

# State-level physical activity planning in the United States: A Report to National Physical Activity Plan Alliance

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**State-level physical activity planning in the United States: A Report to National Physical Activity Plan Alliance**

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## **Purpose**

The purpose of this report is to describe the scope in which physical activity is incorporated in state-level public health plans in the United States, with an emphasis on alignment with the Physical Activity Guidelines for Americans and the National Physical Activity Plan (NPAP). This report will also include recommendations for actions to the NPAP Alliance.

## **Introduction**

Physical inactivity is a major risk factor for noncommunicable diseases such as cardiovascular diseases, cancer, diabetes, and others, coupled with the unsurmountable costs associated with insufficient physical activity, makes it a key public health issue in the United States. States should be prioritizing physical activity in their public health planning efforts, however the extent to which state plans efforts include physical activity is virtually unknown. In 2008, the first federally approved Physical Activity Guidelines for Americans were published after studies showed a strong link between physical activity and lower risks of chronic disease and premature death (Physical Activity Guidelines Advisory Committee, 2008). Soon thereafter, the National Physical Activity Plan (NPAP) was developed to compliment the Guidelines by providing a framework for all population sectors to promote physical activity (Bornstein and Pate, 2014). The aim of the Plan is to foster a national culture of physical activity that will improve the health of Americans. Using the evidence-informed NPAP as a blueprint, states are called to develop stand-alone state-specific physical activity plans that includes context-specific strategies and tactics for all sectors to take a role in physical activity promotion (Bornstein & Pate, 2014) Prior to this project, it was unknown not only how many states have public health plans that include physical activity, but to what extent the NPAP priorities and the Physical Activity Guidelines for Americans were included. The intent of this report is to inform the National Physical Activity Plan Alliance and state public health leaders on the scope of physical activity planning by states, and to provide the need for state health departments and other health leaders to promote and improve prioritization of physical activity in public health.

## ***National Physical Activity Plan***

One of the overarching priorities of the NPAP is to “support development and implementation of comprehensive physical activity strategic plans at the state, regional, and community levels”. The plan has identified strategies and tactics for each societal sector that will facilitate successful implementation of physical activity throughout our society. The Plan’s recommendations are organized by the following sectors: Business and Industry, Community, Recreation, Fitness, and Parks, Education, Faith-based Settings, Healthcare, Mass Media, Public Health, Sport, and Transportation, Land Use, and Community Design.

## **Physical Activity Guidelines for Americans, 2<sup>nd</sup> Edition**

The key guidelines for children and adolescents are:

- Aerobic: 60 minutes or more each day of either moderate or vigorous intensity physical activity.
- Muscle-strengthening: Include muscle-strengthening activity on at least 3 days a week.
- Bone-strengthening: Include bone-strengthening activity on at least 3 days a week.

The key guidelines for adults are:

- Aerobic: at least 150 minutes (2 hours and 30 minutes) to 300 minutes (5 hours) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) to 150 minutes (2 hours and 30 minutes) a week of vigorous-intensity aerobic physical activity spread throughout the week.
- Muscle-strengthening: Include muscle-strengthening activity on at least 2 days a week

The key guidelines for older adults are:

- Aerobic: if unable to do 150 minutes of moderate physical activity a week due to chronic conditions, be as physically active as their abilities and conditions allow.
- Balance, muscle-strengthening, aerobic: multicomponent physical activity that is determined by their level of fitness.

## **Methodology**

A standardized internet search strategy was developed and conducted between May 2017 and January 2018 of each of 50 US states and the District of Columbia to determine the prevalence and characteristics of state-level public health plans that include physical activity. Data regarding the degree of alignment with the Physical Activity Guidelines for Americans and the US National Physical Activity Plan were also abstracted for analyses. Searches were conducted using the Google search engine utilizing the search terms described in Table 1 for the initial selection of planning documents for review. Plans were excluded if they did not include physical

*Table 1. Search Terms Used for Internet Search, US 2017*

1. [state] physical activity plan
2. [state] physical activity and nutrition plan
3. [state] obesity plan
4. [state] chronic disease plan
5. [state] diabetes plan
6. [state] cancer plan
7. [state] cardiovascular disease plan/heart disease and stroke plan
8. [state] health improvement plan
9. [state] physical activity and education plan

activity, were not directed at

the state level, were considered drafts or unpublished versions, or were duplicate publications. Following this process, full copies of plans were retrieved and further assessed for identification of priority population, overall alignment with the Physical Activity Guidelines for Americans (aerobic, muscle-strengthening, and bone-strengthening activity), congruency to each of the NPAP nine societal sectors,

and alignment with the NPAP strategies.

