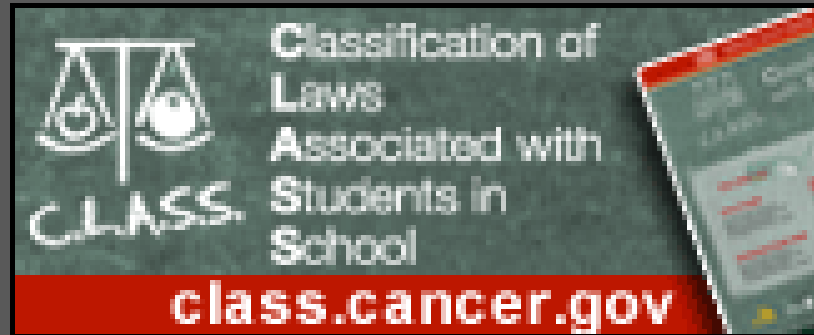


Classification of Laws Associated with School Students (C.L.A.S.S.): Linking PE Law with Practices in Public Schools



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Childhood Obesity Tracks Into Adulthood

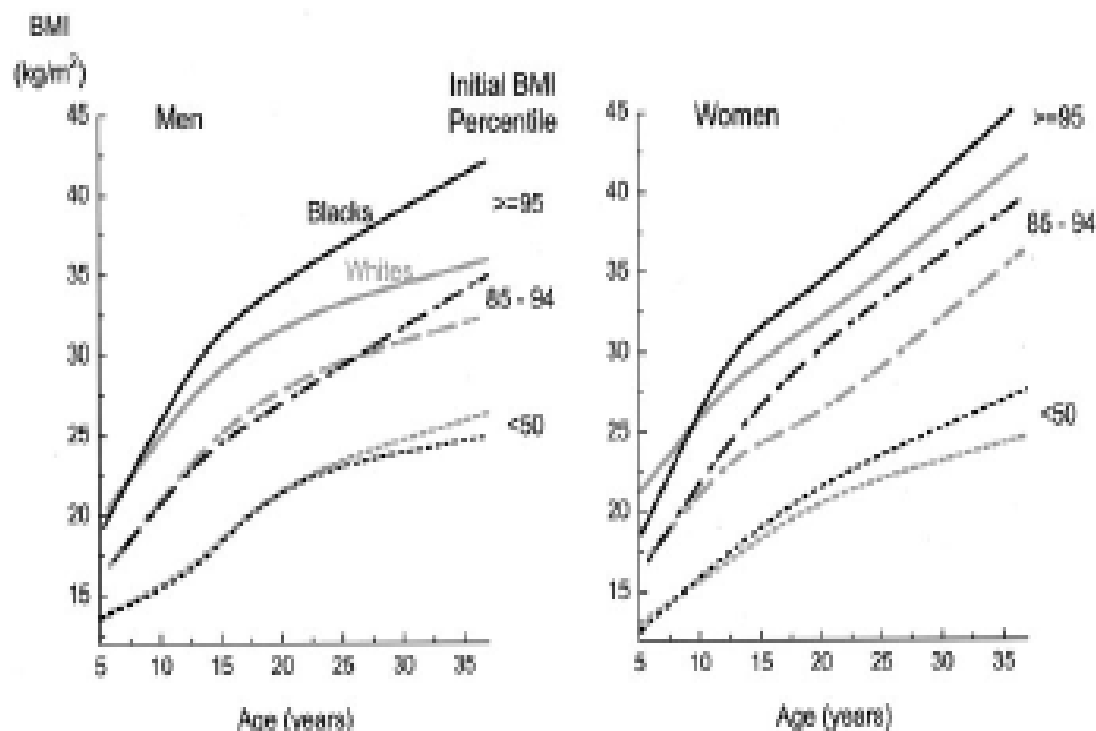


Figure 1: Predicted levels of BMI by age, categorized by race and initial BMI-for-age level. Within each category of initial BMI, the relation of age to BMI was estimated using LME in S-Plus to account for the repeated, longitudinal measurements. Estimated BMI levels at various ages are represented by the black (black participants) or gray (white participants) lines. Solid lines represent children whose initial BMI was ≥ 95 th percentile; dot-dashed lines, 85th to 94th percentiles; dotted lines, < 50 th percentile.

