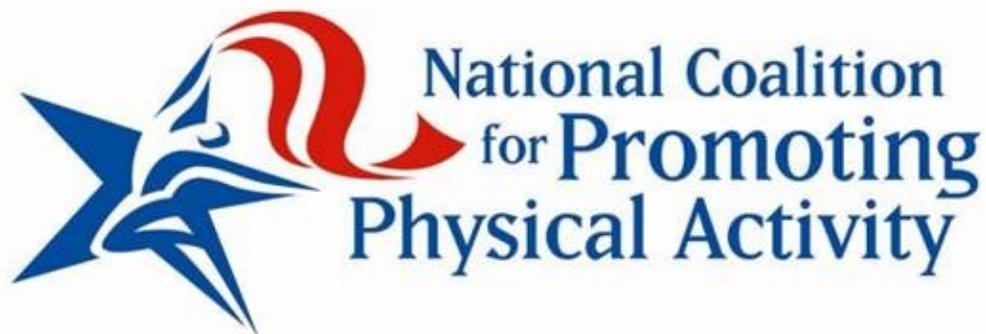


The Economics of Physical Activity Promotion in the United States



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In late 2012, the National Coalition for Promoting Physical Activity (NCPA) and the National Foundation of Fitness, Sports and Nutrition convened a forum in Washington, DC on the economics of physical activity. The collective intention was three-fold; 1) to develop a broader, more sophisticated understanding of the economic impact of physical activity and its potential role for influencing health care costs and labor productivity, 2) to illustrate how the preventive benefits of physical activity are typically unaccounted for within the current federal budgeting process, and 3) to identify areas of future research and data collection to strengthen our evidence base for policy work in this area. This paper summarizes the major points that were raised during the forum and outlines how the NCPA and public health advocates can frame policy work around physical activity promotion to make the case that transforming surrounding environments to promote active living is a worthy investment.

Clearly, the United States cannot have a sustainable federal budget without addressing health care spending. Escalating health care costs are placing an untenable burden on government expenditures making the role of the health of the population and its impact on the spending side of the health care equation paramount. Concerns are compounded by global trends towards an increase in controllable diseases associated with obesity and insufficient physical activity in the coming decades.¹ Would policies effective at promoting more physical activity be an important part of improving population health, prolonging the quality of peoples' lives, and impacting government expenditures? Although an answer of "yes" is intuitive and supported to some degree by the existing evidence, the forum clearly identified a real need for additional evidence to strengthen the case. We need to understand whether regular physical activity pursued for a lifetime would help bend the health care cost curve. Even more important is the need to declare that developing policy that promotes regular physical activity is a worthy

investment to improve quality of life, community development and infrastructure, the learning environment in schools, family recreation, job productivity, global competitiveness, military recruitment and retention and national security.² Researchers will also have to acknowledge any negative cost of exercise due to injury, participation fees, equipment, time away from work and school, and long-term wear on the joints of the body.³

Recent landmark research concludes that “in view of the prevalence, global reach, and health effect of physical inactivity, the issue should be appropriately described as pandemic, with far-reaching health, economic, environmental, and social consequences.”⁴ A shocking amount of health care dollars are spent on those with chronic diseases – two thirds of Medicare spending is for people with 5 or more chronic conditions.⁵ Almost a quarter of companies’ medical costs per year are spent on 10 modifiable risk factors.⁶ According to the World Health Organization, rising levels of physical inactivity have led to adverse health consequences, they are the fourth leading risk factor for global mortality and are now the principal cause for 21-25% of breast and colon cancer burden, 27% of diabetes burden, and 30% of ischemic heart disease burden.^{7,8}

The United States must make its health care delivery system more efficient, including placing greater emphasis on prevention and quality of care, paying for outcomes rather than volume. Health care providers need to understand the importance of physical activity in the clinical environment, assess it just like they do blood pressure or body mass index, and prescribe specific quantities and intensity of exercise to their patients.