*Data Selection.*

Abstracted data from the selected state health plans included the year of publication, type of plan (as identified in Table 1), URL where plan was retrieved, and priority populations identified. Each of the plans were then assessed for overall alignment with the Physical Activity Guidelines for Americans (aerobic, muscle-strengthening, and bone-strengthening activity as they related to each of the three populations). It is worth noting that for analytic purposes the abstracted data was compared to the 2008 Guidelines since the 2018 Guidelines had not yet been released. However, both guidelines recommend the same volume of aerobic, muscle strengthening, and bone strengthening activity per week. Each plan was also analyzed for congruency to each of the NPAP nine societal sectors, and alignment with the NPAP strategies. If a plan explicitly mentioned a NPAP societal sector and all or most sector strategies provided by the Plan, the state plan was determined to align entirely with that NPAP sector. The other categories of sector alignment were “Some Alignment” (e.g. identified the sector and at least one NPAP strategy), “Mentioned Sector” (e.g. identified sector but did not include strategies), or “No Information” (did not identify the NPAP sector). Also, inclusion of tactics was identified.

*Methods for data extraction and assessing data quality.*

States were randomly assigned to one of four data collectors with experience in data collection and entry who were trained in abstracting data for this study using the established protocols and procedures. Data were entered into a customized REDcap database, a web-based data management tool that provides real-time data entry validation and encryption. Upon completion of the abstracting process, one reviewer examined the dataset and contacted the responsible data collector regarding any missing or ambiguous data. Differences were adjudicated. Finally, one reviewer re-ran search terms for each state to confirm reported plans, and contacted the responsible data collector to abstract any additional plans that had not initially been reported for the given state.

**Results**

Overall, physical activity was a part of 245 health-planning documents in 51 U.S. states and territories (Table 2).

Table 2. Types of State-level Chronic Disease Control and Health Promotion Plans that included Physical Activity

<b>Composite Plans (n=245)</b>	<b>(n)</b>	<b>(%)</b>
Physical Activity and Nutrition	28	11.5

Obesity	24	9.9
Chronic Disease	32	13.2
Diabetes	29	11.9
Cancer	52	21.4
Cardiovascular Disease	26	10.7
Health Improvement	49	20.2
Physical Activity and Education	3	1.2
<b>Stand-Alone Physical Activity Plan</b>	2	0.8

Only two public health plans (<1% of documents reviewed) were stand-alone physical activity plans. As indicated in Table 1, plans were abstracted from nine types of plans that included physical activity, with the most prevalent being in Cancer control plans (21.3%) and Health Improvement plans (20.2%).

The majority of the 245 plans indicated that adults were primary priority population (82.4%), followed by children and adolescents (71.4%). Older adults were most often not identified as a priority population, although explicitly identified in the Guidelines. Only thirty-one of the documents specifically mentioned older adults as a priority population (12.6%). Two hundred six (206) of plans indicated that the publication dates were after the release of the 2008 Physical Activity Guidelines for Americans (84.1%) and more than two-thirds (69%) of plans were published after the development of the U.S. National Physical Activity Plan in 2011 (Table 3).

