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Research Informing Policies & Practices
for Healthy Youth

Factors Influencing U.S. Public School District Physical Education and Physical Activity Policy Provisions

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Presentation Overview

- Background and purpose
- Study methods
- Characteristics of district policies for school year 2011-12
 - Physical Education (PE)
 - Physical Activity (PA)
- Factors influencing district PE and PA policies
- Policy and research opportunities
- Resources/contacts

Background and Purpose

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National PE/PA Recommendations

- The Institute of Medicine recommends that local school districts should ensure that all students in grades K-12 have adequate opportunities to engage in **60 minutes of physical activity per school day**, including active transport programs, intramural sports programs, after-school programs, classroom breaks, integration of PA into curricula lesson plans, and recess.¹⁻²
- All students K-12 should have access to a quality standards-based **daily** physical education program (that addresses curriculum time, class size, and employment of certified, highly qualified physical education teachers) aligned with National Standards.
- At least **50%** of PE time should be spent in MVPA.
- NASPE PE time recommendations:³
 - **150 minutes per week** of instructional PE for ES students for the entire school year.
 - **225 minutes per week** for MS/HS students for the entire school year.

Purpose

- To highlight characteristics of districts with various types of PE and PA policies from a nationally representative sample of U.S. public school districts for the 2006-07 through 2011-12 SY.

Study Methods

Methods

- Ongoing nationwide evaluation of school district wellness policies required as of 1st day 2006-07 school year (SY) under P.L. 108-265, Section 204
 - Required wellness policy elements: goals for nutrition education, school meal requirements, competitive food guidelines, goals for physical activity, and implementation plans; also included provisions for physical education.
- Annual, cross-sectional nationally-representative samples of public school districts: SY 06-07 (n=543), SY 07-08 (n=602), SY 08-09 (n=572), SY 09-10 (n=603), SY 10-11 (n=679), SY 11-12 (n=668)
- Primary policy collection and analysis, included wellness policy, all associated regulations/guidelines/procedures, cross-referenced policies/models/state laws
- Policies double-coded by grade level using adaptation of Schwartz et al.⁴ (2009)

