Future Directions for Transforming Kinesiology Implementation Science Into Society

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Abstract
Physical activity policy can play a crucial role in ensuring that individuals, communities, and societies can obtain the wide range of health benefits associated with regular physical activity participation. Policies such as Title IX, the Americans With Disabilities Act, and state physical education laws have all increased opportunities for millions of Americans to participate in physical activity. With that said, how policies are developed and implemented vary considerably. The purpose of this manuscript is to contrast an academic conceptual framework with a pragmatic approach for policy implementation. In an ideal world, polices would be developed from foundational knowledge, scaled up to community-level interventions, and implemented in a sequential fashion. However, policy implementation is a disorderly process that requires a practical methodology. The National Physical Activity Plan encompasses strategies and tactics across 10 key societal sectors—and highlights the disorderly process of policy implementation across the various sectors.

Keywords: physical activity, exercise, policy

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Physical activity (PA) has unequivocally been shown to help prevent and manage numerous chronic health diseases (Office of Disease Prevention and Health Promotion, 2018). Recent data from the Centers for Disease Control and Prevention (CDC) have shown that a general increase in PA could help prevent 1 in 10 premature deaths, 1 in 12 cases of Type 2 diabetes, and 1 in 15 cases of heart disease (Fulton et al., 2018). Despite the known benefits of PA, participation rates across the country continue to remain low. Data from the 2022 Behavioral Risk Factor Surveillance System indicate that 25.3% of adults were physically inactive—with disparities persisting among Black and Latino populations (CDC, 2022a, 2022b). Moreover, only 21% of children between ages 6 and 17 years are meeting the United States PA guidelines (Office of Disease Prevention and Health Promotion, 2018) of 60 min per day of moderate to vigorous PA (Physical Activity Alliance & Active Healthy Kids Global Alliance, 2022).

It is evident that solutions are necessary to try to increase PA participation rates among all members of our society. While many approaches and strategies have merit, the most potent influence is the implementation of policies aimed at promoting PA participation. Policy in this context refers to laws, regulations, procedures, administrative actions, or incentives for voluntary practice of governments and other institutions. Policy decisions are frequently reflected in resource allocations such as the distribution of state and federal tax revenue (CDC, 2021). Health policy in the United States has witnessed numerous successes, such as the widespread adoption of automobile seat belt usage and reduced cigarette smoking (Burris & Anderson, 2013). In each instance, these policies underwent a turbulent process across the various legislative domains to achieve widespread adoption. Logic would hold that policy implementation would occur in a systematic and linear fashion that begins with research establishing the foundational concepts and ending with the passage of a law. However, policy implementation often occurs in a fragmented and nonsystematic process that can span several years and legislative turnover. How this policy implementation process evolves for PA is in its preliminary stages—and serves as the launching point for this paper.

The purpose of this paper is to contrast an academic conceptual framework for PA policy implementation with a more pragmatic real-world policy implementation approach. Our objectives are to (a) describe recent policies that have contributed to increased PA participation in the United States, (b) present an academic conceptual framework for policy implementation, (c) contrast this academic conceptual framework with the National Physical Activity Plan—a pragmatic effort to advance PA policy in the United States, and (d) provide potential future directions for the field of Kinesiology to advance PA policy development and implementation.

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Major PA Policy Successes in the United States

Several large-scale policies—such as Title IX, the Americans with Disabilities Act, and state physical education (PE) requirements— have had substantial impacts on PA participation rates in the United States over the course of the last century (McConkey & Menke, 2022; National Federation of State High School Associations, 2019; Nunes, 2019). While some of these policies were not directly aimed at increasing PA participation, they still served to change the social and cultural landscape of PA in the United States. These shifts reduced the barriers for previously marginalized populations to engage in PA.

Title IX

The 50th anniversary of Title IX was celebrated in 2022. This landmark policy prohibits discrimination on the basis of sex (including pregnancy, sexual orientation, and gender identity) in any education program or activity receiving federal financial assistance. No exclusions or denial of benefits can bemade on the basis of sex for any academic, extracurricular, research, occupational training, or other education program or activity operated by a recipient, which receives federal financial assistance (Department of Education, 2020). Specifically, institutions receiving federal funding cannot— among other things—treat one person differently from another in determining whether the individual meets the requirements for receiving aid, benefits, or services; subject any person to separate or different rules of behavior, sanctions, or other treatment; or limit any person in the enjoyment of any rights, privileges, advantages, or opportunities (Department of Education, 2020).

