

Roles and Strategies of State Organizations Related to School-Based Physical Education and Physical Activity Policies

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School-based physical education (PE) and physical activity (PA) policies can improve PA levels of students and promote health. Studies of policy implementation, communication, monitoring, enforcement, and evaluation are lacking. To describe how states implement, communicate, monitor, enforce, and evaluate key school-based PE and PA policies, researchers interviewed 24 key informants from state-level organizations in 9 states, including representatives from state departments of health and education, state boards of education, and advocacy/professional organizations. These states educate 27% of the US student population. Key informants described their organizations' roles in addressing 14 school-based PE and PA state laws and regulations identified by the Bridging the Gap research program and the National Cancer Institute's Classification of Laws Associated with School Students (C.L.A.S.S.) system. On average, states had 4 of 14 school-based PE and PA laws and regulations, and more than one-half of respondents reported different policies in practice besides the "on the books" laws. Respondents more often reported roles implementing and communicating policies compared with monitoring, enforcing, and evaluating them. Implementation and communication strategies used included training, technical assistance, and written communication of policy to local education agency administrators and teachers. State-level organizations have varying roles in addressing school-based PE and PA policies. Opportunities exist to focus state-level efforts on compliance with existing laws and regulations and evaluation of their impact.

KEY WORDS: communication, physical activity, physical education, policy evaluation, policy implementation

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Approximately one-third of American adolescents are unfit, failing to meet nationally recommended standards for cardiorespiratory fitness.¹ Cardiorespiratory fitness, which has been associated with academic performance during childhood and adolescence^{2,3} and a better cardiovascular health profile and reduced cardiovascular disease in adulthood,⁴ may be a benefit of some school physical education (PE) programs.⁵ In the United States, 42% of children and 8% of adolescents achieve national recommendations for adequate physical activity (PA),⁶ an important correlate of fitness.¹ To address these deficiencies in activity levels, researchers suggest increasing time in PE programs for school children, providing PE curricula that increase the amount of time spent in moderate and vigorous PA, and providing trained teachers to implement the curricula.⁷

School administrators are concerned about the lack of PA among students,⁸ and policy makers are taking action⁹ to increase the proportion of school children who attend schools that offer PE and require regularly scheduled recess by 2020.¹⁰ However, nationally, the proportion of children participating in PE in middle school or high school is stagnant.^{8,11} The proportion of middle school students taking PE has remained at about 90% since 2007,⁸ and national estimates suggest much lower rates (~50%) among high school students,^{8,11} with no improvement over the last decade.¹¹ In 2006, only 4% of elementary, 8% of middle, and 2% of high schools nationally required daily PE for students.¹²

State legislatures, education agencies, and local education authorities have authority over policy in educational settings and therefore the opportunity to use policy to improve the quantity and quality of PE class time and the fitness and PA levels of students. Nationally, schools in states with specific laws and requirements for time spent in PE report providing more time in PE in elementary and middle school grades than states that have no such law or less specific requirements.¹³ Students attending schools in states with unit requirements for PE are more likely to participate in PE classes than students in states without these requirements.¹⁴ While explicit state policies are important, practices to promote implementation at the local school district and individual school levels also play a critical role.^{5,15,16} Factors including pressure for improved academic performance, lack of specific plans for implementation, difficulty in monitoring for compliance,¹⁷ and whether or how policy requirements are communicated¹⁶ may dictate how *and* whether specific PE policies are implemented. The strategies and mechanisms that state agencies and organizations use to put into effect specific policies are important components of policy implementation.¹⁸ In this study, we describe themes related to the processes and activities that state agencies and relevant partner organizations

use to implement, communicate, monitor, enforce, and evaluate key state PE and PA policy components.

● Methods

Setting and participants

Nine states were selected for the study on the basis of location and access to informants by the study investigators. With a target goal of 3 respondents per state in state boards of education and Departments of Education, Public Health, and Coordinated School Health, potential key informants were identified through the Internet searching and referrals and recruited via e-mail according to a standardized script. Researchers contacted 38 potential key informants. Eight declined (eg, not the appropriate person, too busy) and 6 did not respond. Researchers interviewed 24 informants (average 3 per state, range 2-4), including representatives from departments of health (n = 2), education (n = 14), state boards of education (n = 4), and advocacy/professional organizations (n = 4). A representative of the state department of education was interviewed in each state.