Coding Methods and Variables

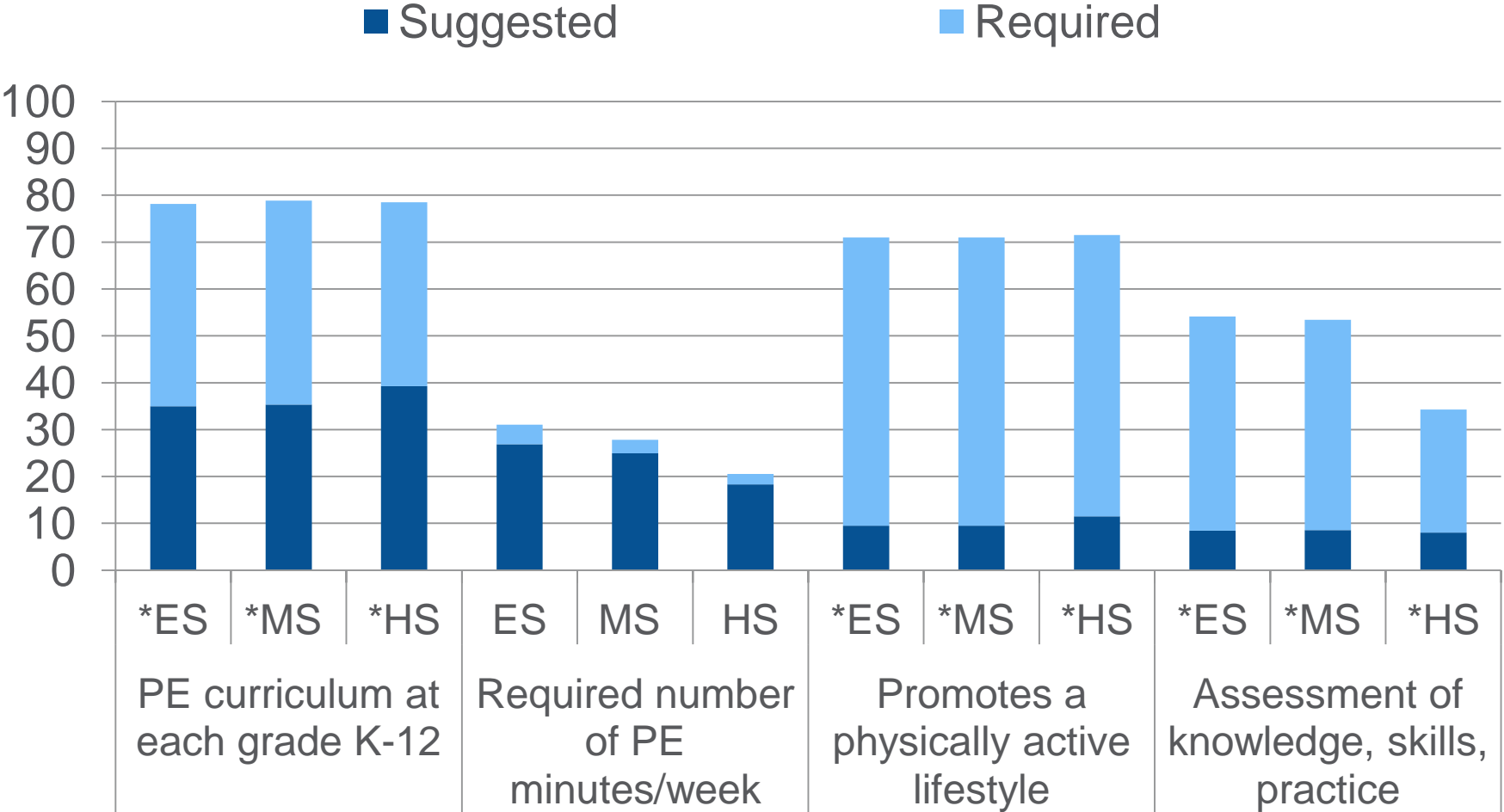
- Policies evaluated using an ordinal coding scheme:
 - 0: No policy/provision
 - 1: Weak policy/provision (should, encourage, may, try, attempt)
 - 2: Strong policy/provision (must, shall, require)
- Policy topics coded:
 - Physical Education
 - K-12 PE curriculum
 - Required number of PE minutes/week
 - Promotes physically active lifestyle
 - Assessment of knowledge, skills, and practice
 - Time spent in MVPA
 - Qualifications of PE teachers
 - Training for PE teachers
 - Prohibits waivers from PE
 - PE credits required for HS graduation
 - Physical Activity
 - FW: Goals for PA
 - PA required all grades K-12 outside PE
 - Required minutes PA per day/week
 - PA integrated into the core curriculum
 - Community use PA facilities
 - Daily (ES) recess

Analytic Methods

- **Descriptive statistics** were computed, clustered to account for the sample design, and weighted to %age of districts nationwide with given policy provision.
- **Multivariate logistic regression** models examined the factors influencing having a strong (required) policy provision adjusting for:
 - The associated state law, district racial/ethnic composition (ref=Majority White), region (ref=South), locale (ref=urban), free-reduced lunch participation (FRL)/socioeconomic status (SES) (ref=high SES), and school year (ref=SY 06-07).
- To ease interpretation, the **adjusted prevalence** of each policy provision was generated after controlling for all covariates. Significant predictors (after adjustment) are presented if statistically related at the $p < .05$ level.

