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## Developing a K-12 Rural School System Wellness Policy through Community Engagement

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with a rural school corporation that involved the development and implementation of a wellness policy necessary to comply with new educational regulations (IDOE/SNP Policy 87 Public Law 108-265). An important objective for this wellness policy was to address the growing problem of school age obesity.

Physicians, health policy experts, and health-care providers and wellness advocates see childhood obesity as a multi-factorial epidemic with serious implications for health-care delivery systems and society now and in the future. The effects of obesity in children include chronic illness, disability, low self-esteem and economic hardship for individuals, families, schools, communities, employers, and nearly all facets of the health-care system (Koplan, Liverman, & Kraak, 2005; Thompson, Brown, Nicholos, Elmer, & Oster, 2001; Finkelstein, Fiebelkorn, & Wang, 2004; Thompson, Edelsberg, Kinsey, & Oster, 1998; Tucker & Friedman, 1998; U.S. Department of Health and Human Resources, 2001). Children and adolescents are especially likely to develop serious health and psychosocial problems related to obesity, which may impair academic performance and social functioning (Schwartz & Puhl, 2003).

Perhaps the most significant component of the obesity epidemic in children is the likelihood of early development of adult associated health problems and risks. Obesity among young people is associated with increased risk for type 2 (formerly called adult-onset) diabetes mellitus (T2DM), high blood pressure, sleep apnea, and musculoskeletal problems (Koplan et al., 2005). Nearly 60 percent of overweight or obese 5-10 year-olds have at least one cardiovascular disease risk factor (e.g., high cholesterol or high blood pressure) (Freedman, Dietz, Srinivasan, & Berensen, 1999). Type 2 diabetes has become increasingly prevalent among children and adolescents as overweight and obesity rates rise (Rosenbloom, Joe, Young, & Winter, 1999). One study estimated that one in three American children born in 2000 will develop diabetes in their lifetime (Venkat Narayan, Boyle, Thompson, Sorensen, & Williamson, 2003). Ferraro, Thrope, and Williamson (2003) reported that children overweight by age eight were more likely to be morbidly obese as adults. Furthermore, it has been reported that overweight children and adolescents are likely to

become obese adults (Freedman, Khan, Dietz, Srinivasan, & Berensen, 2001). Recently, it has been suggested that children in rural areas are particularly susceptible to obesity and increased risk for the development of T2DM (Yousefian, Ziller, Swarts, & Hartley, 2009; Adams & Lammon, 2007).

Physical therapists are uniquely qualified to embrace active roles in community health and disease prevention by providing consultative and intervention services for health and wellness issues to individuals of all ages (APTA Priority Goals, 2009). Opportunities in disease prevention exist in local communities and allow PTs and student PTs to use their intellectual property, talents and skills to meet professional objectives related to social responsibility, advocacy, and prevention and wellness. Community-campus partnerships are recognized in the health professions as an effective strategy in addressing many community health issues through service-learning experiences (Seifer, 1998; Seifer, 2000).

Service-learning is an educational strategy that combines community service with structured experiences, specific learning objectives, and directed student reflection (Seifer, 1998; Community Campus Partnerships for Health [CCPH], 2006). Successful service-learning emphasizes clear open communication between involved parties and balanced responsibilities and outcome benefits, mutually shared goals, accountability, respect and commitment (CCPH, 2006). In addition to supporting curricular objectives and skill development, service-learning can be a useful tool to develop professional behaviors and attitudes that are often considered part of the hidden curriculum of professional education (Hafferty, 2006; Stern & Papakakis, 2006). Service-learning experiences using the world as the classroom can be an effective way to provide real world training and leadership opportunities and promote physical therapy outside of traditional settings.

The primary and secondary education system offers a readily accessible network to provide information and intervention on two important factors associated with obesity: nutrition and physical fitness. Primary and secondary education systems should play an important part in a national effort to prevent childhood obesity. However, there are challenges facing educators



has 15 high school and 10 middle school sports programs. The median household income in the school district is \$37,944 (SWJCS website, 2005). Approximately 50 percent of the students in the school system participate in the free and reduced lunch program. Working with the school system superintendent, the following were identified as key partners: cafeteria staff, representative school faculty, physical/health education staff, district school board members, parents, students, and local community leaders. The superintendent played a central role by identifying and coordinating initial contacts with the stakeholders and articulating the need for development and implementation of the wellness policy.

