50 Million Strong by 2029 for All

The prevalence of sedentary behavior and obesity are considered a pandemic (Kohl et al., 2012). American children demonstrate critically high levels of sedentary behavior (Kohl et al., 2012), especially those with a documented disability (Maller, Williams, Olds, & Lane, 2007). As a result, today’s youth are the first generation predicted to have a shorter lifespan than their parents (Olshansky et al., 2005). Engaging in 60 minutes of moderate-to-vigorous physical activity (MVPA) is a well-documented strategy that has important health-related benefits. Moreover, participating in 60 minutes of daily MVPA is positively associated not only with health-enhancing levels of physical fitness, but also with improved academic and social outcomes (U.S. Department of Health and Human Services).
Ms. Sanchez is a physical education teacher at Erie Elementary School who promotes universal design for learning in her classes. Ms. Sanchez is also a SHAPE America certified Physical Activity Leader who works hard to ensure that all students receive 60 minutes of daily moderate-to-vigorous physical activity through Erie Elementary School’s comprehensive school physical activity program. One of Ms. Sanchez’s students, Henry, is a seven-year-old boy with Level II cerebral palsy who is new to the school. Henry is able to move for short periods without support and engages easily with his classmates while using his braces. Although Henry is eager to play more games with his new classmates, he is reluctant to participate because he is afraid that he will not be able to keep up. At his old school, Henry’s adapted physical education class targeted his learning goals; however, he rarely participated with his peers in general physical education and physical activity opportunities. Ms. Sanchez met with Henry, his mom, and his classroom teacher to work together to develop a plan to ensure that Henry would be able to participate in all the activities provided by the school.
Department of Health and Human Services [USDHHS], 2008). As a result, SHAPE America – Society of Health and Physical Educators made the 50 Million Strong (50MS) commitment to “put all children on the path to health and physical literacy through effective health and physical education programs” (http://50million.shapeamerica.org/).

Time in schools amounts to 8–9 hours of a child’s day (Institute of Medicine [IOM], 2013), and schools are considered a prime avenue to promote 50MS and to help children reach 60 minutes of daily MVPA (CDC, 2013; Pate et al., 2006; USDHHS, 2008). Although physical education and recess are the typical vehicles through which children receive PA during school, schools are now transitioning into more comprehensive, collaborative, school-based efforts called comprehensive school physical activity programs (CSPAPs). However, many children like Henry are not always provided opportunities to participate in regular PA. In many cases this lack of PA or sedentary behavior may contribute to surging levels of obesity (Robinson et al., 2015; Saunders, Chaput, & Tremblay, 2014).

**What Is a CSPAP?**

Many significant national-level health-based organizations agree on a solution to alter school health programs by endorsing comprehensive and collaborative approaches such as CSPAPs. The IOM (2013) also endorsed a “whole of school” or health-promoting school approach to youth PA promotion referencing the need for schools to increase PA opportunities for students. SHAPE America published a position statement about CSPAPs (American Alliance for Health, Physical Education, Recreation and Dance [AAHPERD], 2013; National Association for Sport and Physical Education [NASPE], 2008), which called for schools to provide physical activity programs to help all children “regardless of ability or developmental level” to meet nationally recommended PA levels (AAHPERD, 2013, p. 2). The five components of a CSPAP are (1) quality physical education; (2) PA during the school day (e.g., in-classroom movement breaks and lunchtime PA programs); (3) PA before and after school (e.g., walk and/or ride to school and PA clubs); (4) staff involvement (e.g., school employee wellness program and sponsoring PA clubs); and (5) family and community engagement (e.g., engaging parents in PA and partnerships with community members and organizations; AAHPERD, 2013).

Concurrently, the Centers for Disease Control and Prevention (CDC) partnered with SHAPE America to develop a step-by-step guide for implementing a CSPAP as a means of helping students meet the nationally recommended 60 minutes of daily MVPA (CDC, 2013). The seven-step approach to implementing a CSPAP includes: (1) establish a team/committee and designate a physical activity leader (PAL); (2) conduct a needs assessment; (3) create a vision statement, goals and objectives; (4) identify intended outcomes; (5) develop a CSPAP plan; (6) implement the plan; and (7) evaluate (CDC, 2013).