In the United States, there are approximately 4.5 million boys and approximately 3.4 million girls who participate in high school sports. Similar to sports participation, research indicates that the United States does not have equivalence in PA participation among boys and girls (Physical Activity Alliance & Active Healthy Kids Global Alliance, 2022; Telford et al., 2016). However, it is important to celebrate the enormous progress that has been made since the passage of Title IX (O'Connor, 2022). Figure 1 demonstrates the changes in sports participation among U.S. youth before and after the passage of Title IX—and highlights the enormous progress made in engaging girls in sports programs (National Federation of State High School Associations, 2019). The impact of Title IX has also largely influenced the participation of young women in college and university- level sports programs across the United States, which has followed similar sports participation patterns to those seen at the high school level (Staurowsky et al., 2022).

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Title IX's impact has also positively impacted women's sports around the world, as evidenced by sports leagues, programs, and events that were unimaginable prior to Title IX. A few examples include the Liga MX Femenil in Mexico, women's basketball leagues in Europe and the Women's National Basketball Association in the United States, and international women's sporting tournaments such as the Women's UEFA Champions League and the Women's Tour de France. Another strong representation of women's inclusion in sport is their participation at the Olympic and Paralympic Games. A total of 22 women competed in the 1900 Paris Olympics across two sports (Nunes, 2019). At the recent 2020 Tokyo Olympics, 5,390 women competed across more than 145 events (International Olympic Committee, 2021)—a 245-fold increase. The 2020 Tokyo Paralympics also witnessed a record number of women participating in the events at 1,853, a 10.9% increase from the 2016 Rio Paralympic Games (International Paralympic Committee, 2021). Despite the strides Title IX has made for women's inclusion in sports and PA, disparities still persist in both sport and PA along economic and racial lines (Braveman et al., 2010). Research demonstrates Latina and Black women from low socioeconomic status backgrounds have considerable barriers to PA, including low neighborhood walkability and crime (Derose et al., 2018, 2019; Pekmezi et al., 2020). Efforts have been made to increase PA participation among both Latina (Marcus et al., 2015; Marquez et al., 2016) and Black (Clark et al., 2018; Pekmezi et al., 2017, 2020) women with varied results. These data support the continued need to reduce community and societal barriers to PA participation in communities of color. These disparities will continue to persist unless greater action is taken to address them. Title IX has proven to have had a lasting societal impact that has reshaped the way women are viewed in sport—as well as the economic potential they can have after they leave athletics (Stevenson, 2010). This policy inadvertently played a crucial role in bringing women's sports into the public conscious, and culturally paved the way for girls and women to become and remain physically active across the lifespan.

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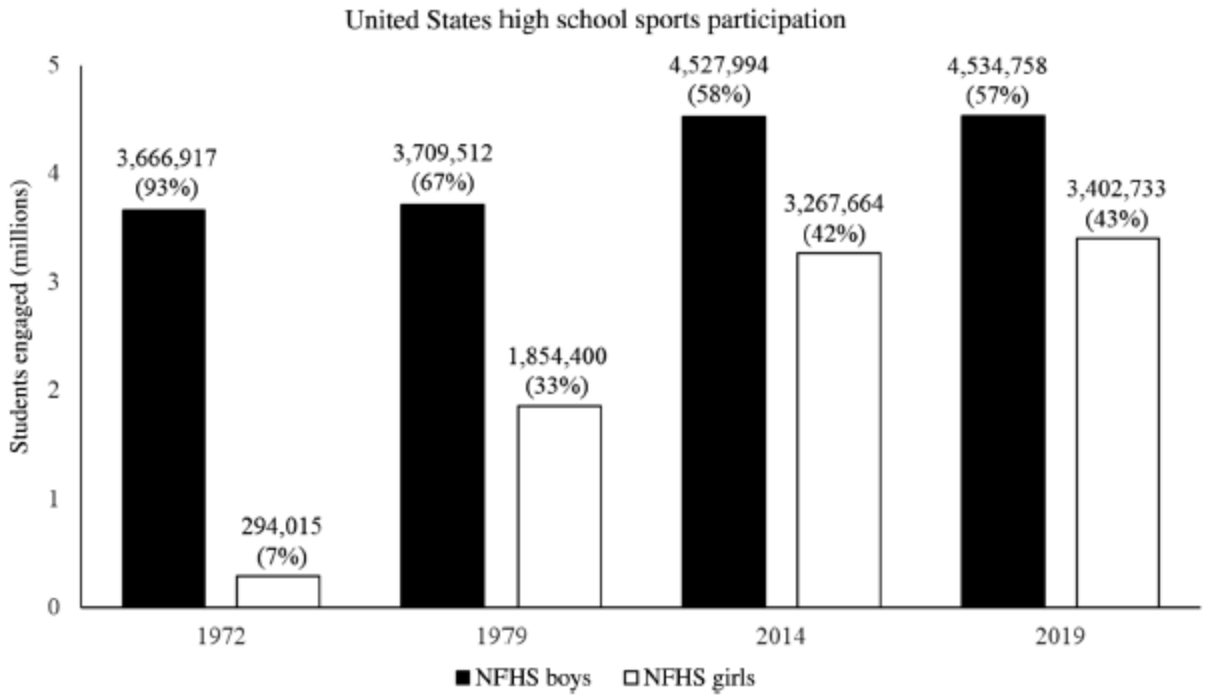