Measures

Student demographic data were gathered from the National Center for Education Statistics Web site (<http://nces.ed.gov/>). Common Core of Data 2009-2010 school-level data were obtained and summarized for each state.

Researchers summarized existing data on state laws and regulations addressing 14 nationally recommended^{19,20} school-based PE and PA policies into a state-specific policy summary sheet, using data describing state codified (“on the books”) laws and regulations from the Robert Wood Johnson Foundation-supported Bridging the Gap research program at the University of Illinois at Chicago²¹ and the National Cancer Institute’s Classification of Laws Associated With School Students (C.L.A.S.S.) Web site.²² The Bridging the Gap researchers used a standardized tool^{23,24} to analyze and code state laws and regulations addressing the school-based PE and PA environments, effective as of the beginning of school year 2009-2010. The National Cancer Institute researchers used the PE and Recess State Policy Classification System (PERSPCS)²⁵ to classify state codified laws and regulations related to PE and PA as of 2008.

Interview protocol and data collection

Researchers developed an interview protocol to examine how state-level codified PE/PA policies were

implemented or put into action, *communicated* to local stakeholders, *monitored* for intended implementation, *enforced* or ensured of compliance, and *evaluated* for intended impact on school- or student-level outcomes. The interview consisted of 22 core questions asked of all respondents. Each key informant was provided a summary of the research study, a PE/PA policy definitions sheet, and a state-specific policy sheet identifying the PE/PA policy components addressed in his or her state for school year 2009-2010. After giving verbal consent to participate in the study, each participant reviewed the state-specific policy component sheet before beginning the core interview questions. Interviews were conducted either in person (N = 5) or by phone (N = 19) between September and December 2011. Interviews were audio recorded with the consent of the respondent. Institutional review boards at all participating institutions approved the protocol.

Analysis

Each recorded interview was professionally transcribed and reviewed by interviewers, and detailed notes were written when the participant declined to be audio recorded (N = 1). Codes were developed on the basis of review of a sample of transcripts. New codes were added during the coding process as necessary. All transcripts were reviewed by 2 independent coders; 1 coder reviewed all transcripts. Codes were compared, and discrepancies were resolved by a third coder. Qualitative themes were developed on the basis of review of the transcripts.

● Results

The study sample comprised 9 states and 27% of the US 2009-2010 school year student population. Half (50%) of the students in these states were eligible for free or reduced price lunch, and 56% were of nonwhite race/ethnicity (14% black, 32% Hispanic/Latino, 7% Asian, and 3% other or multiple race/ethnicity). Students in these states represented a mix of urban and rural settings, with 35% attending schools in urban settings (Supplemental Digital Content Table available at: <http://links.lww.com/JPHMP/A22>).

On average, participating states had 4 of 14 PE and PA policies (range, 2-10). All states had policies requiring PE for every grade level and a competency assessment in PE (Table 1). More than one-half (n = 14) of key informants reported different policies in practice for at least 1 component of their state's PE or PA policy after reviewing the state-specific summary sheets on existing policies presented during the interview process. Key themes, grouped by question topics, emerged from interviews as follows (Table 2).

Implementation

In response to questions about policy implementation or "putting a policy in action," state Departments of Education were identified in all states as the agency responsible for implementation of many of the policies related to PE or PA. However, in 7 states, informants indicated that implementation of PE happened at local levels, including regional or local education agencies, school districts, or at schools themselves. For example, 1 informant suggested that implementation is "... done like an umbrella, the Department of Education is over everyone, and then it varies from district to district. So it's kind of more on a local level... schools within the district would actually be different." The types of support provided for implementation of policies primarily included communication about requirements, standards, policies, and resources; professional development; and technical assistance when requested.

Communication

Most respondents reported some role in communicating policies, with Departments of Education identified as being the agency responsible for key communication activities in all 9 states. State PE professional organizations and advocacy groups also played roles in communication. Specific communication roles often included provision of technical assistance and communication of requirements, standards, and best practices. Professional development events were described as opportunities for communicating about policy in 8 states. Information about policies was most commonly communicated not only through Web sites and workshops but also through e-mail, webinars, stakeholder groups, listservs, and mass media. In some instances, the Department of Education was also a source of information about programmatic implementation for policy makers and state board members.