At the heart of a quality CSPAP is the physical education program, defined as providing opportunities for all students to learn, appropriate instruction, meaningful content, and student and program assessment (CDC, 2013). High-quality physical education must support all stakeholders and constituents of a CSPAP, and the CDC (2013) has recommended that schools identify a PAL, who can be the physical educator or other staff members at the school. Implementing CSPAP does not fall solely on the PAL; rather, CSPAP requires collaboration from faculty, staff, parents/family and community members (e.g., local coaches), along with the physical education teachers (CDC, 2013). Outside of the quality physical education program, CSPAP occurs before and after the school day through the support of CSPAP collaborators. Examples of the types of activities offered in a CSPAP range from before-school Ultimate Frisbee games to movement breaks in the classroom led by the classroom teacher, to after-school jogging activities (Table 1). Overall, the evidence base to support the effectiveness of a CSPAP with regard to meeting daily MVPA recommendations is still in its infancy.

Despite the call for CSPAPs to meet the needs of all students (AAHPERD, 2013; CDC, 2013), there is little practical guidance within the CSPAP literature that directly promotes the inclusion of children with disabilities. The benefits of active participation for children with disabilities go far beyond issues of social justice, equity and access. Central to the conversation on why CSPAP is needed for students with disabilities are matters of health and well-being. Because students with disabilities face multiple barriers, creating an environment of inclusivity is essential. As such, it is imperative that CSPAP leaders include children with disabilities in their planning. One framework supporting the pre-planning of activities to include all children, with and without disabilities, is universal design for learning (UDL; Lieberman & Houston-Wilson, 2009).

**What Is Universal Design for Learning?**

Universal design for learning emerged from the field of architectural design when federal legislation began requiring universal access to buildings and other structures for individuals with disabilities. Architects began to design accessibility into buildings during their initial design stage rather than retrofitting standard structures. Building on this architectural principle, UDL is a strategy for eliminating barriers to students’ learning. For example, a curb cut enables a person who uses a wheelchair to access a sidewalk while also making travel easier for individuals who...
use walkers, parents with strollers, bicyclists, and other people who might have trouble negotiating curbs. Another example is closed-captioned television programming, which helps persons who are hard of hearing or deaf to follow what is happening, just as it also helps people with typical hearing who are watching in a noisy room or have the volume turned down. Universal symbols that communicate function, such as restroom signage, are also helpful both to individuals who have trouble reading and to those who do not speak the local language (Spooner, Baker, Harris, Ahlgrim-Delzell, & Browder, 2007).

Implementing UDL in physical education would mean that the physical, social, and learning environments are designed so that diverse learners are supported through powerful possibilities for teaching and learning (Perez, 2014). Universal design for learning is a concept, set of principles, framework, and mindset that supports accessibility for the heterogeneity found in classrooms today. Universal design for learning is achieved by varying teaching in order to meet the needs of every child. It provides alternative methods of instruction (in the broad sense), delivery of instruction, materials (equipment), and methods of student response (how students show what they can do) — all within the general curriculum and for every student, regardless of his or her specific areas of diversity (Odom et al., 2005; Rapp, 2014).

For example: Henry in the opening scenario was participating fully in his before-school activity program. Their tag games always gave everyone the option to use a long noodle for the person who is “it.” Henry often chose that option, but when they played on scooters, he could engage without the pool noodle. In addition, he used the wall for support when he got tired. When Henry was in physical education class, he had his choice of equipment, such as a larger ball for kicking, and he often used the wall for additional support. His teacher also had lines taped on the floor or a variety of distances marked by cones when they went outside so he always felt he could successfully kick the ball to his partner, around the cones, or in the goal. Every environment was universally designed for equipment, rules or instruction so he always felt fully included in everything.

Universal design for learning is an efficient way to provide students with access to PA and the physical education curriculum (Lieberman, Lytle, & Claracq, 2008). It considers the range of students’ abilities at the design stage of curriculum making and incorporates accommodations at that point. This built-in access for a wide range of users, with and without disabilities, is the underlying principle of UDL (Rapp & Arndt, 2012).