Physical Education & Physical Activity District Policy Provisions, SY 11-12

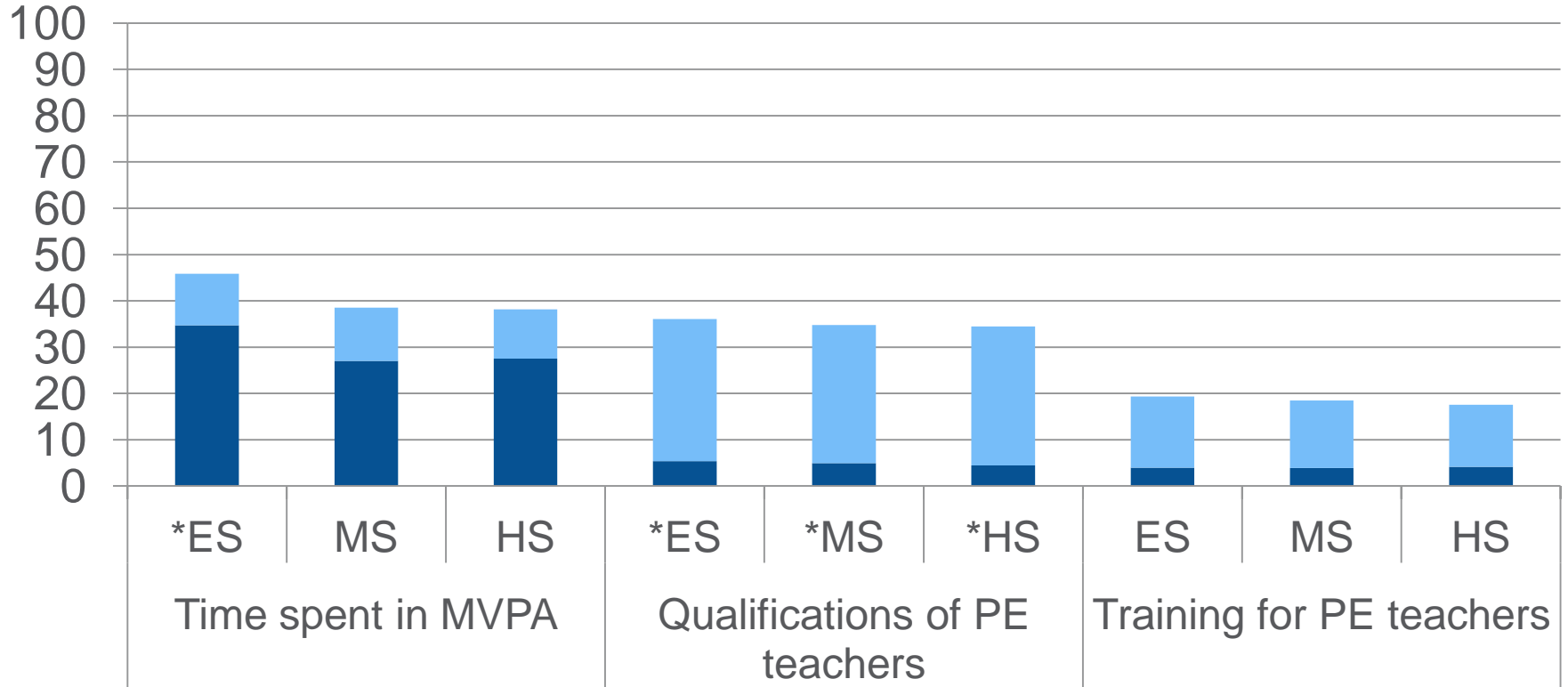
Physical Education Provisions for SY 2011-12



* Significantly different from 2006-7 SY $p \leq 0.05$

Physical Education Provisions for SY 2011-12 (continued)