Table 3. Target Population and Publication Year of State-Level PA Plans: US 2017 (n=245)

	<b>Composite Plan (n=243)</b>	<b>Stand-alone Plan (n= 2)</b>	<b>Total</b>	
	<b>(n)</b>	<b>(n)</b>	<b>(n)</b>	<b>(%)</b>
<b>Number of States</b>	51	2		
<b>Year Published</b>				
< 2008	33	0	33	13.5
2008 - 2010	36	1	37	15.1
2011+	168	1	169	69.0
Not Specified	6	0	6	2.4
<b>Priority Population *</b>				
Children & Adolescents	173	2	175	71.4
Adults	200	2	202	82.4
Older Adults	30	1	31	12.6
Not Specified	35	0	35	14.3

\*Some plans identified more than one priority population

Of the 206 plans published after the release of the 2008 US Physical Activity Guidelines for Americans, only 58 (28.2%) were in some alignment with the Guidelines but only 8 of those plans included all three priority populations (youth, adults, older adults) (Table 4). Interestingly, the eight plans (3.9%) that identified older adults as a priority population were also those plans addressed all three age groups. Of those eight plans, only 3 plans (1.5%) identified all three priority populations AND aligned with both aerobic and muscle/bone strengthening recommendations. Across priority populations a total of 12 plans aligned with both aerobic and muscle/bone-strengthening recommendations (5.8%), while 46 plans (22.3%) aligned with the aerobic guidelines only. Most plans (71.8%) did not specify any acknowledgement of the Guidelines or had no alignment with the Guidelines.

Table 4. Alignment with 2008 Physical Activity Guidelines for Americans among State-Level Physical Activity Plans post-2008 by Priority Population: United States 2017 (n=206)

Priority Population Identified	Alignment with Aerobic Only		Alignment with Muscle and/or Bone-Strengthening Only		Alignment with Both		TOTAL Plans that Provided Some/All Alignment		No Alignment Provided		TOTAL All Plans	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>Youth Only</b>	2	1.0	0	0.0	0	0.0	2	1.0	5	2.4	7	3.4
<b>Adults Only</b>	7	3.4	0	0.0	1	0.5	8	3.9	22	10.7	30	14.6
<b>Older Adults Only</b>	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0
<b>Adults and Youth</b>	32	15.5	0	0.0	8	3.9	40	19.4	77	37.4	117	56.8
<b>Youth and Older Adults</b>	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0
<b>Adults and Older Adults</b>	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0
<b>All</b>	5	2.4	0	0.0	3	1.5	8	3.9	13	6.3	21	10.2
<b>Not Specified</b>	0	0.0	0	0.0	0	0.0	0	0	31	15.0	31	15.0
<b>TOTAL</b>	46	22.3	0	0.0	12	5.8	58	28.2	148	71.8	206	100

Most of the 51 states and territories had multiple plans that addressed physical activity in some way. Only 2 states just had one plan, while 42 states had four to six plans. Three states has seven or more plans (Table 5). Table 6 identifies the number of plans analyzed in each state.

Table 5. # of Plans in States

<b>Number of Plans in State</b>	<b>n=51</b>	<b>%</b>
1	2	3.9
2	1	2.0
3	3	5.9
4	15	29.4
5	12	23.5
6	15	29.4
7+	3	5.8

Table 6: Number of Plans per Individual State

<b>State</b>	<b># plans</b>	<b>State</b>	<b># plans</b>	<b>State</b>	<b># plans</b>
Alabama	6	Kentucky	4	North Dakota	4
Alaska	6	Louisiana	3	Ohio	6
Arizona	7	Maine	5	Oklahoma	5
Arkansas	4	Maryland	2	Oregon	6
California	4	Massachusetts	4	Pennsylvania	4
Colorado	4	Michigan	7	Rhode Island	8
Connecticut	4	Minnesota	6	South Carolina	5
Delaware	5	Mississippi	6	South Dakota	4
District of Columbia	4	Missouri	6	Tennessee	6
Florida	3	Montana	4	Texas	6
Georgia	4	Nebraska	6	Utah	6
Hawaii	5	Nevada	5	Vermont	4
Idaho	5	New Hampshire	5	Virginia	4
Illinois	6	New Jersey	4	Washington	1
Indiana	5	New Mexico	5	West Virginia	5
Iowa	5	New York	3	Wisconsin	6
Kansas	6	North Carolina	6	Wyoming	1

The NPAP identified 9 societal sectors and makes recommendations for each in promoting physical activity. The NPAP sector alignment data analysis revealed that the Education sector was the most targeted across health planning documents with either entire or some alignment



(66.5%). Business and Industry (55.9%), Community, Recreation, Fitness, and Parks (53.1%), and Transportation, Land Use, and Community Design (45.7%) sector alignment was also prevalent in many of the public health planning documents. Less likely to be aligned were the sectors of Healthcare (30.6%), Public Health (30.6%), Mass Media (22.8%), and Faith-based Settings (11.8%). Only 10 plans mentioned the Sport sector (4.1%) (Table 7). No state public health plan aligned entirely with all nine US National Physical Activity Plan sector-based approaches to physical activity promotion. Most plans targeted 3-4 sectors (39.5%), followed by targeting 5-6 sectors (21.4%), and 7-8 sectors (5.6%). One-third of plans (33.0%) targeted fewer than two sectors (data not shown).