In terms of curriculum design, UDL implies an approach to employing and arranging instructional materials and activities that allows learning goals to be attained by individuals with wide differences in their abilities to see, hear, speak, move, read, write, understand English, attend, organize, engage and remember. Such a varied, yet challenging, curriculum gives teachers the ability to provide each student with access to the PA content without having to adapt the curriculum repeatedly to meet various needs (Lieberman & Houston-Wilson, 2009). Equipment, instruction, rules and environmental variations that meet the elements of UDL help students learn the intended skills, knowledge and dispositions (Rapp, 2014) by getting them to feel interested in, and good about, the work they are doing (Lieberman & Houston-Wilson, 2009). Such variation supports motivation to learn by offering multiple ways to engage with the lessons’ content, thus providing them with various preferences and styles to find avenues that increase the chance for success (Lieberman & Block, 2016). In another example, Ms. Sanchez, Henry’s teacher, was writing her yoga lesson. Each yoga move had 3–4 variations to meet the abilities of every child. This is not individualized instruction; rather, this is instruction that can be accessed by every child in the class regardless of previous experience or ability.

### Table 1.
#### School-wide CSPAP Week

<table>
<thead>
<tr>
<th>CSPAP Component</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality physical education</td>
<td>Weekly physical education</td>
<td>Weekly physical education</td>
<td>Weekly physical education</td>
<td>Weekly physical education</td>
<td>Weekly physical education</td>
</tr>
<tr>
<td>Before/after school</td>
<td>Jump rope club</td>
<td>Morning-announcement movements</td>
<td>Morning-announcement movements</td>
<td>Morning-announcement movements</td>
<td>Open-gym stations</td>
</tr>
<tr>
<td>During school</td>
<td>Marathon Monday</td>
<td>Active lesson in general education classrooms</td>
<td></td>
<td>Movement break in general education classrooms</td>
<td></td>
</tr>
<tr>
<td>Staff involvement</td>
<td>Participate in Marathon Monday with students</td>
<td>Teach active lesson</td>
<td>Participate in yoga during faculty meeting</td>
<td>Provides movement break</td>
<td></td>
</tr>
<tr>
<td>Family and community engagement</td>
<td>Unified basketball through recreation center</td>
<td>Community sports through recreation center</td>
<td>Unified sports</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Strategies for Collaboration

To be effective, the tactics adopted by the CSPAP leadership team should target strategies designed to improve the actions of all participants, as their attitudes and beliefs will influence how the programs are implemented (Ainscow & Sandill, 2010). Most often, it will be the physical education teacher who initiates the plan of action. Other stakeholders might include classroom teachers, related service providers (such as physical therapists, occupational therapists, or vision teachers), coaches, the school administration, and the school wellness committee. All stakeholders need to focus on outcomes that include activity goals and full participation. When beginning the training, emphasis should be placed on the principles of UDL as identified in the previous section. Applications on how design concepts/activities or content can be used flexibly should be encouraged. Simple instructional practices that promote interaction and communication between students are essential.

Key Principles to Apply

**Identify the Environmental Factors Related to UDL.** To be a strong leader in developing inclusive environments, practitioners must be knowledgeable in accessibility guidelines for public facilities. While many state and federal laws mandate equal access to recreation programs and environments, there is still reluctance and, in many instances, resistance to inclusive practices. The first concern is where the activity is going to take place. How accessible is the room, and what is the spatial arrangement including lighting, noise level and physical location? Students should be able to access activities and equipment in ways that work for them. In Henry’s case, the PAL should consider surface areas for moving and equipment such as a scooter or sport wheelchair to make it easier for him to move around.

**Identify Questions the Instructors Need to Ask for Full Participation.** When meeting with the PAL, have individuals brainstorm all possible scenarios they may encounter when presenting activities. Alternative ways in which students can participate (such as participating at the speed or pace that the student chooses, or allowing for an extra bounce in volleyball) and what is required for participation, including levels of support and the utilization of peers and paraprofessionals, should also be discussed.