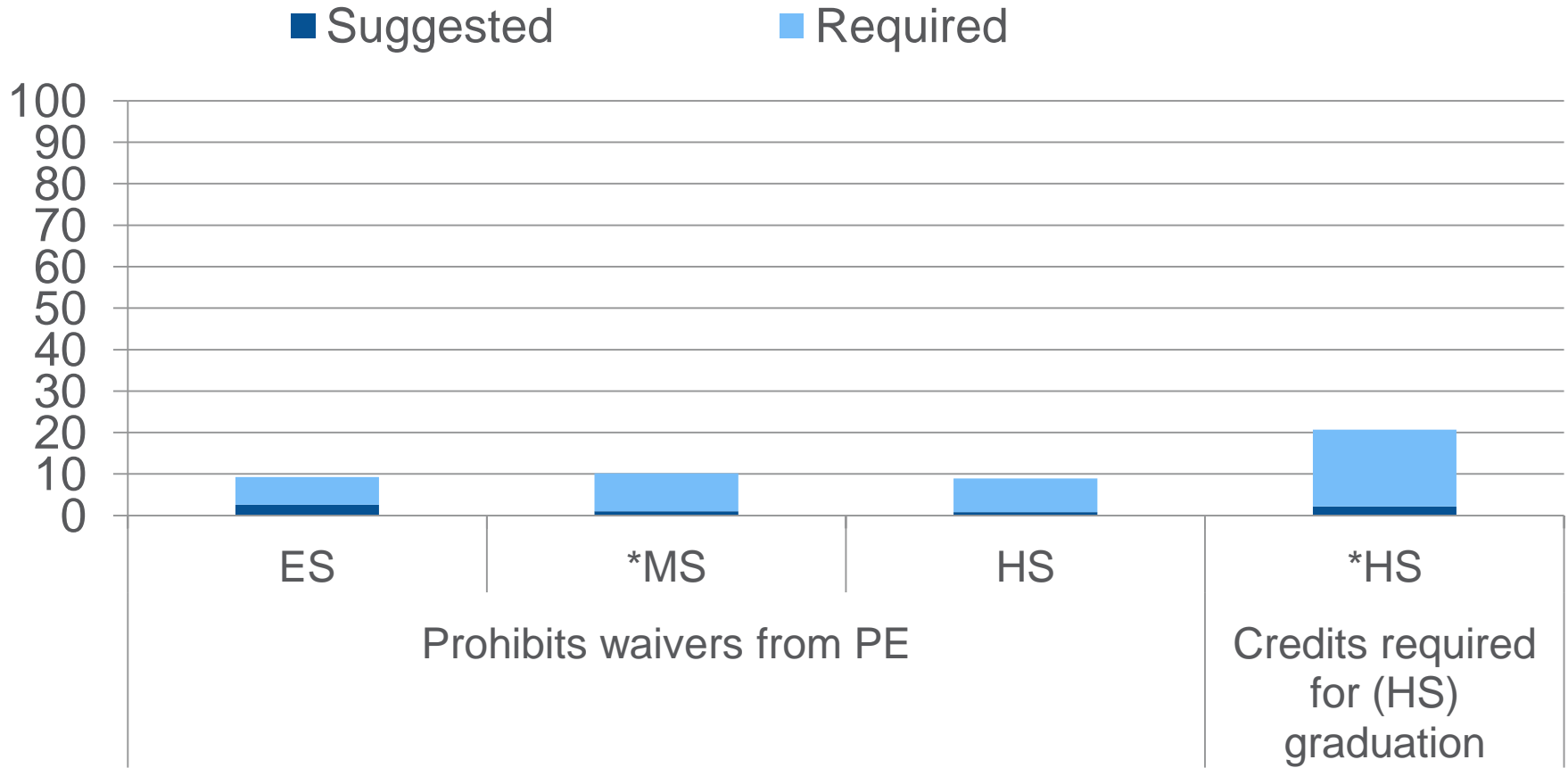
■ Suggested ■ Required



* Significantly different from 2006-7 SY $p \leq 0.05$

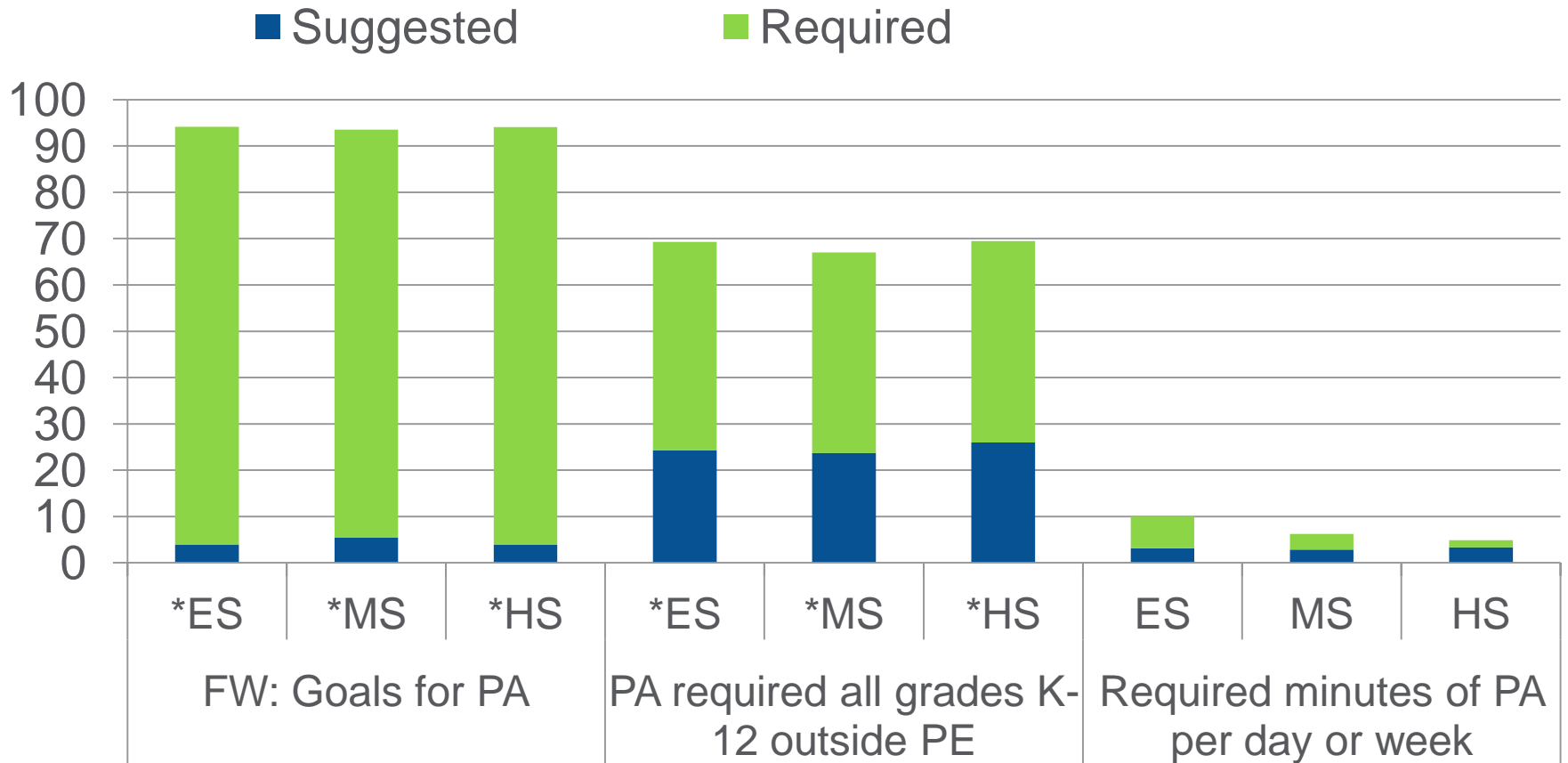
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Physical Education Provisions for SY 2011-12 (continued)