Figure 1 — Rates of high school sports participation among U.S. youth before (1972) and after the passage of Title IX. Percentage of total surveyed population is denoted in parenthesis. Data are derived from the National Federation of State High School Associations (2019) High School Athletics Participation Survey.

Americans With Disabilities Act

The 1990Americans with Disabilities Act (ADA) is a civil rights law that prohibits discrimination against individuals with disabilities. It guarantees equal opportunity for individuals with disabilities in public accommodations (Title III); employment (Title I); transportation, local and state government services (Title II); and telecommunications (Title IV; Department of Labor, 1990). As it pertains to PA, the ADA made assurances that students with disabilities must be afforded the same opportunities to participate in sports and activities as their able-bodied counterparts. This policy also ensures equal access to team facilities including fields, courts, locker rooms, meeting areas, exercise equipment, and other provided amenities.

The ADA led to substantial changes in the built environment that continues to support PA among those with disabilities. Some built environment features include expanding the width of sidewalks to make them accessible for those in wheelchairs, and accommodated signals that—not only beep for people who are blind—but also have extended timers to give people with limitations in mobility more time to cross the street

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(Department of Transportation, 2015). These accommodations have extended into PE (National Cancer Institute, 2020), providing thousands of children and youth with opportunities to move in ways that suit their abilities. Considerable headway in this arena has been made via the passage of the Individuals with Disabilities Education Act (2015), a four-part statute administered by the Department of Education that promotes equal access to quality education by governing how states, schools, and public agencies provide special education and related services to children across the United States.

The Special Olympics organization has been critical in the larger efforts to increase PA among those with intellectual disabilities. Established in 1968, this organization aims to provide year round sports training and athletic competition for children and adults across the United States (McConkey & Menke, 2022). These efforts involve both the Unified Schools and Unified Sports initiatives, which aim to provide millions of children with inclusive opportunities to engage in PA. At the international level, the Paralympic Games have experienced considerable growth and popularity. Tokyo 2020 had the highest participation of any games—with 4,403 athletes from 162 National Paralympic Committees partaking in one of 22 sports (International Olympic Committee, 2021).

Implementation of State PE Requirements

PE refers to the K–12 academic subject that provides standardized PA curriculum and instruction (CDC, 2020a). The development of state PE requirements can be traced back to the postcivil war era and was further developed in the early 20th century and up through the WWII era (Lumpkin, 1997). Across this timeframe, PE has transitioned from a policy aimed to prepare youth for military service to a policy that aims to improve the health and physical literacy of children and adolescents (Lumpkin, 1997).

