

**The Maine Prevention Research Center**  
*A Program of the Maine CDC, Harvard School of Public Health Prevention Research Center, and the  
Center for Community and Public Health at the University of New England*

**Physical Education and Physical Activity in Schools Case Study**  
**Final Report**  
**August 1, 2011**

**Overview**

The purpose of this case study is to enhance our understanding of how a Maine elementary or middle school might succeed in implementing 150 minutes of physical education (PE) per week.

The domains explored included:

1. Current PE practices:
  - o What is being taught by PE teachers such as a focus on lifelong physical activity
  - o How are students being assessed
  - o How is data collected and used
  - o How many minutes of PE are taught
2. Current physical activity opportunities/practices
3. Current sports opportunities/practices
4. What makes current level of PE possible
  - o Leadership/PE champions
  - o Resources
  - o Infrastructure
  - o Process of change
  - o Any others?
5. What may be needed to improve current levels of PE even more

**Method**

The Maine Dept. of Education PE Consultant, Jayne Chase, and Maine CDC PAN Healthy Weight Program Manager, David Crawford were consulted to help choose middle or elementary schools known to have exceptional physical education and/or physical activity programs. Three sites were selected – one middle school and two elementary schools.

Interviews were conducted by a trained research assistant in person or, in one case, by phone with the principal, school health coordinator and a PE teacher. Interview responses were recorded, transcribed and summarized in tabular form according to themes.

**Results**

The results are compiled into two tables. The first includes the school characteristics and their physical activity and physical education practices and programs. The second table includes the leadership, resources and infrastructure that were needed to make changes.

**Table 1. School Characteristics and Activities**

| <b>School</b>                                  | <b>Characteristics</b>                        | <b>Physical Education</b>                                                                                                                                                                              | <b>Physical Activity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Other</b>                                                                                                                                                        |
|------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mountain Valley Middle School<br>RSU10, Mexico | 305 students<br><br>74% free or reduced lunch | 50 min 4 times per week<br><br>100% participation<br><br>Activities include traditional (eg. volleyball) and new (eg. Wii, biking, snowshoeing)<br><br>Fitnessgram, heart rate monitors, student goals | 10 min. “choice” time after lunch (e.g. walk, shoot baskets)<br><br>Teachers take students outside (action based learning)<br><br>Open gym in morning supervised by principal and assistant principal                                                                                                                                                                                                                                                                                                                                                                                        | Fitness room (PEP grant)<br><br>Staff use fitness room during planning period (role models)                                                                         |
| Oxford Hills Elementary School<br>SAD17        | 346 students<br><br>61% free or reduced lunch | 1x per week 40 minutes<br><br>Focus on getting heart rates up and crossing midline<br><br>President’s Fitness Challenge in grade 4-6<br><br>Use data for monitoring obesity rates                      | “Spark Time” 3 days a week in 3 <sup>rd</sup> grade (PE teacher, School Health Coordinator, classroom teachers)<br><br>Pedometers for teachers to use; teachers take students out during class<br><br>Yoga for 1 <sup>st</sup> grade; 4 <sup>th</sup> grade does mile run with PE teacher; grades K&1 have extra recess<br><br>Walking program at recess<br><br>Developing “meaningful” recess for grades 5 & 6, especially for girls who are generally not active at recess (e.g. walking program; menu of 3 or 4 activities to choose from; teachers sign up to share “recess coach” role) | Staff development regarding enhanced heart rate=brain development=increased student learning<br><br>Principal walks with kids who are sent to office for discipline |
| Pittston Community School<br>MSAD11            | 180 students<br><br>44% free or reduced lunch | 1x per week 40 minutes<br><br>Children Moving curriculum (George Graham)                                                                                                                               | Spark program grade 3-5 by classroom teachers 3x per week for 20 minutes<br><br>Take Time and Brain Gym for K-2 – 10-15 minute spurts of activity throughout the day<br><br>30 minute recess plus 10 minutes in the morning unstructured<br><br>Walking school bus one day a week<br><br>After school physical activity club – 30 minutes twice a week                                                                                                                                                                                                                                       | Most Take Time minutes in the district                                                                                                                              |