Backdrop: Physical Education Policy

- **Low engagement in regular physical activity**
- **Sedentary activity Increasing**
- **Increased risk factors for chronic disease among school-aged children**

- **Economic situation imposing restraints on school resources**
- **Despite recent reports, PE questioned in relation to academic achievement**

Backdrop: Physical Education Policy

- **Standards for PE exist (e.g., NASPE)**
- **States do not uniformly adopt standards: Policy**
 - **Codified into Law vs. Informal policy**
- **State law sets the floor on the stringency of standards for districts and their schools**
- **Is stringency of state law associated with practices in districts in schools?**



Classification of **L**aws **A**ssociated with **S**chool **S**tudents

Measure the extensiveness of state codified law related to School Physical Education and Nutrition

State codified laws as of December 31, 2003 are compiled, independently coded, and tracked annually through 2008 and biannually thereafter

Topic areas based on consensus recommendations from an Expert Panel, review of published literature, and key documents

Coding based on IOM standards (Nutrition) and NASPE guidelines (PE)

PERSPCS: Physical Education-Related State Policy Classification System

- **State codified law (statutes and regulations)**
 - **Time allocated for PE**
 - Curriculum standards
 - Teacher Qualifications
 - Assessment of Health-related fitness
 - Recess

Publically available

- *<http://class.cancer.gov>*

Purpose

To determine if schools within states with relatively more stringent PE-related laws actually implement more PE-time.

To derive nationally representative estimates of PE Time in schools as a function of a states codified law (i.e., PERSPCS classification)

Hypothesis

Schools within states with higher PERSPCS PE-Time scores would allocate more PE-time than schools within states with relatively lower PERSPCS scores.

Methods

- ❖ Secondary data analysis of PERSPECS and SHPPS (School Health Policy and Programs Survey) data sets
 - PERSPECS Score (2005)
 - State Law regarding public School PE policy
 - SHPPS School level data (*public schools*) 2006
 - School practices (minutes of physical activity)
 - School demographic characteristics: size, urbanicity, poverty level

School Health Policies and Programs Survey (SHPPS)

- The Centers for Disease Control and Prevention (CDC) periodically conducts the (SHPPS)
 - School District, School and Classroom level data policies and practices related to nutrition and physical education (PE)
- 2006 SHPPS School data will be used in this analysis.
 - Nationally representative sample of public and private elementary, middle, and high schools.
 - School-level data were collected by computer-assisted personal interviews with designated faculty or staff respondents.
 - Respondents had primary responsibility for or were the most knowledgeable about the school health program component being studied.
 - Questionnaires designed to describe school-level policies and practices specific to each school health program components (including physical education), with an emphasis on practices.

PERSPCS Classification

PERSPECS Score	PE Required	Minimum PE minutes	School Level
5	yes	225	HS/MS
		150	ES
4	Yes	150	HS/MS
		90	ES
3	Yes	90	HS/MS
		60	ES
2	Yes	nonspecific<90	HS/MS
		nonspecific<60	ES
1	Recommend	Variable	HS/MS
	Recommend	Variable	ES
0	NO	NO	HS/MS
			ES

PERSPCS Classification Recode

PERSPEC Score	RECODE	PE Required	Minimum PE minutes	School Level
5	Require/ Specific	yes	225	HS/MS
4	Require/ Specific	Yes	150	ES
3	Require/ Specific	Yes	90	HS/MS
2	Required/ Non-Specific	Yes	nonspecific<90 nonspecific<60	ES
1	Not Required	No	Variable Variable	HS/MS ES
0	Not Required	No	No	HS/MS ES

