local wellness policy*) and programs relating to student health. Depending on the state, members may be selected through appointment, election, or volunteering. Many states mandate that every school system establish a SHAC; if mandated, states are usually very specific about a SHAC’s responsibilities and structure.

Appendix D—Glossary of Selected Terms

SOFIT (System for Observing Fitness Instruction Time)—SOFIT is an objective tool for assessing the quality of physical education instruction. It is a comprehensive system that provides a measure of student activity levels, lesson context, and teacher behavior during class time. SOFIT involves the direct observation of lessons by trained observers. For further information, refer to the SOFIT Overview and Training Manual at <http://www-rohan.sdsu.edu/faculty/sallis/sofitprotocol.pdf>.

School-Based Physical Education: Working with Schools to Increase Physical Activity Among Children and Adolescents in Physical Education Classes—An Action Guide

Partnership for Prevention® would like to hear from you about this Action Guide. Please help us improve this tool by filling out this form and faxing it back to us at (202) 833-0113, or by providing your feedback online at <http://www.prevent.org/actionguides>.

User Feedback Form

1. Please rate how much you agree with the following statements:

- | | | | |
|---|------------------------------|-----------------------------------|-----------------------------|
| a) Information within this Action Guide is easy to understand | <input type="checkbox"/> Yes | <input type="checkbox"/> Somewhat | <input type="checkbox"/> No |
| b) Information within this Action Guide is easy to find | <input type="checkbox"/> Yes | <input type="checkbox"/> Somewhat | <input type="checkbox"/> No |
| c) Boxes marked with hurdler and light bulb icons provide practical and useful additional information | <input type="checkbox"/> Yes | <input type="checkbox"/> Somewhat | <input type="checkbox"/> No |
| d) I will use this Action Guide to help improve my community's health | <input type="checkbox"/> Yes | <input type="checkbox"/> Maybe | <input type="checkbox"/> No |
| e) I would recommend this Action Guide to others | <input type="checkbox"/> Yes | <input type="checkbox"/> Maybe | <input type="checkbox"/> No |

Comments (continue on back if necessary):

2. Is there any other information that you would like to have seen included in this Action Guide to assist with implementation? Yes (please describe below; No continue on back if necessary)

3. Which best describes your work setting? Nonprofit For profit]

- Federal/State/Local Government Agency Healthcare Setting Community Organization
- Academic Other (please specify) _____

4. What is your position? _____

5. How did you hear about this Action Guide? (check all that apply)

- Word of mouth Newsletter Web site Conference Direct Mailing Other

(please specify for all checked items) _____

6. May we contact you for additional feedback? If yes, please provide information below.

Name: _____ Daytime Phone Number: _____



Shaping Policies • Improving Health