Simply getting people to be moderately physically active can go a long way toward improving health. Moderate-intensity physical activity, such as brisk walking, as recommended by the Physical Activity Guidelines for Americans,⁹ is associated with a substantial reduction in chronic disease.¹⁰ Approximately 44% of the decline in U.S. age-adjusted coronary heart disease

death rates achieved in previous decades can be attributed to improvements in risk factors including reductions in total blood cholesterol, systolic blood pressure, smoking prevalence, and physical inactivity.¹¹ Estimates suggest that \$5.6 billion in heart disease costs could be saved if 10% of Americans began a regular walking program.¹² Community-based programs focused on improving lifestyle behaviors, including increasing physical activity, have demonstrated the potential to create a return on investment of \$5.60 for every dollar spent within five years.¹³ Systematic reviews show that many interventions to increase physical activity are cost-effective, and are often on par with pharmaceutical interventions, especially if they involve brief exercise advice on prescription with multiple means of delivery using current technologies.^{14,15,16}

Cost-benefit and cost-effectiveness analyses allow economists to quantify the efficiency of different choices facing policy makers. Framing physical activity policy within the context of budget setting and fiscal responsibility is essential and necessary if the public health community is to gain the attention and respect of decision makers. Advocates of physical activity policy must have a sophisticated and concise set of talking points that incorporates the perspective of experts outside of public health -- economists, Congressional Budget Office (CBO) staff, experts on behavior change, and Chief Executive Officers/Chief Financial Officers -- to craft a rationale that makes the case for effective physical activity policy in the most refined, evidence-based way.

In the context of federal budgeting and budget analysis, increased participation in physical activity appears to be difficult to capture in the CBO budget scoring process. Despite the lack of scoring-based support for the promotion of participation in physical activity, evidence-based research from the peer-reviewed literature can still inform budget setting priorities. The CBO relies on empirical evidence. Advocates must demonstrate that the

proposed policy changes or interventions are replicable and scalable and any resulting behavior changes are a result of the proposed legislation. The baseline that the CBO uses as a point of departure for assessing change is important for understanding budget policy analysis. The further into the future CBO scores are forecast, the less precise the estimate of the economic impact. Recent CBO research on medication adherence, in particular the finding that Medicare costs go down when older Americans take their prescription drugs (<http://www.cbo.gov/publication/43741>), would be an excellent model for the type of research needed for CBO scoring in the area of physical activity.

Thankfully, economic research on physical activity has rapidly grown in the past 15 years as researchers have made an effort to better understand how participation in physical activity and sport benefits society. Most studies employ large nationally representative survey data and include a common set of demographic and socio-economic factors like age, education, income, marital status, household structure, and employment status. Economics-based studies can be loosely grouped into three categories:

- Analyses of decisions about the determinants of physical activity and sport
- Impact of physical activity and sport participation on other factors, like labor market outcomes and happiness
- Analyses of the impact of physical activity on such factors as health care utilization, health care costs, self-assessed health status, and health outcomes

It is important to note that gaps exist in our knowledge base. In order to gather more data and develop more evidence we need longitudinal data sets to track behavior over time based on representative samples that reflect a diverse U.S. population. These data sets must integrate the different factors influencing health including medical care, lifestyle choices, genetics, environment, socioeconomic status, technology and demographics and researchers must account

for different levels of intensity of physical activity in their measurements. Little is known about the transition of individuals into and out of active participation in physical activity. Researchers need to untangle the complex nature of an individual's decision to be physically active, including the necessary support system, motivators for participation such as social interaction, competition, personal accountability, health, fun, and feelings of success, and identify the best delivery systems for motivating people to be physically active every day.

Current models for the dissemination of relevant information fail to reach the greatest proportion of the population. Likewise within traditional fitness settings the one-on-one personal trainer model currently employed is neither cost-effective, nor scalable in a manner that could reach the millions of Americans who need to overcome a sedentary lifestyle. We must design and transform environments where people spend a majority of their time (schools, worksites, communities, and homes) to facilitate active living for large numbers of people across all ages, income levels, educational backgrounds, races, and ethnicities. Then, we need to continue to obtain reliable estimates of return on investment for different interventions and for the costs of transforming infrastructure that facilitates sustained physical activity.

In summary, researchers and advocates must continue to determine the economic ramifications of policy priorities focused on physical activity promotion. The United States is suffering from an epidemic of sedentary behavior. We must further investigate the role of increasing regular physical activity in addressing the unsustainable growth of health care spending. In order to integrate physical activity interventions into federal budget scoring and priority setting, we have to develop additional empirical research from policy interventions and environmental transformations to better estimate the return on investment. In the meantime, as

advocates continue to outline the economic case for the promotion of physical activity, they can frame for policy makers why this is a worthy investment. Increasing physical activity and transforming communities for active living has been shown to positively impact labor productivity, economic development, quality of life, physical and mental health and well-being, military readiness and retention, and academic performance. Clearly this represents a worthy investment for the future of our nation.

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