SHPPS Measures

- **Dependent Variable – Time spent in PE**
 - SHPPS Questions:
 - How many **weeks** during the school year are _____ graders scheduled to take physical education?
 - On average, how many **days** per week are the _____ graders scheduled to take physical education?
 - On average, how many **minutes** is each session of physical education scheduled to last?
 - **Time = Weeks x Days x Minutes / 36 weeks**

Covariates

Coding for each SHHPS School (Provided)

- Urbanicity
 - Urban
 - Rural
- Poverty
 - Low
 - High
- Size
 - Small
 - Large

School Characteristics (N = 410)

	Elementary (n = 145) %	Middle (n = 131) %	High (n = 134) %
Urbanicity	73.8	67.2	64.7
Poverty (high)	53.8	59.5	59.4
Size (large)	58.6	73.3	72.2
PE-Law PERSPCS			
No Requirement	11.7	9.9	
Nonspecific Retirement	61.4	67.9	85.0
Specific Retirement	26.9	22.1	15.0

*2006 SHPPS Public Schools (N = 723); 410 provided PE Time data;
States not in SHPPS: DE, HI, MS, NV, RI, SD, UT, WY (DC)*

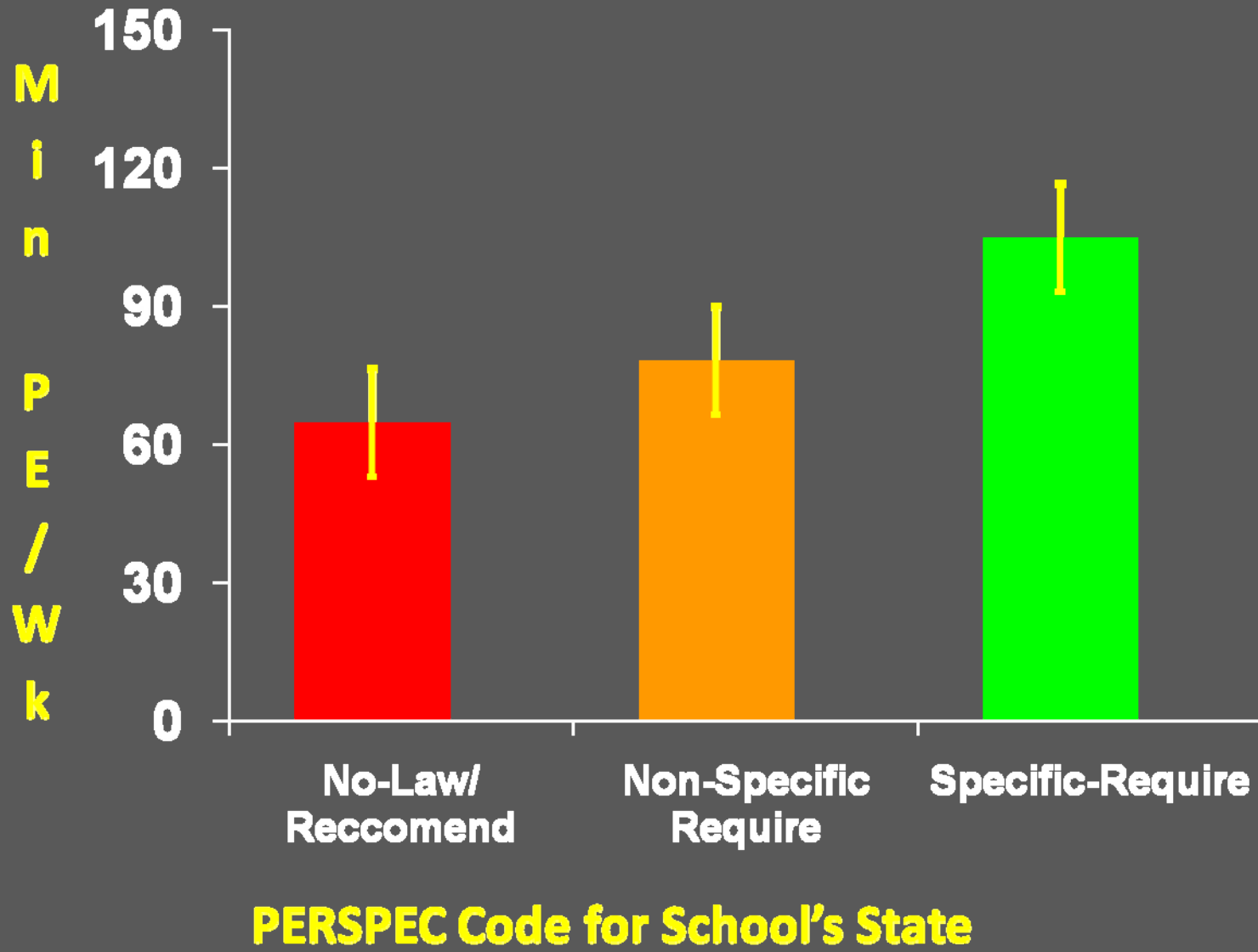
PRIMARY ANALYSES

PE Time (Elementary School)

	<u>Beta</u> <u>Coeff.</u>	<u>SE</u> <u>Beta</u>	<u>F</u>
Model Parameters			
Intercept	86.5	12.9	
Urbanicity (Non-Urban)	25.3*	11.4	2.21*
Poverty (High)	2.7	9.3	
Size (Large)	8.5	8.5	
PERSPCS Code			8.19**
No Requirement	-40.2	14.0	
Nonspecific Requirement	-26.7	12.9	
Specific Requirement (reference)			