Monitoring and enforcement

Respondents were queried about agency roles in monitoring whether policies were being implemented as intended and enforcement efforts to ensure that local education agencies abided by policies. The most common monitoring method, reported among 6 of the 9 states, was to review documents provided by schools or school districts. Reported monitoring schedules varied. In 6 states, monitoring was conducted on a schedule ranging between 1 and 5 years. Other monitoring strategies included the collection of data (n = 6 states), sometimes in response to complaints, and performance of on-site reviews (n = 4 states). In practice, when established monitoring strategies were present,

TABLE 1 ● State Policy Status for 14 PE and PA Policies, Among Sample States as of 2009-2010 School Year

Physical Education and Physical Activity Policy	State Policy Addressed ^a									
	California	Colorado	Illinois	Kansas	Louisiana	Maine	Massachusetts	North Carolina	West Virginia	
1: PE curriculum or program for every grade	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2: PE instruction time	✓				✓			✓	✓	
3: PE curriculum addresses knowledge, skills, and fitness ^b	✓		✓		✓	✓		✓	✓	
4: PE assessment required for students	✓	✓	✓	✓	✓	✓	✓	✓	✓	
5: PE teacher certification	✓	✓	✓					✓	✓	
6: PE teacher professional development	✓									
7: Class student-teacher ratios for PE	✓				✓			✓	✓	
8: PE facilities provisions	✓				✓				✓	
9: Moderate-to-vigorous activity in PE	✓				✓			✓	✓	
10: Substitutions/exemptions from PE					✓					
11: PA provided for every grade		✓		✓				✓	✓	
12: Amount of time required for PA					✓			✓	✓	
13: PA throughout the school day					✓			✓	✓	
14: Daily recess for elementary students	✓							✓	✓	

Abbreviations: PA, physical activity; PE, physical education.

^a Check mark indicates that state had any policy addressing at least 1 grade level for the policy noted. From Bridging the Gap Research Program,²¹ except as noted.

^b From National Cancer Institute, Classification of Laws Associated With School Students (C.L.A.S.S.), PE and Recess State Policy Classification System (PERSPCS).²²

TABLE 2 ● Interview Themes Regarding State Physical Education and Physical Activity Policy**Implementation: putting a policy into action**

- At the state level, departments of education play a key role in implementation
- Implementation of physical education activities can also be determined locally
- Supports for policy implementation included communication about requirements, standards, policies, and resources; and professional development and technical assistance provision

Communication: informing stakeholders of policy requirements and implementation guidelines

- At the state level, departments of education play a key role in communication activities
- Communication opportunities included required and optional professional development
- Methods of communication about policy included via Web sites, workshops, e-mail, webinars, stakeholder groups, and mass media

Monitoring and enforcement: assessing whether policies are implemented as intended and ensuring that local entities abide by policies

- Monitoring and enforcement were often considered as linked activities in "best practice"
- Monitoring was commonly done via self-report or document review as part of overall program monitoring activities or in response to complaint or inquiry
- Enforcement authority and consequences of noncompliance were weak in some states

Evaluation: determining whether a policy is impacting outcomes as intended

- State agencies infrequently reported a role in evaluation due to resource constraints or competing issues
- Collaboration with partners and outside funding resources may support more evaluation
- Specific measurement strategies (eg, FitnessGram) supported evaluation activities

monitoring and enforcement were tightly linked. Efforts varied across states on the basis of resources and requirements. For example, 1 respondent noted: "... we really only monitor if there's any sort of questions or complaints. We really don't have the staff to do a very in-depth monitoring of everything that's going on." While in another state, the informant described established procedures: "... we do a document review online and then for those districts chosen for on-site monitoring we actually go on-site to confirm that the documentation provided is accurate."

Most respondents reported no role in enforcement. However, Department of Education respondents reportedly had a role in enforcement in all 9 states. Regional or local education agencies were also responsible for enforcement in 5 states. Respondents reported that no consequences were imposed on schools or districts found out of compliance with existing policy (n = 5 states), or else noncompliant schools or districts were required to submit a plan to achieve compliance with the policy (n = 4 states). Respondents identified reviewing compliance or corrective action plans and reporting noncompliance to state boards or legislatures as frequent enforcement methods (n = 5 states). As 1 informant noted, "... we have plenty of policy. Our issues are implementation of policy... We try to monitor and provide assistance, but there's really no teeth in some of the policies, no consequences..."

