Physical Activity and Public Health: The Challenges Ahead

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The “epidemiologic transition” refers to the shift in public health focus away from communicable diseases that plagued prior centuries and toward the rising prevalence of noncommunicable (ie, chronic) diseases of the 20th Century. The past 60 years have brought often-overwhelming technological advances designed to make life easier and more efficient in order to free up leisure time. Although these advances have improved the quality of life for many, we now recognize the substantial global challenges that they pose to population health as daily energy expenditure continues to decline exponentially. Indeed, sedentary lifestyle-related disorders (eg, cardiovascular disease, cancer, and diabetes) are now identified as the leading causes of death in the United States and other developed countries. Moreover, the risk factors associated with these disorders (obesity, hypertension, dyslipidemia, and insulin resistance) are becoming more and more prevalent at younger ages.

Fortunately, an abundance of observational and experimental science supports the notion that regular physical activity of higher, moderate, and even lower intensity is beneficial to health across the lifespan. This evidence also suggests that while the initiation of regular physical activity is effective at ameliorating most chronic disease risk factors, even greater benefits are derived at the prevention (rather than the curative) end of the public health spectrum. These findings underscore the importance of maintaining an active lifestyle and justify the move of the Physical Activity and Public Health (PAPH) field to the front lines of public health practice.

Public health remains a delicate balance between science and practice. Many times, strategies to prevent the spread of a given “contagion” must be initiated well before science decides (with 95% confidence) what that “contagion” is or how it works. Take, for example, the HIV/AIDS outbreak of the early 1980s, in which efforts to close bath houses were enacted years before the HIV/AIDS retro-virus was identified. This is not the case, however, with regard to the etiology of our most prevalent chronic diseases. In fact, the scientific principles of biological plausibility, temporality, dose-response, and consistency of the findings allow us to infer safely that sedentary behavior is a causal factor in the pathway to disease and early mortality. Therefore, the promotion of an active lifestyle across the lifespan should be a primary element of public health practice and healthy public policy—except that it is not because (despite overwhelming evidence) as policy makers, we are reluctant to interfere with the lifestyle choices of the very public we are meant to protect.

Also at odds among public health professionals is whether intervention efforts should be directed toward individual (behavioral) risk factors or toward environmental risk conditions. Some of the most successful public health maneuvers of the past century have relied on environmental policies and approaches (eg, zoning laws, water fluoridation, garbage pick-up, highway/automobile design). What was especially successful about these strategies is that they were passive strategies in that they bypassed individual choice. For example, changes in highway and car design were far more effective in lowering motor vehicle fatalities than were public services messages about wearing seatbelts. So, why not apply these same principles to promote physical activity via building and transportation design or by school and workplace policies? After nearly 60 years of physical activity and health research, it is clear that behavior change alone is insufficient to increase population levels of physical activity.

This is not to suggest that efforts toward individual behavior change should be abandoned. It is just that such efforts seem particularly insufficient in a culture that creates barriers to physical activity at every opportunity (think escalators, the internet, locked stairwells, drive-thru windows, policy bans on recess or on clotheslines). More importantly, these environmental efforts should not stop at stairwells, safe routes to school, green spaces, and bicycle lanes, but rather continue toward participatory community building and community action, giving people control over these aspects of their environment and their health. For instance, new buildings or industries should be required to submit a health impact assessment to the community, which documents the planned effects the building or industry would have on the physical activity patterns of the citizens exposed to it. This is especially important for underserved sectors of the population, for whom lifestyle-related health disparities between their
more affluent counterparts and themselves continue to grow wider.

More than 20 years ago, the 1986 Ottawa Charter of the World Health Organization clearly defined a plan for engaging citizens to participate in strategies to mitigate their own individual risk factors, as well as the environmental conditions that affected their families and their entire communities. Unfortunately, the full potential of the Ottawa Charter with regard to directing public policies and private decisions affecting physical activity behaviors has yet to be realized. This may be due to the fact that the majority of our so-called efforts at health promotion lack considerable imagination. Providing aerobics classes for single mothers living in urban housing projects is nice, but is destined for failure. On the other hand, providing low-cost, on-site day care or after-school care, along with 30 minutes of free time during the work day, might allow someone to walk or play during the day with their children. Further, helping older adults of low income raise a communal vegetable and flower garden is far more beneficial from a health promotion standpoint than is a program of chair aerobics; however, it involves more creativity and effort on behalf of the public health practitioner. So it is now time to move science into action. This translational approach appears a bit stalled, however, as the policy and practice area of PAPH is the least developed at this time. The goals of our field need now to expand toward increasing knowledge, understanding, and formulation of evidence-based public health policy directed toward the promotion of physical activity across the lifespan. Sound training in the knowledge and understanding of health policy process, content, and outcome is necessary to facilitate this movement. This movement, however, also relies on capacity-building and multiple sector approaches among scientists and practitioners from within and outside the traditional public health arena. Examples of such complimentary efforts are observed in the national physical activity plans of several countries, as well as within 2 state-specific plans in the United States (Texas and West Virginia). These efforts are designed to center on multiple sectors of society, such as public health; health care; academia; mass media; business and industry; not-for-profit organizations; recreation, fitness, and sports; and transportation/community planning for physical activity promotion. In doing so, these plans should create consensus among a number of traditional and nontraditional public health partners to initiate a major social movement necessary to shift cultural knowledge, attitudes, beliefs, and practices with regard to the importance of an active lifestyle. More recently, the United Nations General Assembly Political Declaration on the Prevention and Control of Non-communicable Diseases reaffirmed the need for a Global Action Plan for Diet, Physical Activity, and Health and called for a “whole-of-government and whole-of-society effort” in addressing the challenges of implementing such a plan. Again, the charge is one comprising government commitment and leadership, as well as multiple sector approaches to achieving a healthy and active lifestyle that acknowledge and utilize the contributions of the relevant stake-holders (ie, individuals, families, and communities).

Thus, we appear to be approaching the “tipping point” of a global cultural shift in recognizing the importance of daily physical activity to health and function. As the new Editor-in-Chief of the Journal of Physical Activity and Health, I will help to sustain the momentum of this movement by encouraging the submission of manuscripts and grey papers that 1) describe physical activity policy-based action strategies at the local, state, or national level; 2) provide sound evaluation of such policy-based efforts; 3) describe community-based programs that embrace a multiple-sector model of action; or 4) that provide evidence of the effectiveness of such multiple-sector interventions—not simply with regard to the promotion of an active lifestyle and the improvement of standard biomarkers, but with regard to the ability of such an intervention to promote social action and capacity-building among community members. At the same time, I feel that it is time to start channeling our third generation of PAPH talent less toward the laboratory/classroom and more toward federal and local government agencies. These newly minted MS, MPH, PhD, and DrPH scientist/practitioners should be pushed toward embracing the principles of social action and community building when designing, implementing, and evaluating healthy public policies that will be based on the best science and the best practices of their PAPH forebears.

References