The presence of PE in K–12 curricula across the United States has evolved over the last two decades. Presently, laws exist that require a specific amount of PA throughout the day at the elementary school level for 21 states; at the middle school level for 13 states; and at the high school level for nine states (Physical Activity Alliance & Active Healthy Kids Global Alliance, 2022). This reduction in PE laws from elementary to high school corresponds with a considerable drop in the percentage of schools that make PE a required course. Inclusion of PE curriculum dropped from 97% at the sixth-grade level to 43% at the 12th grade level (CDC, 2020a; Physical Activity Alliance & Active Healthy Kids Global Alliance, 2022). While 52% of high school students participated in PE on at least 1 day per week, the number of high school students participating in PE on 5 days per week was only 26% (CDC, 2020b). Regarding adapted PE, only 31 states have

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curriculum requirements that meet the Free Appropriate Public Education law—a federal mandate that ensures equitable access to PE for all students of all abilities (National Cancer Institute, 2020).

In addition to the declining rates of PE participation across the different education levels, 55.3% of states allowed use of waivers, exemptions, or substitutions for PE requirements (CDC, 2020a). These waivers encompass students who participate in marching band, a school sport, or Reserve Officer Training Corps. While each includes PA within its activities, these students may not develop the physical literacy necessary for lifelong PA participation in the same way that a student who is engaging in a structured PE curriculum by a trained PE instructor would experience. Moreover, only 12 states require all educators who teach PE be licensed or credentialed (National Cancer Institute, 2020).

These data suggest that wide-scale action is needed to prioritize PE in school curricula at the middle and high school levels of U.S. education. Specific attention must be given to ensure that laws passed require students meet the U.S. PA guidelines, limit exclusions for PE participation, and ensure that PE educators at all levels obtain the necessary education to teach their respective curricula. While stronger and more universal policies are needed, we should not discount the fact that over the course of the last two centuries, PE has become a well-established discipline in the U.S. education system that has the potential to provide a foundation of PA for all children and youth.

An Academic Conceptual Framework for Policy Implementation

The premise behind an academic conceptual framework for policy implementation is that research-generated knowledge drives policy implementation in a linear fashion. Figure 2 provides a visual representation of the seven distinct steps that comprise an academic approach to this process. While each stage of the policy implementation process can go on to influence a different step, this often does not hold true in practice. Descriptions of each stage are given in the following paragraphs.

Research Establishing Benefits of PA

Research supporting the benefits of PA for all demographic groups is strong and encompasses decades of evidence across the multiple populations that make up the United States (Chodzko-Zajko et al., 2009; Office of Disease Prevention and Health Promotion, 2018). This evidence is summarized in the second edition of the PA Guidelines for Americans (Office of Disease Prevention and Health Promotion, 2018)

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and the World Health Organization's (2020) Guidelines for Physical Activity and Sedentary Behavior.

Intervention Research Establishing Efficacy of Strategies for Promoting PA

Evidence-based programs and strategies to increase PA in communities have been developed from research-generated knowledge and have been incorporated into community preventive services across the country (Fulton et al., 2018; National Cancer Institute, 2022; Truman et al., 2000). Culturally tailored interventions have also been shown to have success in diverse racial populations including Latino (Agui˜naga& Marquez, 2019; Beemer et al., 2022; Hasson et al., 2021; Marcus et al., 2015; Marquez et al., 2016) and Black (Clark et al., 2018; Keith et al., 2016; Parra-Medina et al., 2011; Pekmezi et al., 2020; Wilcox et al., 2007) communities.

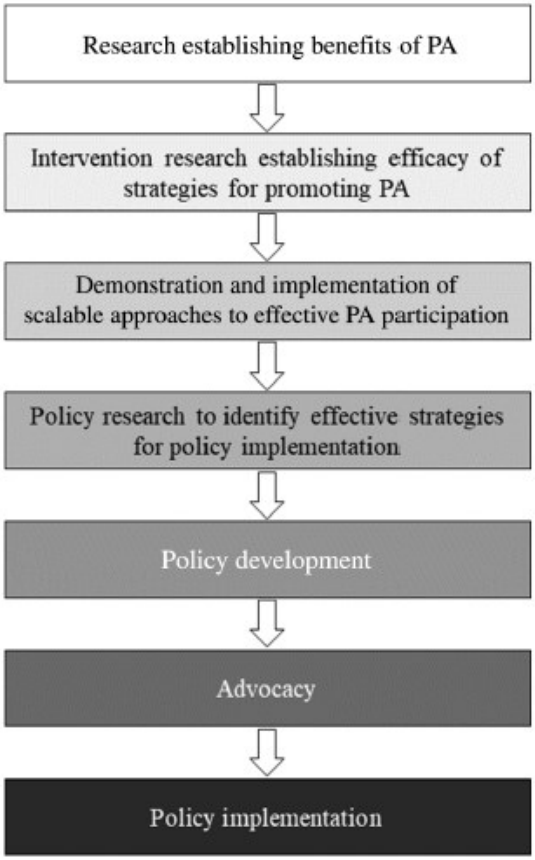

Figure 2 — An academic conceptual framework for policy implementation. Under this model, policy creation, development, and implementation follow a sequential order that results in the passage of a policy into law. PA = physical activity.