**Identify Several Options for Accomplishing the Goals of the Activity.** For example, activities can be organized in a variety of ways to accommodate a range of abilities. In Henry’s case he could work with selected peers in a smaller space while participating in an activity such as after-school Ultimate Frisbee. Allow the PALs to continually innovate and collaborate with one another with ongoing meetings or quick check-ins for more effective results. Assist individuals in finding information needed to answer questions on participation by accessing resources, essential personnel and equipment needs. Provide specific examples of UDL in practice that can
easily be implemented. For example, at Henry’s elementary school there are also two students who speak English as a second language, two with autism spectrum disorder, and one who has a visual impairment. The after-school Frisbee program would offer all children options, such as playing a regulation game of Ultimate Frisbee; playing smaller, modified games of Ultimate Frisbee; or just tossing a Frisbee back and forth with 2–3 friends. Henry might feel most comfortable in the modified game or just tossing a Frisbee with friends. Another example might be when the PALs were setting up an obstacle course for the children to do before school and during physical education. The obstacle course had footprints on the floor to show children where to go, a rope from obstacle to obstacle, and various noise-emitting devices on each activity, and many of the obstacles were against the wall for ease of access by many of the children.

Identify the Outcomes and Assessments. This process synthesizes evidence-based practices for planning, instruction and assessment of diverse learners in ways that facilitate teachers’ ability to instruct. In addition, PALs should consider strategies to develop and arrange multi-level assessments to ensure participation. For example, when assessing locomotor skills, provide videos, posters and demonstrations so every child knows what to expect for that skill. For kicking, provide different types of balls and tape and cones to demarcate kicking different distances, as well as videos, posters and demonstrations to model the intended skill. Finally, make sure there is ongoing communication with the teachers, coaches and other personnel responsible for helping all students thrive. All members should actively assist in addressing any issues that pertain to increasing PA throughout the school day. For example, Henry has a friend at school who uses a wheelchair. Henry’s school has an after-school fitness club that does station work. Each station is set up with variations in execution, repetitions, intensity and duration. The fitness course is accessible to every student, and there is no need to adapt as an afterthought. All variations in skill and directions are done ahead of time, and a culture of full inclusion is created. Examples include allowing children different ways to express their understanding and mastery of locomotor patterns, such as by doing the pattern in traditional ways or in a way that is student-created. For a child who uses a wheelchair, alternative ways of demonstrating functional locomotor patterns might include moving through obstacles, changing speed and directions, and popping small wheelies.

Case Study: Back to Henry

At the beginning of the school year Ms. Sanchez and other PALs met to discuss how to universally design all components of the CSPAP model. During the meeting, the PALs derived a 36-week universally designed CSPAP plan for Erie Elementary School. The CSPAP model is designed to encourage collaboration between the school, the community and the parents to implement a CSPAP. The details of each component are listed here.

Before and After School. The staff at Erie Elementary provides opportunities for children to participate in extracurricular activities to increase MVPA. Every day before the school’s morning announcements, teachers lead short physical activities in the classroom. The school also provides a jump rope club and open gym times once a week before school. During jump rope club Henry and his classmates are free to jump when the music plays or take a break by walking around the gym between songs. Henry and his classmates are able to choose from a wide variety of ropes (i.e., ropes that are taped on the floor, ropes with large handles, single ropes and double ropes). Henry can also use his braces during this whenever he needs to. During open gym, Ms. Sanchez sets up a variety of stations (e.g., scooter obstacle course, jump rope, hula hoop, basketball shooting, dance) with various forms of equipment to make sure Henry and all his classmates can successfully complete each activity at every station.

During School. Once a week Henry’s class participates in the school’s running program, Marathon Monday. This school-wide program is designed to train students to participate in a local community 5k race. The Marathon Monday program provides opportunity for students to complete laps that count toward their classes’ total mileage. The first class in each grade level to complete 26.2 miles (full marathon) receives a marathon medal and extra recess time the following nine weeks. Henry and his classmates are provided choices in how they complete their laps on Marathon Monday. The track is divided into zones (red: walking zone; blue: jogging/walking; green: running), and students can complete laps in whichever zone they choose and change zones as needed. The PALs at Henry’s school also design and implement daily active classroom lessons and movement breaks. The PALs design each break so that all students can participate (refer to http://moveforthought.ning.com/ for ideas on morning movements, active lessons, and movement breaks).