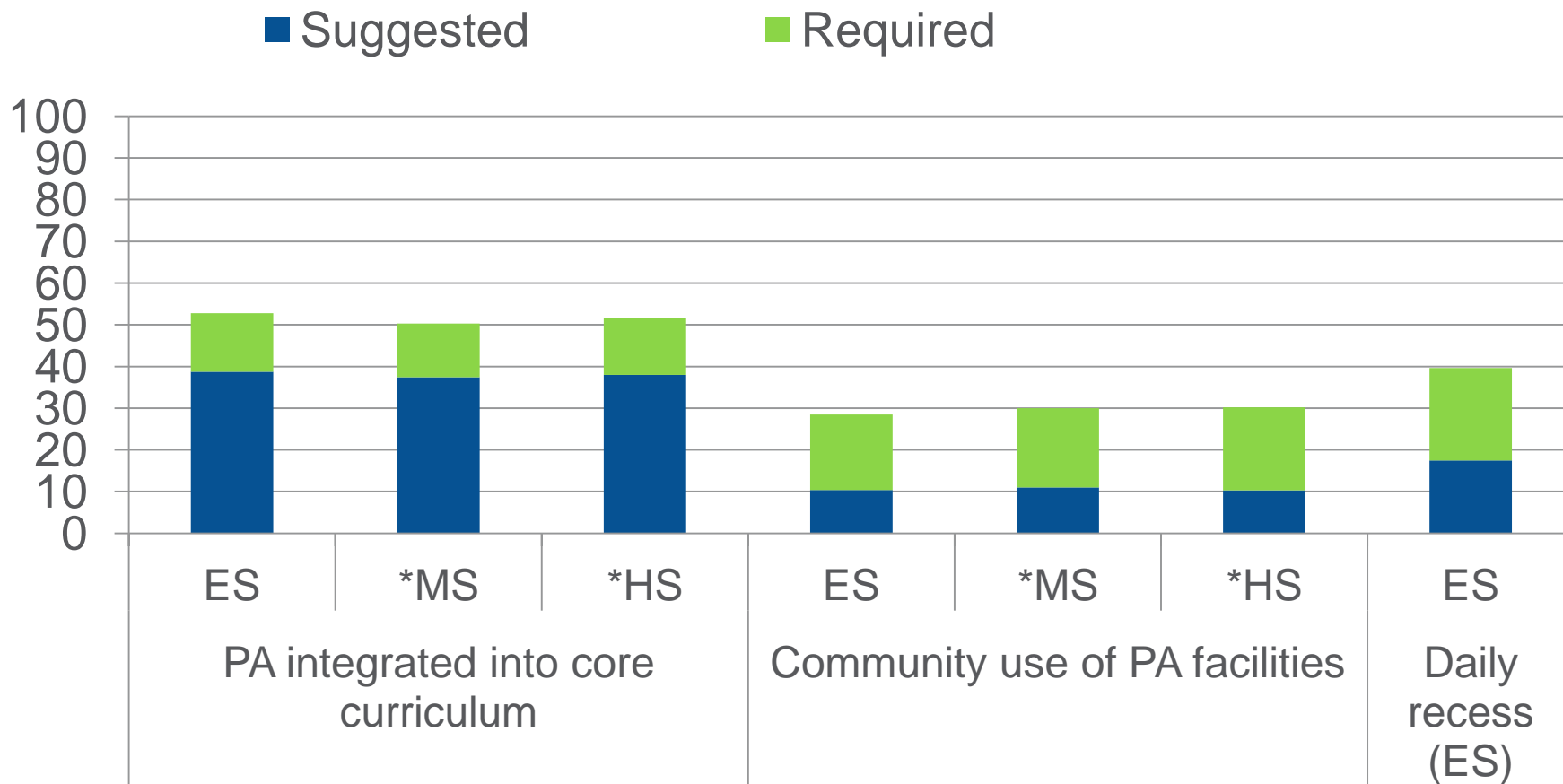
* Significantly different from 2006-7 SY $p \leq 0.05$