**Table 2. Keys to Change**

| <b>School</b>                  | <b>Leadership</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Resources/ Infrastructure</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Other Factors</b>                                                                                                                                                                                                                                                                                             |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mountain Valley Middle School  | <p>School leaders envisioned health and physical fitness as an identity for the school</p> <p>SHC and administrators worked together – advocate for physical activity as a district priority</p> <p>PE teachers are champions</p> <p>Principal provides leadership and support – organizes schedule to make PE possible</p> <p>Strong wellness policy by School Health Advisory Council adopted by the new RSU</p> <p>School Board and Superintendent support coordinated school health plan</p> <p>“Systemic buy-in”—custodians help maintain equipment; IT troubleshoots programs; etc.etc.</p> | <p>2004, 2008 PEP grants resulted in \$1.2 million for equipment purchases, fitness room and professional development</p> <p>2 PE teachers</p> <p>Community resources such as Black Mountain Ski area and Greater Rumford Community Center plus land fields and water access</p> <p>Full size gym with curtain so two activities can be going on at the same time</p> <p>Space for fitness room and equipment including kayaks, canoes and bikes</p> <p>Nice showers and towels available for students after PE</p> | <p>SHC wrote grants</p> <p>Scheduling change required to have 4 days a week meant PE classes were larger but with 2 PE teachers working together it was a good trade off</p> <p>Showed teachers the research to make the case for 200 minutes of PE – physical activity benefits students and helps teachers</p> |
| Oxford Hills Elementary School | <p>PE teacher, principal and SHC are key leadership team</p> <p>PE teacher is champion for physical education</p> <p>Principal encouraged Spark as a response to teachers with a challenging class</p> <p>Principal led change as part of mandated school improvement plan</p> <p>District PE head is helpful in finding resources and very supportive</p>                                                                                                                                                                                                                                        | <p>Good outside space and fields</p> <p>Grant money used for snow shoes</p> <p>Curriculum coordinator bought heart rate monitors and pedometers as a way to connect physical activity and classroom learning</p> <p>Organizing teacher duties for meaningful recess requires careful planning and scheduling</p> <p>Bryant Pond 4-H Outdoor Center utilized to promote life-long physical activity</p>                                                                                                              | <p>Track NWA test scores and discipline for Spark classrooms</p> <p>Looking for grant for after school program and equipment</p>                                                                                                                                                                                 |
| Pittston Community School      | <p>Principal works with teachers to schedule physical activity time; led effort to revamp PE curriculum to make more substantive</p> <p>SHC is a resource to classroom teachers; works with PE teacher; TA on fitness measures</p> <p>Leadership and framing of changes makes a difference when teachers are asked to do more</p> <p>Teacher is doing a masters degree and studying brain research -- brings information to staff meetings</p>                                                                                                                                                    | <p>Costs were minimal—PTA and some other grants</p> <p>Had dedicated professional development time to learn about Spark.</p> <p>Creatively use space because gym is also cafeteria and music room eg. Classroom becomes an obstacle course; use hallways</p> <p>Teachers are willing to staff after school program</p>                                                                                                                                                                                              | <p>As a result of 40 minutes of PA/PE every day with challenging 5<sup>th</sup> grade class saw improved behavior and academics</p> <p>After school club is a benefit to parents – it’s affordable after school care</p>                                                                                         |

### **Other findings**

- A School Health Coordinator is an important resource for bringing in good ideas from other school districts.
- Principals are critical in leading teachers, adjusting schedules and leading by example.
- Middle and elementary schools will need to have different approaches.
- Connection between physical activity and academic performance and discipline is key to buy-in by everyone in the school.
- Costs associated with incorporating physical activity in the elementary school level is very low.
- Starting with a behaviorally challenging classroom or school is a good way to get buy-in because teachers/administrators are looking for a solution and willing to give physical activity a try.
- These schools view a healthy environment as a priority.

### **Recommendations for Pilot Sites**

Successful schools demonstrated some or all of the following:

- A school health coordinator
- Engagement in multiple activities to create a healthy school environment (e.g. Take Time, Spark or Brain Gym program, healthy school nutrition offerings, after school physical activity programs, PEP grant recipient, walking program, etc.)
- A PE teacher who is seen as a champion for PE/PA school-wide
- The principal has a passion for physical activity and one or two other staff that have the same passion (leadership team)
- Will commit time to classroom teacher professional development on the connection between physical activity and learning as well as PE teacher professional development
- Has and uses data to help improve programs and/or help students set personal goals (e.g. Fitnessgram, BMI classifications, etc.)
- School is connected to community resources to help expand offerings
- Has a strong school wellness policy around PA/PE that is supported by superintendent and school board

### **Interviews**

May 9, 2011

**Pittston Consolidated School, Pittston, Maine**

Shelly Simpson, Principal

Tara Marble, School Health Coordinator

Beth Mazerole, PE Teacher (by phone)

May 20, 2011

**Mountain Valley Middle School, Mexico Maine**

Ryan Casey, Principal

Kathy Sutton, School Health Coordinator

Elaine Michaud, PE teacher

May 27, 2011

**Oxford Hills Elementary**

Kim Ramharter, Principal

Pat Carson, School Health Coordinator

Emily Ellis, PE teacher

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