Focus groups, meetings, and interviews with key stakeholders (e.g., administrators, faculty, staff, and parents) were held in the evenings using “brainstorming” strategies that identified system strengths, barriers, and potential strategies for implementing a multi-faceted wellness program. During these initial meetings, stakeholders were familiarized to the needs of the school system in regard to IDOE/SNP Policy 87 Public Law 108-265. While the underlying causes of childhood obesity were understood to be complex, the interaction of lack of physical activity and unhealthy eating was considered primary. These factors required input and direction from the cafeteria staff, parents, faculty, and specifically the health and physical education faculty. The barriers specific to SWJCS were limited fiscal and other resources, lack of community awareness about the childhood obesity epidemic, student extra-curricular involvement, and the potential for community resistance to change.

Significant consultants and collaborators in this project were the cafeteria personnel who played a key role in development of the nutrition section of the wellness policy. The head cooks from the schools and the food service director provided menus, recipes, and personal and professional opinions pertaining to nutritional content and food choices currently available to students. The cafeteria is a self-supporting entity within the school system and depends on adequate revenues to meet its budget. Because of this arrangement, the cafeteria needed to sell the items to cover expenses. Balancing the economic realities of the cafeteria enterprise with the nutritional requirements of the wellness

policy was a challenging process. Cafeteria staff expressed concerns about changing menu choices from items that might be popular with students and tend to be inexpensive (processed or frozen items such as French fries and chicken nuggets) to items that might be unpopular and lead to reduced revenues. Healthy food items such as fresh fruits and vegetables tend to be more expensive and require more effort to prepare and are typically unpopular with students of all ages.

Health and physical education teachers assisted with the activity and health awareness components necessary to meet the state requirements. Physical education and health educators discussed the challenges regarding funding levels, gym time availability, the use of out-dated equipment, and coordination of class schedules. The physical education and health educators also indicated that the typical student tended to be indifferent to matters pertaining to physical fitness and wellness. They also noted a general lack of student accountability for their own health. School board members played an important role by critically reviewing, providing feedback, and ultimately adopting the collaboratively developed wellness policy. The board consisted of five active community members who served as educational consultants and provided community oversight of the school wellness policy implementation. The school board members demonstrated unanimous support for adoption of the wellness policy. Key community contributors in policy development and implementation were the state-appointed childhood obesity coordinator and the local hospital wellness coordinator. These individuals had worked together closely in the past to develop strategies to increase community wellness awareness and prevention of obesity and served as external consultants to the school system and student PTs in the development of the health and wellness policy.

Following the interviews and focus group meetings, three phases of project development and implementation were identified:

**Phase 1. Wellness policy development.**

The PT students met with the school system superintendent to discuss the progression and events needed to implement a successful and sustainable policy. The superintendent provided academic and administrative insight



Early anecdotal reports a year after implementation of the policy were obtained from the superintendent and administrative staff, cafeteria staff, school nurse, psychologist, school board parents, testing coordinator, and technology administrator. Examples of compliance with the wellness policy noted for nutritional improvements included: exclusive sale of baked snack chips and items containing zero trans fat on snack cart; sale of mostly diet, caffeine free soft drinks; offering water and healthy juice alternatives in vending machines; baking cafeteria food items with the exception of French fries (French fries are scheduled to be phased out by 2010); addition of healthy wrap sandwich options to menu; daily offerings of salad bar and baked potato bar; yogurt offered with breakfast options; introduction of alternative milk options, including vanilla and strawberry milk, which were very popular with the student body; and a daily “healthy sack lunch” available to elementary students. The cafeteria staff decreased serving fried foods from five days a week to only two days a week with plans to limit to one day a week in the next academic year. Other observable nutritional changes consisted of an increase in the number of school lunches consumed by faculty. Average faculty lunch consumption for the prior school year was 18 per day in the elementary school; this increased to 58 per day following implementation of the wellness policy and was attributed primarily to the availability of the new daily salad bar. An initial staff concern with policy implementation was the possibility of decreased cafeteria revenue, particularly for the elementary school cafeteria, which had been experiencing difficulty generating a profit. However, since incorporating healthier food options in the cafeteria, the elementary school cafeteria generated approximately \$6,000 in profit in the first three-month period. While actual numbers were not available, the faculty and administration reported a decrease in the number of student visits to the elementary school nurse’s office during morning hours during this initial phase-in period. In response to the wellness policy implementation and administrative encouragement, many teachers adopted a policy of no cakes/cookies and requested healthy snack choices for all classroom parties. Any practices that promote the consumption of less nutritious

snack foods and beverages in schools have been shown to be associated with poorer diets and higher body mass index among students (Brenner, O’Toole, Kann, Lowry, & Wechsler, 2009). The changes related to healthy eating introduced by the cafeteria staff, the vending machine offerings, and the classroom party snack policy, have all been important and proactive changes to at least promote healthy eating, though the long term effectiveness of these changes will take years to determine.