Evaluation

Informants also reported on their role in evaluating policies, specifically about the processes their organi-

zations used to determine whether a policy was impacting PE or PA in the way it was intended. Frequently, respondents reported no role in evaluating policies and no policy evaluation activities occurring in their state, sometimes citing lack of personnel or funding. Some respondents noted that evaluation was not a priority for their state because the PE program was not part of state-mandated testing, performance measures, or standards. A common theme was illustrated by 1 respondent: "... we used to actually have a state testing for [PE], but we dropped that because of funding issues... we kind of lost all means of evaluation."

In some instances, program evaluation was reportedly conducted by and/or in collaboration with outside partners, including funded evaluation research teams. Respondents' roles in evaluation included reviewing and communicating results of evaluation projects conducted by other organizations (n = 7 states). Four states used fitness assessments such as FitnessGram to measure student outcomes. One respondent described how his or her state made evaluation results more tangible:

... the Department of Education collects [FitnessGram] data per school and that is compiled into a yearly report that we post on our website that has each school's score, each county's score and what the state score is. So a school can match up how they did in relationship to their county and the state.

● Discussion

Key informants reported multiple supportive policies and practices to promote implementation of PE and PA

policies. State Departments of Education were often key players in implementation, communication, monitoring, and enforcement of PE and PA-related policies. Partnerships, collaborations, or coalitions across state agencies and organizations were described within the domains of communication and evaluation of policies. Information about policies was communicated through multiple channels and often accompanied professional development opportunities. Electronic modes were standard communication practices, with e-mail, webinars, and Web sites some commonly noted mechanisms for sharing PE and PA policy information. Monitoring and enforcement emerged as linked activities in states that had comprehensive plans or standards for them. Otherwise, enforcement authority and subsequent consequences for schools or districts found to be out of compliance were described as weak or nonexistent.

Professional development opportunities and electronic media were reported here, as in prior studies,¹⁶ as common channels for communication. In some states participating in this study, implementation of PE and PA policies happened locally (ie, "local control"²⁶), suggesting the need for local communication and implementation plans. Research suggests that the method of communicating policy requirements may impact how and whether specific policies are implemented.¹⁶ Departments of Education served as a source of information for policy makers and state board members and as a resource for examples of successful local implementation. Bi-directional processes of information transfer, which have been shown to contribute to effective program transfer,²⁷ may help bridge disjuncture between state and local practitioners.

As reported elsewhere, factors, such as lack of specific plans for implementation, difficulty in monitoring for compliance,¹⁷ and competing priorities including academic performance^{17,28,29} and staffing considerations,^{15,29} were also described as barriers in the states in this study. Staffing and funding shortages emerged as important obstacles to implementation of compliance monitoring and evaluation, in particular. State agencies responded to these shortages both reactively, by "responding to inquiries," and sometimes proactively, by securing outside funding, monitoring districts and schools on a cyclical basis, and partnering with other state programs. Each of these strategies allows for more accountability and monitoring of policy implementation but differs in sustainability over time. Greater compliance with existing policy has been linked with beneficial student fitness levels.⁵

Here, key informants described the mechanisms and techniques used by state-level stakeholders involved in the implementation of PE and PA policies, an important component of public health law research.¹⁸ Dif-

ferential interpretation of existing policy was perhaps due to differences in interpretation of what formal laws and regulations exist compared with policies the states are implementing in practice. This distinction is important for evaluation and compliance efforts. This study described perspectives of state agencies and organizations but not those of key stakeholders at other levels of educational administration who may hold different views and may play primary roles in how and whether PE and PA policies are implemented.¹⁷

States have an opportunity to positively impact PA levels of students and improve health. Supportive school-based PE and PA policies, a formal PE program with adequate frequency, trained teachers, and curricula that ensure sufficient active time are all recommended approaches,⁷ many of which were in place in some form in the states included in this study. The critical next steps include ensuring that existing policies are communicated effectively and implemented successfully with strategies to monitor, enforce, and evaluate their impact.

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