Table 7: Alignment of Plans with National Physical Activity Plan Sectors, United States 2017. (n=245)

	Sector and strategies entirely align		Sector and strategies partially align		Mentions Sector-no strategies		No Information	
	n	%	n	%	n	%	n	%
<b>Business/Industry</b>	3	1.2	134	54.7	9	3.7	99	40.4
<b>Comm/Rec/Fit/Parks</b>	1	0.4	129	52.7	16	6.5	99	40.4
<b>Education</b>	6	2.5	157	64.3	13	5.3	68	27.9
<b>Faith-based Settings</b>	0	0.0	29	11.8	5	2.0	211	86.1
<b>Healthcare</b>	3	1.2	72	29.5	27	11.1	142	58.2
<b>Mass Media</b>	5	2.0	51	20.8	14	5.7	175	71.4
<b>Public Health</b>	3	1.2	72	29.4	8	3.3	162	66.1
<b>Sport</b>	0	0.0	7	2.9	3	1.2	235	95.9
<b>Transportation, Land Use, Comm Design</b>	6	2.4	106	43.3	2	0.0	131	53.5

All but one state identified the Education sector in at least one of their state plans, followed by 49 states identifying the Business and Industry sector, and 48 states mentioned the Community, Recreation, Fitness, and Parks sector and the Healthcare sector. The other most noted sector was Transportation, Land Use, and Community Design designated in at least one plan in 45 states (Table 8)

Table 8: NPAP Sector Alignment Across States (n=51)

N=51	NPAP Sectors								
	Buss & Industry	Com,Rec, Fitness & Parks	Educ	Faith-Based Settings	Health care	Mass Media	Public Health	Sport	Transport Land Use & Comm Design
# of States with at least some alignment	49	48	50	25	48	33	30	6	45
% of States with at least some alignment	96.1%	94.1%	98.0%	49.0%	94.1%	64.7%	58.8%	11.8%	88.2%

Table 9. # of Plans with strategies, tactics, and action plans

	Number of Plans	
	n	%
<b>Strategies</b>	183	74.7
<b>Tactics</b>	35	14.3
<b>Action Plan</b>	29	11.8

Of the 245 plans, 74.4% included strategies related to physical activity, only 14.3 % included some tactics, and 11.8% identified some type of action plan that included physical activity (Table 9). They were partially aligned with NPAP sectors but not exclusively. Related to plans that included SMART objectives for various priority

populations, objectives were identified less than 50% of the time for both youth and adults, but almost never for older adults, as might be expected since most plans did not identify older adults separate from adults, as indicated earlier in the report (Table 10).

Table 10: Number of Plans, by Priority Population, that include SMART Objectives

Priority Population (# of plans)	Plans including SMART Objectives for Priority Population	
	n	%
Youth (n = 171)	70	40.9
Adults (n = 201)	94	46.8
Older Adults (n = 31)	1	3.2

### **Summary of Key Findings:**

There were 245 state health-planning documents that mentioned physical activity and most states had multiple plans that addressed physical activity, with 42 states having four to six plans. However, there were only two states with stand-alone physical activity plans. Physical activity was most often included in cancer control plans and health improvement plans.

Very few plans aligned with both the Physical Activity Guidelines for Americans and the National Physical Activity Plan.

Most plans (71.8%) did not specify any acknowledgement of or alignment with the Guidelines. Of those that provided some or all alignment with both aerobic and muscle/bone-strengthening exercise, 19.4% aligned these exercise guidelines with both the adult and youth priority populations.