Several barriers limited the progress of the physical activity components of the wellness policy. The primary limiting factors were the availability of gym space and staff required for an increase in structured physical activities, the perception of dissonance between academics and wellness and nutrition policies, and the minimal state physical education requirements for high school grade levels. Despite these limitations, observable changes have been made in the elementary school. A notable addition to the elementary school curriculum as a result of the new policy was the implementation of a daily 40-minute, four-week swimming course. Previously, the pool was only being utilized by the elementary school 20 percent of the available time during the school week. However, after the policy was enacted, the 3rd, 4th, and 5th grade teachers incorporated swimming classes for an hour a day for eight-week periods through the school year as part of the physical education curriculum. In addition, elementary staff attempted to incorporate additional physical activity into the scheduled lunch period, allowing students the opportunity for unstructured play after finishing lunch. However, an increased amount of plate-loss (uneaten food) was noted as many of the children were rushing through meals to participate in the lunch time physical activities. This resulted in a decision to temporarily discontinue the additional lunch period physical activity time until other strategies could be identified. Perhaps some of the most exciting and unanticipated developments involved the faculty and staff. The SWJCS faculty and staff initiated an after-school walking program on campus, a weight loss contest and a no-smoking policy. Additionally, because of the increased community-wide awareness of the school wellness policy, the faculty and staff were offered a free one month membership at a local

fitness center. From a community perspective, the school has also opened up the pool to community members two nights per week for a nominal fee (one dollar) to cover the cost a lifeguard.

### Discussion

The rising incidence of childhood obesity requires grassroots efforts by many concerned parties. The development and implementation of a school system wellness policy by student physical therapists is one example of how academic institutions, community members, and local stakeholders can assemble talents, resources, and intellectual capital to work for a common cause. The community and academic partners were visionary, enthusiastic, dedicated, and driven through a common need to meet a state educational mandate. We have reported here that following the implementation of the wellness policy, substantive changes were made in the cafeteria offerings providing healthy food options, and there were increased opportunities for children to engage in physical activity during the school day. In addition to obvious benefits associated with the wellness policy, there were other immediate benefits to the school system, including an awareness of faculty and staff on role modeling through healthy food choices and regular physical activity. These non-classroom/non-academic life skills and behaviors are potentially as important as academic skills and behaviors learned in the classroom.

Several challenges were identified while assessing the needs of the school system. They included stakeholder expertise, limited resources and funding, the lack of community awareness, resistance to change, and perceived sensitivity of how to locally address the childhood obesity epidemic factor. However, through open and honest communication, planning and the combining of resources, the community stakeholders were able to work together to address these challenges. The many benefits reported from other school wellness program models (Michael et al.) have also been realized at SWJCS and include improved student morale, more focused children in the classroom, fewer headaches, healthier eating habits, and neutral or improved revenue streams from the cafeteria.

The primary intent of the wellness policy was aimed at influencing the current health

and wellness practices of students, faculty, staff, and community members. Sustainability of the program will depend on continued community involvement with established local resources, the dynamics and dedication of the current wellness team, and, most importantly, parent, student, and family involvement. Parents and families may have the greatest responsibility to have positive and lasting effects on children through healthy living and setting good examples by incorporating regular physical activity and healthier eating habits into their daily routines. The superintendent (personal communication, April 17, 2009) reported in a telephone interview some preliminary observations and changes from the wellness policy including the elimination of all fast foods brought into the school, an 80 percent reduction in the days fried foods are served, and improved interaction with the cafeteria and nutrition staff about menu and best practices. When asked about the impact on the faculty and staff, he observed that faculty and staff are walking and/or swimming more than before and the elementary teachers have started the “biggest loser” weight loss contest with monetary incentives for those losing the most weight. He also believed the increased use of the swimming pool during school hours for the elementary children and creating community evening availability two nights per week were viewed as an example of increasing healthy behaviors for physical activity and exercise within the entire community. The superintendent also expressed what he felt were the two major challenges to incorporating lifestyle and behavioral changes in the school children. One is the “technology challenge,” which involves limiting (or at least balancing) computer, video, and television time with appropriate physical activity. The other is the “stranger/danger” phenomenon regarding the real or perceived problem of limiting outside play by children; rural communities have been shown to be particularly sensitive to this challenge (Yusefian et al.). These are issues perhaps best addressed by school systems, parents, families, and the communities working together.