* p<0.01, ** p<0.05

Elementary School Level

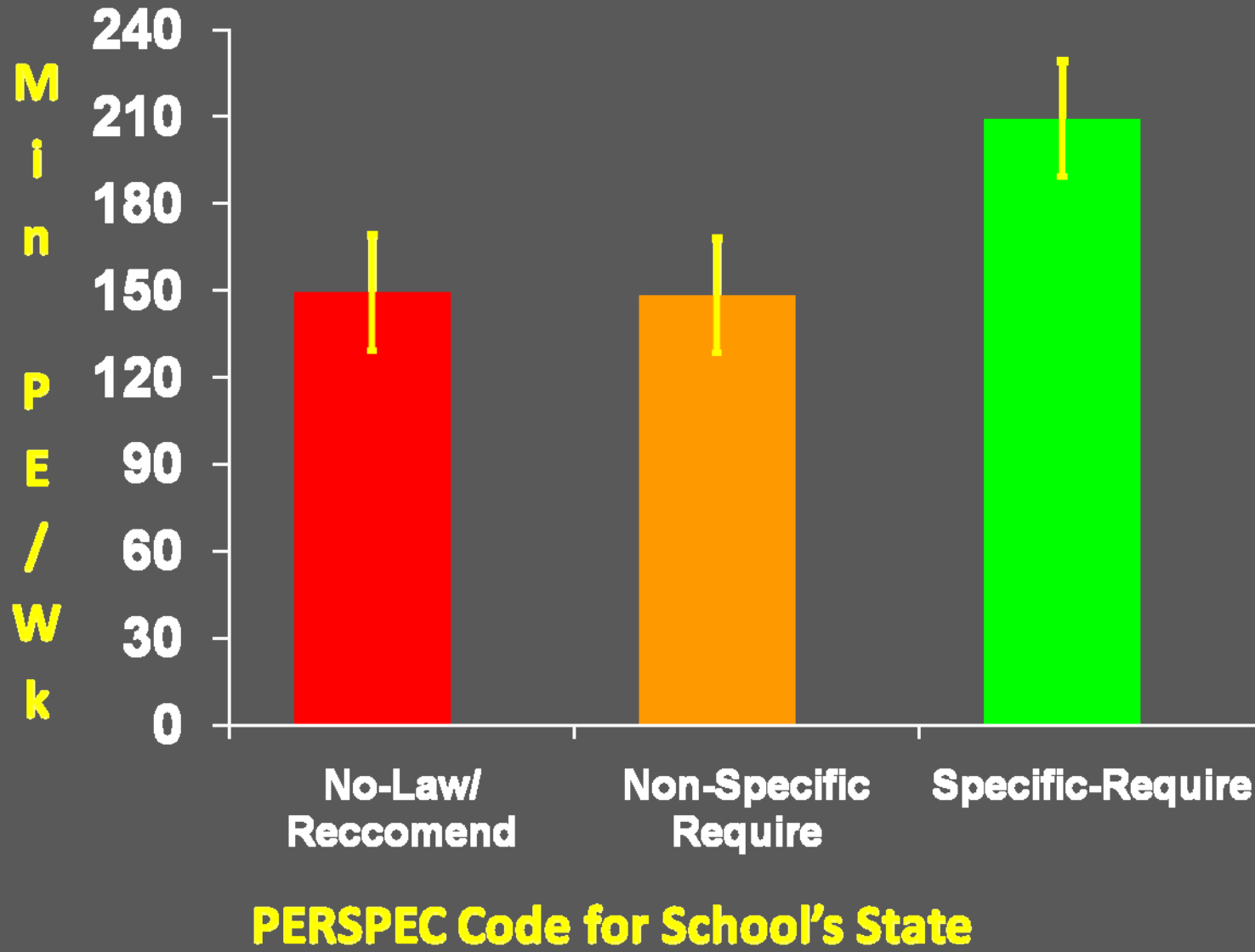


PE Time (Middle School)

	<u>Beta</u> <u>Coeff.</u>	<u>SE</u> <u>Beta</u>	<u>F</u>
Model Parameters			
Intercept	191.2	17.7	
Urbanicity (Non-Urban)	11.9	19.8	
Poverty (High)	35.5	12.7	7.78**
Size (Large)	-12.3	17.2	
PERSPCS Code			20.67**
No Requirement	-59.2	29.2	
Nonspecific Requirement	-60.6	13.9	
Specific Requirement (reference)			