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Dissemination and Implementation Research Identifying Scalable Approaches to Effective PA Participation

Scalable health promotion interventions are a critical step in the policy implementation process, as these interventions increase the reach achieved in the target population and provide greater benefits to more individuals (WHO & ExpandNet, 2009). This increase in available data can then go on to provide the evidence necessary to develop a policy. There are several excellent examples of scalable PA promotion interventions—one of which includes the work conducted by the Childhood Disparities Research Laboratory. The group aims to improve PA participation and health-related outcomes in children and adolescents across the state of Michigan. Recently this group has used implementation science and community- based participatory research methods to promote PA among youth in schools across Michigan (Hasson et al., 2022). The Physical Activity and Health Promotion Lab's School Wellness Integration Targeting Child Health program (Eisenmann et al., 2008) is another excellent example of a scalable PA program. School Wellness Integration Targeting Child Health is an evidence- based obesity prevention program that aims to modify key health behaviors (e.g., PA, nutrition) related to childhood obesity among third through fifth graders. This program has been adopted by schools across the state of Iowa with varied success (McLoughlin et al., 2020)—but nonetheless provides valuable insight into the complexities of scaling up school wellness programs across different school environments.

Despite these successes, many interventions have geographic limitations that prevent multistate or national-level adoption. During the last two decades, the National Institutes of Health began funding significant amounts of dissemination and implementation science research. Considerable promise has been made in developing frameworks, languages, and analytic approaches—but there are few examples documenting population level impacts on PA knowledge and behavior.

Policy Research to Identify Effective Strategies for Policy Implementation

There have been several organizations working on PA policies for decades including the National Physical Activity Plan Alliance, the National Physical Activity Society, and the National Coalition for Promoting Physical Activity (now united to form the Physical Activity Alliance—more on this in the following section). In addition, many PA-promoting professional organizations—such as the American College of Sports Medicine, National Strength and Condition Association, American Heart Association, and American Physical Therapy Association—maintain staff who dedicate 100% of their efforts lobbying for PA policies on Capitol Hill. At the federal level, the CDC maintains

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the Division of Nutrition, Physical Activity, and Obesity, which leads the United States' public health efforts to promote regular PA. This includes promoting PA-supportive policies and initiatives like Active People, Healthy Nation (Fulton et al., 2018). In addition, the Office of Disease Prevention and Health Promotion has established and updated the PA Guidelines for Americans since 2008, as well as other health initiatives such as the Move Your Way campaign and the President's Council on Sport, Fitness, and Nutrition.

While many organizations and agencies champion a more active society, a limitation is that the voices are not sufficiently amplified to generate the needed urgency for policy change or coordinated action. While independent missions and goals are needed, impacts would be greater if the various organizations consolidated their efforts using a more collaborative and integrated approach.

Policy Development

Policy development refers to the implementation of policies at the city, county, state, and federal level. It must be noted that policies at the lower levels of our society (city, county, and state) will vary in their development as a result of the region-specific circumstances including the economic, cultural, social, and political forces that make up a state or region's identity. Those responsible for policy development at these levels must ensure that their policies keep these considerations in mind to ensure that the policy moves along in the legislative process and garners larger public support.

Advocacy

Advocacy efforts for PA policies are necessary at the various domains of our society (individual, interpersonal, community, and societal) if the policy is to obtain legislative support. School districts, health professionals, city health systems, city personnel, universities, businesses, and dedicated advocates on Capitol Hill are all called upon to participate in efforts to promote and educate our society on the numerous benefits of regular PA participation.