The need to increase public awareness of the alarming statistics related to the childhood obesity epidemic and future health-care implications is real. There are important roles

for community members and health-care providers from multiple disciplines to bring their expertise and intellectual property to the table to work collaboratively and meet the needs of individuals and society. Cultural, racial/ethnic, and socio-economic differences need to also be considered as childhood obesity has been shown to disproportionately affect minority youth populations, with African-American and Mexican-American adolescents more likely to be overweight than non-Hispanic white adolescents (National Center for Health Statistics, 2006). In response to changing demographics in the nation, it is crucial that local health-care communities initiate active roles in health awareness, education, wellness, and disease prevention and collaborate to address this epidemic.

The CDC conducts SHPPS every six years to assess school health programs in the United States, with the most recent information published from the 2006 study (Kann, Brener, & Wechsler, 2007). The SHPPS is a valuable resource for school and public health practitioners, policy makers, and advocates for those concerned about the health and safety of youth. Essential elements of effective school health programs include health education, physical education and activity, health services, mental health and social services, nutrition services, healthy and safe school environment, faculty and staff health promotion, and family and community involvement. Several of these essential elements were addressed through this partnership, although SHPPS 2006 recommends more family and community involvement is needed (Michael et al).

One of most important aspects of the policy was the recognition and importance of emphasizing opportunities to empower students. Incorporating physical fitness and nutrition into a daily routine within the curriculum allows even young children to appreciate benefits and begin to develop healthy lifestyles. It is anticipated and hoped these changes will lead to the development of a commitment to lifelong learning in which physical fitness and nutrition are incorporated into their daily lives. However, assessing long-term impact of the wellness policy on actual student behaviors, lifestyle changes, and on childhood obesity is beyond the scope of this paper and will require years of

ongoing evaluation to establish any cause and effect.

### **Impact on Professional Development of Physical Therapist Students**

The PT students, now practicing clinicians, reported personal and professional growth through their involvement and leadership in this community-campus partnership. Reflecting on the personal impact, the PT students reported that this experience helped them with recognition and development of the core values of their profession: accountability, altruism, compassion, excellence, integrity, professional duty, and social responsibility (APTA Core Values, 2009). Furthermore, as students these individuals reported positive experiences in directing their own learning using the partnership as a vehicle for increasing their knowledge of health and wellness issues in children. As the project continued through the second and third curricular years, the PTs were proud of the accomplishments associated with the progress of the project and reported growing appreciation of the intellectual contributions that they were able to make as students to the community partnership. The project also provided opportunities and experience in disseminating their work in the form of scholarly endeavors at national meetings (Featherstone, Etienne, & Brosky, 2007; Abraham et al., 2008). These clinicians continue to be actively involved in the promotion and development of health and wellness initiatives in their workplaces and communities. It is important to appreciate that one of the initial challenges encountered by the student PTs and the SWJCS was the lack of resources available in the district to develop and implement the federally mandated wellness policy. This reality demonstrated the potential impact of partnership development between communities and academia, especially when students are involved through focused, credit-bearing service-learning. Truly demonstrative of a “win-win” situation, the work of the student PTs in development and implementation of the wellness policy saved substantial school system time, manpower, and financial resources.

### **Conclusion**

As the profession of physical therapy advances toward APTA Vision 2020, there is

relevance in community partnerships to promote physical therapists' role in addressing wellness needs within local communities. Service-learning as a pedagogy has been effective in many health professions educational programs like medicine, nursing, and dentistry, but is relatively new in physical therapy educational programs. This current project may provide an idea or model for other physical therapists/students to explore community engagement and service-learning opportunities. According to Vision 2020, physical therapists will be guided by integrity, life-long learning, and a commitment to comprehensive and accessible health programs for all people; further, it states that PTs will render evidence-based services throughout the continuum of care and improve quality of life for society.

There is a real opportunity for physical therapists to act as change agents and advocates for preventative health care in the community and at local, state, and national levels. As the profession of physical therapy moves forward, it is necessary to validate a role in the provision of health-care services through research, addressing direct patient intervention and active health promotion and disease prevention. This validation will occur through endeavors that include advocacy and awareness, community partnerships, coalitions and collaborations, legislative action, appointments to federal panels, an assertive health services research agenda and infrastructure, and research capacity building (APTA Vision Statement, 2009). While academic programs will prepare physical therapists to effectively manage adverse effects of chronic adult diseases such as diabetes and obesity related illnesses, a continued emphasis may also include collaborative efforts on improving awareness and meaningful prevention measures in youth through multi-disciplinary community engagement.

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