* p<0.01, ** p<0.05

Middle School Level

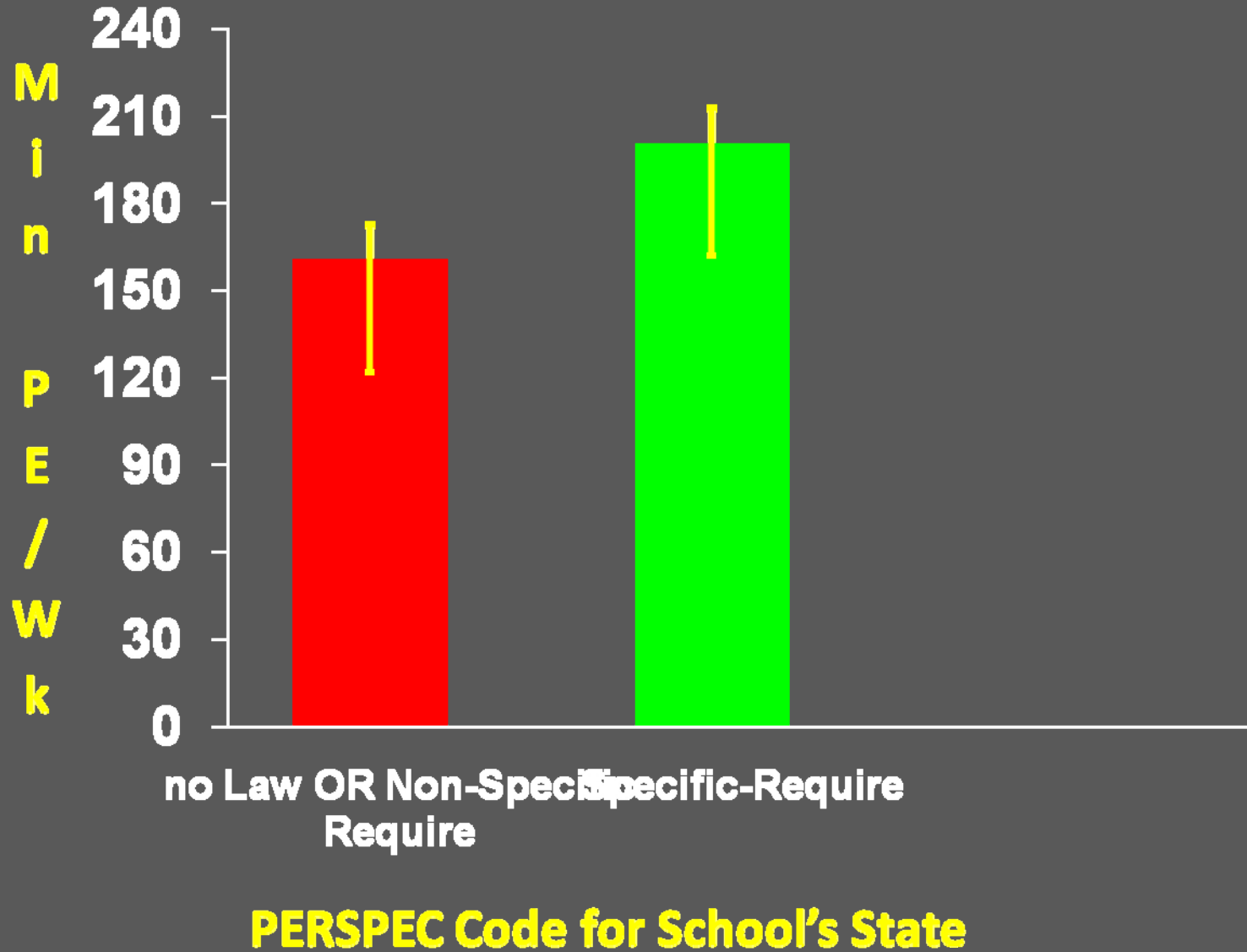


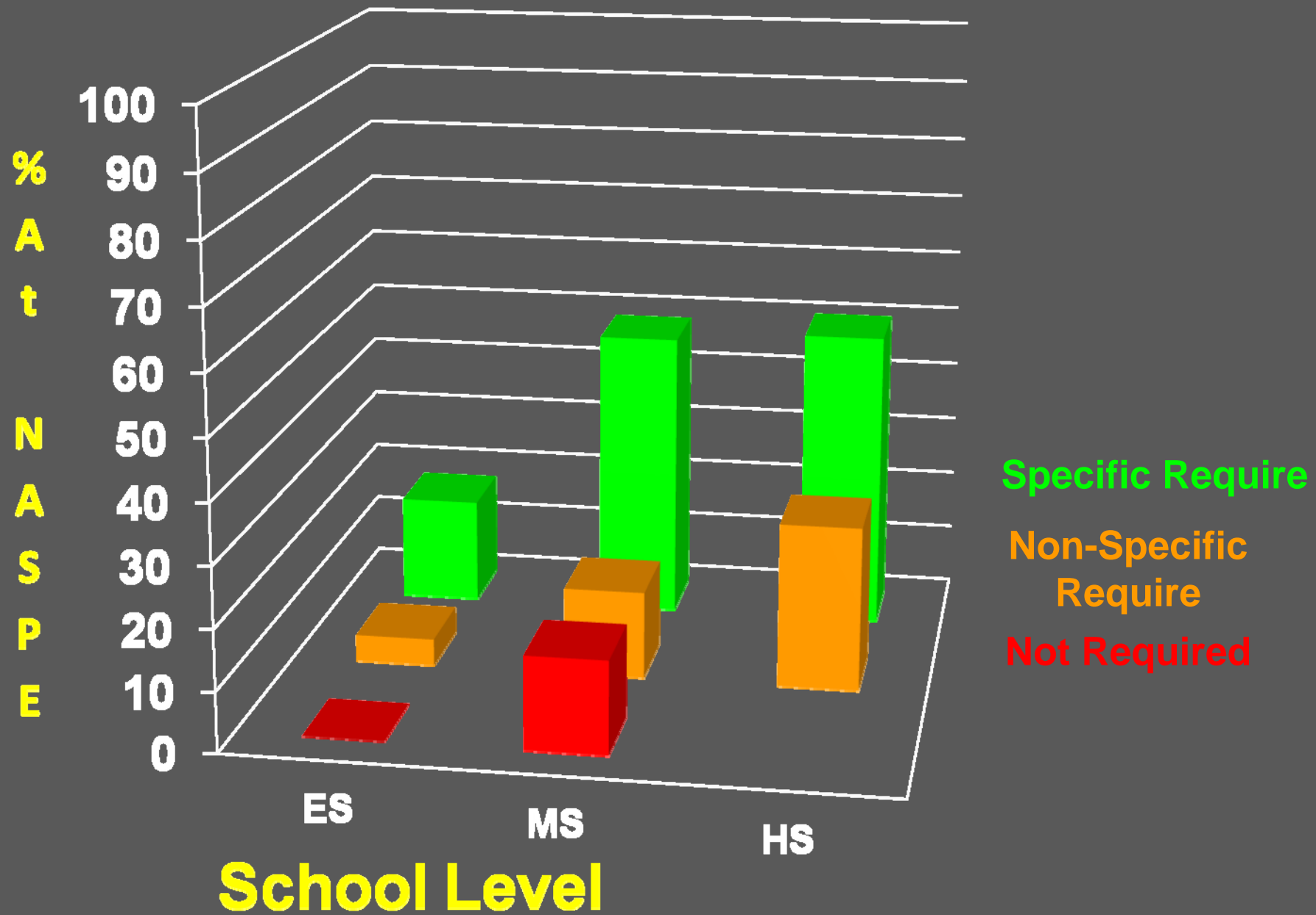
PE Time (High School)

	<u>Beta</u> <u>Coeff.</u>	<u>SE</u> <u>Beta</u>	<u>F</u>
Model Parameters			
Intercept	190.9	50.1	
Urbanicity (Non-Urban)	-2.0	20.3	
Poverty (High)	12.1	17.4	
Size (Large)	9.3	18.3	
PERSPCS Code			
Nonspecific Requirement	-40.54	43.6	
Specific requirement			

* p<0.01, ** p<0.05

High School Level





Conclusions

At public elementary and middle school levels:

Schools within states whose law required a specific amount PE had significantly more minutes of PE than schools within states whose law either had no PE requirement or required PE but left time unspecified

Few schools meeting NASPE recommendations

Limitations

- ❖ No PE time data from over 1/3 of public schools
- ❖ Not all States sampled
- ❖ Time only one element of PE Policy
- ❖ Linkages to District policy lacking (sample size)
- ❖ Relationship to actual time spent in physical activity (both in and out of school) is unknown
- ❖ Change in school practices (2006) and PE law (2005) since data analyzed
- ❖ Causal relationship Unknown



Classification of Laws Associated with School Students

View Data Map

Select policy area and grade-level of interest to generate tailored policy maps for download and printing.