Policy Implementation

In the final stage of this academic conceptual model, the policy will have survived the legislative process, passed into law, and implemented into its designated domain. How policies are implemented can vary along a multitude of factors such as personnel training and knowledge of the policy. In turn, following a systematic approach to policy

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implementation can ensure that laws are adopted with minimal pushback. The field of implementation science (Estabrooks et al., 2018) has made considerable progress in identifying evidence-based interventions that can be used to support initiatives and policies. The Physical Activity Policy Research and Evaluation Network has also done a considerable amount of work to promote the implementation of PA policies. Physical Activity Policy Research and Evaluation Network is a collaborative research and evaluation network that identifies and implements policies that promote PA opportunities at the local, state, and national level. The six working groups publish a variety of materials that inform policy implementation across their respective domains, such as essays (Ablah et al., 2019), commentaries (Slater et al., 2020), and research briefs (Lemon, 2015). A full list of Physical Activity Policy Research and Evaluation Network resources can be found here: https://papren.org/resources/

Other methods to track policy implementation can include Public Health Law Research (Burris et al., 2012) and policy surveillance (Burris et al., 2016). Both methods can assist interested parties in monitoring the implementation of policies, as well as identifying a policy's shortcomings. Adoption of these methods is also useful in Kinesiology, especially considering that many laws and initiatives can experience legislative volatility. Work must continuously be done to ensure that polices survive administrative turnover and continue to garner positive outcomes for the citizens meant to benefit from them.

In an ideal world, PA policy implementation would occur in this orderly, sequential fashion. However, policy implementation is often slow, inconsistent, and fragmented. This is not to say that the academic conceptual framework for policy implementation outlined above is not useful. But rather, that policy implementation often occurs in a nonsystematic fashion.

A Pragmatic Effort to Advance PA Policy in the United States—The National Physical Activity Plan

There is a need for pragmatic approaches to PA policy implementation that provide a fluid structure capable of accommodating the ebbs and flows of policy discourse. One such approach to advance PA policy in the United States is the National Physical Activity Plan (NPAP).

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Brief History of the NPAP

The NPAP is a comprehensive set of strategies—including policies, practices, and initiatives—aimed at increasing PA in all segments of the population (Physical Activity Alliance, 2016). The NPAP as we know it today began in 2007 from CDC seed funding and was designed to coincide with the 2008 release of the first edition of the PA Guidelines for Americans (Office of Disease Prevention and Health Promotion, 2008). An organizing group gathered informally later that year to establish a public–private partnership to guide the development of the first iteration of the NPAP that would be launched in 2010. Later that year, the NPAP Alliance was registered as a 501c3 organization and spent the subsequent years developing multiple special projects related to the NPAP, including the thorough review and development of a second iteration of the NPAP released in 2016 (Physical Activity Alliance, 2016).

The development of the first and second editions of the NPAP occurred independently of government oversight. While federal entities propose recommendations to the NPAP, the plan exists independently from the federal government—allowing for the development of a robust policy platform void of federal government interference or transitions in the administration. The fact that the NPAP has been able to exist without government regulation or political affiliation is arguably the reason the plan continues to persist today.

The PA Alliance

After the second edition of the NPAP, more intentional and coordinated communication started between the National Physical Activity Plan Alliance, the National Physical Activity Society, and the National Coalition for Promoting Physical Activity to consolidate their efforts toward their common cause. The three organizations united in 2020 to form the Physical Activity Alliance (PAA), consolidating the NPAP as one of PAA's three key pillars.

The NPAP at a Glance

The NPAP is currently organized around 10 societal sectors that are aimed at sustaining a set of policies, programs, and initiatives designed to increase PA in all segments of the United States population, including business and industry; community, recreation, fitness, and parks; education; faith-based settings; health care; mass media; public health; sport; transportation, land use, and community design; and military (Physical Activity Alliance, 2016).

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Content for the plan is determined by a steering committee comprised of professionals with considerable knowledge, expertise, and senior leadership experience in the areas of PA, public health, and policy. The steering committee appoints committees for each sector. Each sector committee has an appointed chair and is made up of a diverse group of individuals from academia, nonprofits, for profits, and government settings. Each committee works to create, maintain, and/or update the content of their respective sector. Guidelines are formulated using evidence-based approaches. Once guidelines are established, there is an opportunity for public comment and final revisions are made based on the provided feedback. The last step is to obtain approval from the PAA before the plan can be released to the public.