Physical Activity Provisions for SY 2011-12



* Significantly different from 2006-7 SY $p \leq 0.05$

Physical Activity Provisions for SY 2011-12



* Significantly different from 2006-7 SY $p \leq 0.05$

Factors Influencing District PE and PA Policy Provisions

Influence of state laws on district policy after controlling for all other covariates*

District Policy	State Law: No (Ref)	State Law: Yes
PE curriculum all grades	30.3%	43.0%
PE competency assessment	26.8%	46.3%
PE teacher qualifications	22.4%	37.1%
PE teacher training	11.7%	41.3%
PE waiver prohibited	5.7%	12.1%
PE time meets NASPE std. for ES	3.0%	14.6%
PE credits required for graduation	6.6%	17.2%
Daily recess for ES	19.6%	38.0%

*Adjusted prevalence of district policy occurring based on state law status controlling for all other covariates. All models presented are statistically significant at the $p < .05$ level or lower in multivariate logistic regression models. ns=not stat. sig. with adj.

Relationship between district-level socioeconomic status and district policy, after controlling for all other covariates*

District Policy	High SES (Ref)	Mid SES	Low SES
PE curriculum all grades	31.6%	42.3%	41.7%
PE teaches PA lifestyle	46.6%	58.9%	57.3%
PE competency assessment	30.1%	40.0%	44.0%
PE teacher qualifications	21.0%	29.6%	32.0%
PE teacher training	7.2%	13.3%	16.4%
PE waiver prohibited	4.8%	4.9% (ns)	8.8%
Meets NASPE ES time std.	1.5%	3.2% (ns)	5.4%
Meets NASPE HS time std.	1.2%	2.9% (ns)	4.0%
Goals for PA	83.1%	88.1%	82.9% (ns)

*Adjusted prevalence of district policy occurring based on SES level, controlling for all other covariates. All models presented are statistically significant at the $p < .05$ level or lower in multivariate logistic regression models. ns=not stat. sig. with adj.

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Relationship between region and district policy, after controlling for all other covariates*

District Policy	W (ref)	MW	S	NE
PE curriculum all grades	57.3%	44.2%	23.2%	35.5%
PE teaches PA lifestyle	66.7%	58.9% (ns)	33.2%	64.9% (ns)
PE competency assess.	48.2%	48.2% (ns)	18.5%	42.2% (ns)
50% PE time in MVPA	14.4%	12.2% (ns)	5.3%	6.6%
PE waiver prohibited	7.4%	8.1% (ns)	2.9%	7.2% (ns)
PA for every grade	40.3%	29.5%	53.5%	33.4% (ns)
PA time outside of PE	1.7%	2.2% (ns)	5.3%	2.0% (ns)
Meets NASPE time std.-ES	5.8%	5.1% (ns)	2.8%	1.2% (ns)
Meets NASPE time std-MS	38.3%	30.1% (ns)	11.9%	15.8%
Meets NASPE time std-HS	8.1%	2.0%	2.2%	0.7%
Daily recess req.–ES	28.9%	23.9 (ns)	11.3%	19.3%

*Adjusted prevalence of district policy occurring based on region, controlling for all other covariates. All models presented are statistically significant at the $p < .05$ level or lower in multivariate logistic regression models.