No plan aligned entirely with all nine of the National Physical Activity Plan sectors, however, almost 40% targeted 3-4 sectors followed by a little over 20% targeting 5-6 sectors. Related to the nine societal sectors identified in the Plan, the Education sector was most targeted in the state plans (66.5%). About 50% of the plans also mentioned some alignment with the Business and Industry sector, the Community, Recreation, Fitness, and Parks sector, and the Transportation, Land Use and Community Design sector.

About 75% of the plans included some strategies for promoting physical activity, however these strategies were aligned with various sectors or with no sector identified, and were mostly identified for children and/or adults, but almost never for older adults. Older adults were not specifically mentioned as a priority population, although older adult population should be identified separately from adults since they often require different recommendations and strategies to increase physical activity participation.

### **Recommendations for Action:**

From these analyses of state health planning documents across the United States, it is clear that physical activity should become a much bigger priority in state-level public health plans than what currently exists. States should prioritize physical activity promotion by developing a plan that focuses solely on physical activity rather than including it briefly in other health improvement or chronic disease prevention plans. Stand alone physical activity plans will allow a depth and breadth to address a complicated public health topic adequately and to support other health improvement or chronic disease-specific planning efforts at the state level. These plans should include recommendations from the Physical Activity Guidelines for Americans and should use the National Physical Activity Plan as a blueprint for developing physical activity

promotion strategies and tactics for a variety of societal sectors that are appropriate to the states' environmental and social context.

Translating what has been learned into action prompts some recommendations to build from these findings to facilitate more widespread change related to state-led physical activity promotion as part of public health planning. These recommendations call for action from both state and local public health leaders and from the National Physical Activity Plan Alliance. In order to achieve the vision of the NPAP that "all Americans will be physically active in environments that encourage and support regular physical activity", an effort across all local, state, and national levels must focus on their role in promoting physical activity in all societal sectors of our population across all environments and contexts of our nation.

### **National Physical Activity Plan Alliance**

- Develop and implement a surveillance system to more routinely track progress of states.
- Offer trainings to state organizations who can lead the development of a state Physical Activity Plan (in person 1 day workshop, online training module prior to onsite workshop, etc.)
- Use the data from each state to identify state representatives to the NPAP State Liaison Network to advocate for stand-alone PA plans, NPAP alignment, and congruency with the Physical Activity Guidelines for Americans.
- Keep the State Liaison Network engaged by hosting a national meeting and holding quarterly conference calls.
- Distribute reports to state health departments or other designated organizations related to state results requesting updates and additional information (or develop a webpage with results).
- Promote states which can demonstrate alignment with the NPAP with evidence of successful sector activity, implementation of strategies, etc. (even in one sector). Develop a website presence of quality state plan components on the NPAP website or promote on the NPAP social media sites.

### **State Departments of Health or other state health governing bodies:**

- Lead the development of a state physical activity plan modeled after the National Physical Activity Plan.
  - Identify sector leaders in each of the nine recommended societal sectors and develop sector teams of dedicated stakeholders representing different geographic, social, and cultural demographics.
  - Bring sector leaders/teams together to brainstorm and make decisions about procedures for physical activity plan development, dissemination, and evaluation.
  - Use the NPAP and other evidence-based practices as appropriate to the state context to develop sector-specific recommended strategies and tactics to promote physical activity.

- Implement the strategically developed physical activity plan components in all other health promotion and disease prevention state plans.

#### **Local, State and National Organizations and Health Advocacy Leaders**

- Support the development of a state physical activity plan through advocacy, funding, leadership efforts, partnership facilitation, and public awareness promotion
- Promote best practices for developing, implementing, and evaluating a state physical activity plan.
- Highlight local and state success stories in physical activity promotion in all societal sectors.
- Facilitate efforts for environmental, systems, and policy changes that will increase opportunities for physical activity for all populations - children, adults, and older adults.

#### **State and Federal Funders**

- Ensure that priority is given to eligible funding proposals that have a stand-alone physical activity plan in place for their state/region that follow the recommendations of this report.
- Provide funding support for implementation of sector-specific physical activity strategies and tactics identified in the National Physical Activity Plan.
- Support policy development centered around physical activity in one or more population sectors to create a culture change that will be sustainable over time and that will reach a large segment of the population.

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