The NPAP is organized into strategies, tactics, and objectives. The current plan includes seven overarching priorities, 56 sector specific strategies, and 286 sector-specific tactics (Physical Activity Alliance, 2016). Examples of three sector's strategies and tactics are shown in Table 1.

Table 1 Examples of the National Physical Activity Plan's Sectors, Strategies, and Tactics

Sector	Strategy	Tactic
Public health	Public health organizations should develop and maintain work-forces with competence and expertise in physical activity and health that has ethnic, cultural, and gender diversity.	Increase the number of Master of Public Health programs that provide training on physical activity and its promotion—and increase the number of graduates from those programs.
Health care	Health care systems should increase the priority of physical activity, assessment, advice, and promotion.	Make physical activity a patient vital sign that all health care providers assess and discuss with their patients.
Education	States and school districts should adopt the policies that support implementation of the comprehensive school physical activity program model.	Disseminate best practices that exemplify the Comprehensive School Physical Activity Program model.

Note. These components aim to provide professionals across the 10 sectors with implementable actions that can lead to systemic changes to physical activity participation.

NPAP Progress and Next Steps

The NPAP has made considerable progress in the development, application, and implementation of strategies aimed at increasing PA policy across the plan's 10 sectors. NPAP's strategies and tactics have been included in numerous federal initiatives and position stands, including the U.S. Surgeon General's Call to Action on Walking (Office of the Surgeon General, 2015); the first and second editions of the PA Guidelines for Americans (Office of Disease Prevention and Health Promotion, 2008, 2018); the CDC's Active People, Healthy Nation initiative (Fulton et al., 2018); and the Office of Disease Prevention and Health Promotion's Move Your Way campaign (https://health.gov/moveyourway). The PAA's efforts to increase PA awareness and policy considerations were taken up by Joe Biden's 2022White House Conference on Hunger, Nutrition, and Health (White House Domestic Policy Council, 2022). This included panel sessions discussing methods of creating communities designed to

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encourage PA and developing strategies to support PA among children and youth.

The next steps for the NPAP will be to build upon the existing 2016 edition of the plan, and include: (a) an upcoming midcourse update scheduled for 2022; (b) a thorough evaluation scheduled for 2023 that will characterize the extent to which strategies and tactics from the 2016 NPAP plan have been achieved; and (c) the development, refinement, and release of the NPAP Third Edition— scheduled for release in 2026.

Summary and Future Directions

Policy implementation is a disorderly, time-consuming process that depends on influencing policymakers and influential stakeholders. It is imperative that academics, fitness professionals, public health professionals, medical professionals—and anyone with a desire to influence policies, systems, and environments—recognize this nuance. While there is consistent evidence linking PA to positive health benefits, it will take more than scientific evidence to push policy implementation forward. PA policy successes have often involved connecting major societal trends and cultural shifts. Title IX and ADA are two such examples that demonstrated how societal trends and sentiments can influence equity-driven policy initiatives.

Moving forward, our field must use multifaceted approaches to advance PA policy development and implementation. The field should continue building a broad evidence base for PA. While there is already considerable scientific support regarding the benefits of PA, there is still plenty to learn. This is especially true as it pertains to public health interventions to promote PA and policy research that supports the transition from basic and behavioral sciences to public health research and broad policy implementation. Particular efforts should be aimed at demonstrating that PA can be increased at the community-level through policies, systems, and environments. There is considerable evidence that shows PA can be increased at the individual level (Chodzko-Zajko et al., 2009; Garber et al., 2011), but exceedingly less published data to show that increasing PA at the community level improves health outcomes.

Identifying and utilizing emerging social and cultural movements can provide catalysts for PA policy progress. One such matter is military preparedness, which was initially addressed in 1956 through the formation of the President's Council on Youth Fitness and has evolved through today as the President's Council on Physical Fitness, Sport, and Nutrition. Presently, only two-in-five young adults in the United States are physically capable of meeting the challenges of basic training. This potential threat to national security has warranted the inclusion of the military sector as part of the NPAP

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(Physical Activity Alliance, 2022). This military concern could lead to further investments in PA resources and a revision of state PE laws that promote long-term physical preparedness.