Relationship between district student enrollment race/ethnicity and district policy, after controlling for all other covariates*

District Policy	>66% White (ref)	>50% Black	>50% Hispanic	Other
PE curriculum all grades	38.5%	45.5% (ns)	26.1%	39.6% (ns)
PE teaches PA lifestyle	55.4%	65.3% (ns)	41.2%	53.1% (ns)
PE competency assessment	38.5%	47.4% (ns)	22.7%	37.4% (ns)
PE teacher qualifications	27.4%	26.5% (ns)	16.6%	29.1% (ns)
PE waiver prohibited	5.7%	16.1%	6.5% (ns)	5.4% (ns)
PA for every grade	38.1%	25.1%	42.2% (ns)	36.6% (ns)
Meets NASPE time std-ES	3.4%	8.2%	1.8% (ns)	3.3% (ns)
Meets NASPE time std-MS	21.7%	38.6%	17.2% (ns)	21.3% (ns)
PE required for GPA-HS	15.6%	36.2%	7.7% (ns)	14.2% (ns)

*Adjusted prevalence of district policy occurring based district student enrollment race/ethnicity, controlling for all other covariates. All models presented are statistically significant at the $p < .05$ level or lower in multivariate logistic regression models. ns=not stat. sig. with adj.

Relationship between district locale and district policy, after controlling for all other covariates*

District Policy	City (ref)	Suburb	Rural	Township
PE curriculum all grades	30.7%	50.8%	36.3% (ns)	34.6% (ns)
PE teaches PA lifestyle	51.9%	64.3%	52.2% (ns)	51.3% (ns)
PE competency assessment	32.1%	49.2%	35.5% (ns)	34.2% (ns)
PE teacher qualifications	22.8%	25.2% (ns)	29.3%	26.7% (ns)
PE waiver prohibited	3.8%	3.8% (ns)	8.1%	4.8% (ns)
Goals for PA	75.4%	83.7%	85.7%	87.5%
PA for every grade	38.2%	30.3%	43.5% (ns)	33.4% (ns)
Joint use of facilities	8.5%	12.5% (ns)	20.7%	27.2%
Daily recess req.- ES	22.4%	15.5%	24.1% (ns)	16.5% (ns)
PE required for GPA-HS	18.6%	12.7%	17.4% (ns)	12.4%

*Adjusted prevalence of district policy occurring based locale, controlling for all other covariates. All models presented are statistically significant at the $p < .05$ level or lower in multivariate logistic regression models. ns=not stat. sig. with adj.

Summary/Future Research

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Summary

- Most district policies minimally meet the FW goal for PA.
- Most district policies minimally address goals for PE.
- District policies have strengthened over time, but still weak in many areas.
- Very few district policies address specific requirements beyond the FW language, especially across all grade levels.

Summary

- Factors Influencing District PE and PA Policy Provisions:
 - Districts in states with PE/PA laws are significantly **MORE** likely to include various PE/PA provisions in their district wellness policies.
 - Districts with low/mid SES are significantly **MORE** likely than high SES to include various PE/PA provisions in their district wellness policies.
 - Districts in the South are significantly **LESS** likely to include various district PE/PA policy provisions compared to the West.
 - Majority Hispanic districts are significantly **LESS** likely than majority White districts to address PE curriculum, PA lifestyle, PE competency, and PE teacher qualifications; while, majority Black communities are significantly **MORE** likely to address PE waiver prohibitions, PA for every grade, meeting NASPE time req. for ES/MS and requiring PE for HS graduation.

Future Research

- Future Research

- Continued surveillance of wellness policies and state PE and PA laws.
- Linking state and district policies with school level PE and PA practices and, ultimately, student PA and health-related outcomes.

- Implications

- Absent increased resources (i.e., funding), district wellness policies addressing adequate PA and PE are not likely to significantly change; negatively impacting the health of students.

Resources and Contacts

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- Identify the policy and environmental factors that have the greatest impact on diet, physical activity, obesity and tobacco use among youth.
- Track trends and changes in these factors over time at the state, community and school levels.
- Disseminate findings to help advance solutions for reversing the childhood obesity epidemic and preventing young people from smoking.

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