Physical Education Nutrition

All School Levels

Elementary School

Middle School

High School

Time Requirements

Staffing Requirements

Curriculum Standards

Fitness Assessment

Recess Time

Summary Score

2007

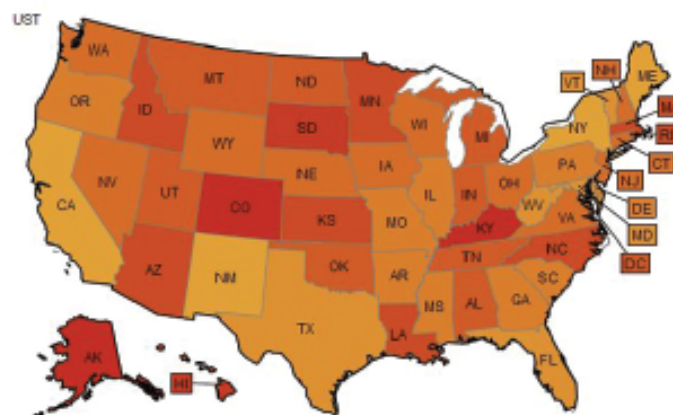
View Data Map

PDF

Print

Reset Map

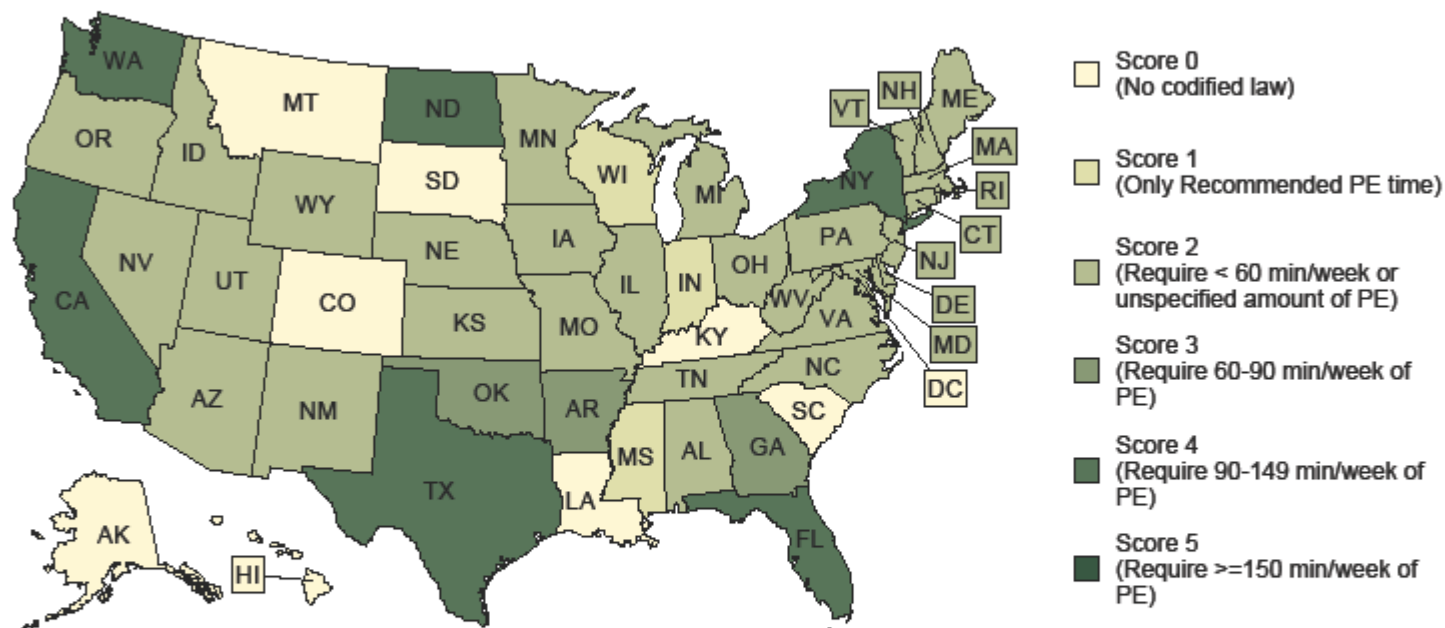
Physical Education / All School Levels / Summary Score / 2007



THANK YOU
Questions?

Physical Education / Elementary School / Time Requirements / 2005

The Physical Education (PE) Time Requirements Score reflects the degree to which state law addresses the amount of PE instruction at the specified grade level.



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