Quality Physical Education. Ms. Sanchez’s physical education objectives emphasize developing children’s motor skills and increasing their MVPA levels. These objectives align with the goal of preparing all students to be successful before school and during community activities. For example, a favorite activity of students is to play on the racetrack. When playing on the racetrack, students complete laps in the zone that they choose (walk, run or jog) around either the big or small track (see notes about a universally designed track above). For each completed lap on the large or small track, students receive two dollars (play money). In the middle of each racetrack, Ms. Sanchez places stations with equipment (e.g., soccer balls, floor hockey sticks, scooters, hula hoops, gymnastics mats) and skill cards (cards with various activities that teach skill mastery). Each activity inside the racetrack costs students a designated amount of money. During the stations, children participate in activities that promote skill mastery. At each station the activities also incorporate important components of the sport such as rules, teamwork and tactics through small-sided games to ensure maximal opportunities for response, success and PA. Teachers may set time limits for each activity and have students complete more laps to pay and choose a different station. For example, Ms. Sanchez’s lesson will focus on developing different skills needed to play basketball. Basketball is one of the unified sports in Henry’s community. In this instance Ms. Sanchez chooses activities at the stations that develop skills such as dribbling, shooting and passing (Lieberman & Houston-Wilson, 2009).

Physical Activity. In order to facilitate good CSPAP implementation, the staff should be involved in the planning and implementation, and also be provided with opportunities to be physically active. Marathon Monday provides teachers with an opportunity to be active alongside their students (Table 1). Furthermore, by incorporating a brief yoga session into weekly faculty meetings the teachers are provided with another opportunity to be active. Also, faculty meetings provide an opportunity for the PAL to lead professional development trainings to help teachers implement universally-designed movement opportunities in their classrooms. These meetings provide a variety of ways to perform the yoga skills or
any activity that is presented so teachers can learn the various ways to teach each unit of a CSPAP. To assist the PAL in these trainings, local experts in CSPAPs (i.e., university professors and community members) should be considered as resources to lead and assist in professional development opportunities. Finally, the school staff and PAL should discuss avenues for connecting families, the community and the school to promote universally designed opportunities for all students to be active.

Conclusion

In order for Henry to participate in all aspects of the school’s activities, effective communication skills were needed for successful implementation of a CSPAP through the use of UDL. Additionally, connections and positive communication between school and community members were made. For example, Henry’s teacher contacted a local disability sport organization that offered to lend the school wheelchairs for Ultimate Frisbee. Ms. Sanchez will plan on introducing Ultimate Frisbee in the afternoons, which all children, with and without a wheelchair, will be able to play together. Building these connections between staff, community members and local sport organizations is essential for establishing opportunities that foster inclusiveness and, more importantly, a sense of belonging for the students (Fennick & Royle, 2003).

When Ms. Sanchez began planning her CSPAP activities, she made it clear to the staff that she wanted all children to have access to the PA programming offered at the school. Her basic philosophy was that all of her students have strengths as well as challenges, and that a learning community, particularly one engaged in promoting a healthy and active lifestyle, requires an appreciation for diversity in order to succeed. To accomplish this, everyone needed to “be on the same page.” As a result of the planning, communication and universally designed CSPAP, Henry is able to achieve 60 minutes of daily MVPA. For example, Henry will be able to participate in recess since the playground monitor ensures various balls for four-square, which Henry likes, and many different types of jump ropes including a rope-less jump rope and a rope cut in half. The children are also taught different types of rules in order to include everyone. During before- and after-school programs the school provides variations in equipment and execution (e.g., serving a volleyball from different lines on the court, allowing the ball to bounce twice, and large/small volleyballs and beach balls). Henry is always included, and his presence is never an afterthought by the teachers. His involvement is part of the planning from the start, and every activity is universally designed to ensure his total inclusion. Henry is now really excited about going to before-school programs such as jump-rope club, and his mom is eager for him to attend after-school programming such as playing Ultimate Frisbee.

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