Climate change has also proven to be a pressing societal issue that can be a launch point for PA policy advancement (Davis, 2020; House Select Committee on the Climate Crisis, 2020). This can come via legislation that promotes climate-conscious transportation infrastructure such as Complete Streets. The Complete Streets initiative aims to promote the safe use and mobility of all users; including motorists, cyclists, pedestrians, and public transportation users of all ages and abilities (Moreland-Russell et al., 2013). The Complete Streets model of road infrastructure is a considerable departure from the automobile-first model currently in place in the United States—but is a necessary direction to take if we are to decrease the barriers to PA for all members of our society. The growth in Complete Streets policy adoption has been substantial, such that by 2020, 1,520 jurisdictions in the United States had adopted a Complete Streets policy (only nine jurisdictions had adopted the Complete Streets policy in 2001; Smart Growth America & National Complete Streets Coalition, 2022).

A necessary step forward for the field of Kinesiology will be to train students on how to translate their work into implementable policy recommendations. Graduate students, professional students, medical students, and other trainees in health-related fields are not necessarily taught how to translate science into policy—or how to think about dissemination and implementation while developing and evaluating interventions. Thus, a future direction for Kinesiology education should include changes to program curricula that teach students strategies on how to translate research into practice, how to evaluate policy, and how to advocate for policy.

Establishing a central PA advocacy group that orchestrates the entirety of Kinesiology's efforts would be a vital step forward for the advancement of PA policy in the United States. Doing so would provide health professionals passionate about PA with a streamlined outlet to voice their concerns. PAA supports these efforts with contributions from organizations such as the American Council on Exercise, the American College of Lifestyle Medicine, the American College of Sports Medicine, the American Heart Association, the American Institute of Cancer Research, the American Medical Society for Sports Medicine, and several other organizations that are combined into a single cohesive coalition. A full list of represented organizations within the PAA board of trustees can be found in Table 2. Developing strategies to standardize the message regarding the importance of PA to the respective state and federal legislators

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will be vital to moving our efforts forward.

Table 2 PAA Board of Trustees (2022) and the Organizations Each Board Member Represents

Organization	Representative	Organization website
American College of Lifestyle Medicine	Catherine Collings	lifestylemedicine.org
American College of Sports Medicine	Monte Ward	acsm.org
American Council on Exercise	Graham Melstrand	acefitness.org
American Heart Association	Kristy Anderson	heart.org
American Institute of Cancer Research	Deirdre McGinley-Geiser	aicr.org
American Medical Society for Sports Medicine	Irfan Asif	amssm.org
Myzone Inc.	Mike Leveque	myzone.org
National Athletic Trainers Association	Amy Callender	nata.org
PAA National Physical Activity Plan Sector	Harold Kohl, Russell Pate	paamovewithus.org
PAA Professional Development Sector	Alan Beck	
National Youth Sports Health & Safety Institute	Rebecca Battista	nyshsi.org
NIRSA: Leaders in Collegiate Recreation	Pam Watts	connect.nirsa.org
Move to Live More	Amy Bantham	movetolivemore.com
National Academy of Sports Medicine	David Van Daff	nasm.org
The Sports Institute at UW Medicine	Karla Landis	thesportsinstitute.com
California Fitness Alliance	Francesca Schuler	californiafitnessalliance.com
International Health, Racquet, & Sportsclub Association	Liz Clark	ihrsa.org
Tivity Health	Richard Ashworth	tivityhealth.com
American Physical Therapy Association	Erin Wentzell	apta.org

Note. The PAA is made up of representatives from diverse organizations within the fields of kinesiology, medicine, and the allied health professions. PAA = Physical Activity Alliance; NIRSA = National Intramural-Recreational Sports Association; UW = University of Washington.

Similarly, the field of Kinesiology should aim to improve communication and messaging efforts to policymakers and their constituents. It is not enough to solely rely on the scientific merit of the field's evidence base. Messaging efforts must be tailored to the needs and resources available in the community of interest, the financial constraints faced, the policymakers' knowledge about the issue, the culture around PA in the region, and the region's political climate.

Policy implementation can be a daunting and messy process. Substantial progress can be made through the support of interdisciplinary groups and building up the evidence base for areas in our field that are underdeveloped. No societal or political structure remains in a permanent state—it is up to the citizens to reshape the society in the way that reflects their ideals. The field of Kinesiology must continue to build the science while advocating for a future that can—through policies, systems, and environments—promote physical, mental, and emotional health gains for all.

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