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Commentary

Developing policy solutions for a more active nation: Integrating economic and public health perspectives

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ABSTRACT

Both economic and public health/medical perspectives play an important role in the policy process but often approach policy questions in an incompatible way. Harnessing any synergy requires an understanding of the other perspective. We begin by comparing and contrasting the economic and public health perspectives, including introducing relevant economic concepts. We next identify economic considerations for the development of environmental incentives that promote physical activity. We then assess features of the political environment which could impact the success of policy alternatives aimed at increasing physical activity. We conclude with several policy levers that may promote active living. Throughout the manuscript, we use the term economics to refer to classical economics and utility maximization rather than behavioral economics. In addition, we focus mostly on normative economics (which offers prescriptions for what should be done) rather than positive economics (which offers predictions of economic outcomes conditional on various hypothetical scenarios).

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The economic versus the public health perspective

Public health and economics each have rich intellectual traditions. While there is no inherent conflict between public health and economics, neither is there a natural congruence, because of differing philosophical underpinnings (Sturm, 2004). A public health view focuses on improving health, an outcome-oriented perspective. Other outcomes (including costs) are of secondary importance, even if they are considered. An economic view focuses on the optimal allocation of resources, a more process-oriented perspective.

To classical economists, neither health compromising behavioral patterns (e.g., sedentary lifestyle) nor ensuing health outcomes (e.g., obesity) alone are a justification for government intervention or regulation. In fact, several factors which have encouraged more sedentary behavior such as better transportation, power tools, or home electronics have arguably increased quality of life even as they have reduced physical activity. However, other factors (such as the underprovision of public parks, discussed below) could reflect poorly functioning markets, possibly leading to socially undesirable economic and health outcomes. In the classical economic paradigm, when unhealthy behaviors or adverse health outcomes are a consequence of market failures (defined below) there is a justification for governmental intervention. In those instances, public health and economic perspectives may coincide, but their rationale is fundamentally

different: public health views health risks as the immediate problem; economics views health risks as a problem if they are a consequence of *market failures*. While this may seem strange to public health advocates, the economic approach parallels the principles of individual freedom, opportunity, and choice that permeate existing laws and institutions, ranging back to the founding fathers. In short, there is nothing wrong if people want to be sedentary, but there is a problem if people are sedentary because market failures discourage physical activity.

There are three broad types of situations where markets fail to optimally allocate resources: *public goods*, *externalities* or *information problems*. There are others, but these three broad groups are arguably most relevant for physical activity and most likely to garner broader public support. Irrational behavior on the part of consumers (i.e., time inconsistent preferences—what is preferred at one point in time is inconsistent with what is preferred at another point in time), something absent in the concepts of classical economics, may or may not be relevant for obesity or related behaviors but behavioral economists and non-economists certainly think it is (Ariely, 2008). It may also be where the best case for government intervention lies, but also the one that may receive the most political pushback for encouraging policies that promote a “nanny” state.

Once public goods exist, nobody can be excluded and consequently nobody has an individual incentive to pay for them. Markets do not provide enough of these goods. The standard textbook example is national defense. Safe neighborhoods and parks are relevant examples of public goods for physical activity. Externalities are side-effects created by the production or consumption of a good, but are not

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Table 1
Policy levers to promote active living and key components of policy alternatives.

Promising policy levers	Key components of policy alternatives
Incorporating the social cost into activities that cause negative externalities	Finding a politically acceptable mix between financial and/or non-monetary incentives (e.g., taxes, subsidies, expedited permits)
Reducing the barriers to entry for communities that promote active living (e.g., mixed land use developments)	Making the physically active choice the preferred or default option
Redistributing or providing more public goods to encourage physical activity (e.g., parks)	Assessing the political environment (e.g., issue framing, key stakeholders/decision-makers, policy windows)

included in the price of the good. An example of an externality affecting physical activity is driving which makes biking or walking dangerous or unpleasant for others. Yet, the driver does not bear these costs. Information problems are instances where buyers and sellers possess different information about a transaction and include factors such as exaggerated claims for fitness equipment by marketers of popular exercise machines (Federal Trade Commission, June 17, 1997). Arguably, market failures related to public goods and externalities would be the more important ones for physical activity, information problems may be more important for diet (even nutritionists are unable to reliably estimate the calorie content of a prepared meal and are as prone to biases stemming from plate sizes or glass shapes as the general public).

Market failures that reduce physical activity justify interventions, and this view complements the public health perspective. Synergistic policies will be more politically feasible and a higher priority for policy makers. Promising policy levers and important components of those alternatives are summarized in Table 1.

Economic considerations to develop environmental incentives that promote physical activity

Using the existing knowledge base of economic evaluations of physical activity interventions, which is limited (Sturm, 2005), our identification of meaningful policy priorities is speculative. Poorly aligned environmental incentives create market failures which are undesirable from both the public health and economic perspectives, but the magnitudes are important and that is unknown.

Market-oriented financial incentives that make individuals bear the full social costs of their actions can substantially modify behavior. The congestion charge in London—a daily fee for driving or parking a car on public roads within central London—reduced traffic congestion and CO₂ emissions, improved reliability of public transport, and increased rates of walking/biking (Leape, 2006, Santos, 2004, Transport for London, 2008).

In the long-term, infrastructure changes—such as mixed land use that encourage walking and biking for utilitarian travel, thereby reducing the externalities of driving (Saelens et al., 2003)—can reduce market failures. A more direct and immediate way to move in that direction, of course, would be an increase in gas taxes. Incentives/disincentives are one way to encourage housing developments in areas with existing or planned shopping centers, worksites or schools. For example, the one-time impact fees levied against new developments using mixed land use designs could be reduced. Impact fees are designed to recover a proportionate share of the capital cost for the infrastructure needed to serve new developments (e.g., water, sewage, roads) and research suggests that they reduce rates of residential development by more than 25% (Skidmore and Peddle, 2006). Positive incentives that do not require additional government expenditures are another possibility. Expedited processing for mixed land use developments can be as valuable to developers as subsidies. Environments that make a physically active choice the default or preferable option

could receive preferential treatment, such as staircase versus elevator layouts in businesses.

On the public goods side, tax incentives offered by local, state, or federal government to increase investment in public spaces could additionally be used to promote the development of parks or biking trails, for example. Access is a critical precursor to physical activity for children and adults (Humpel et al., 2002, Sallis et al., 2000) and these are public goods from which no one should be excluded. In contrast, gyms—an industry whose growth outpaces GDP—are private goods and markets which appear to work quite well, suggesting high demand for physical activity in well functioning markets.

The use of environmental incentives to promote physical activity is complicated by existing legislation. For example, zoning has historically encouraged the development of isolated, car dependent subdivisions. Today, where zoning does allow mixed land use, it often restricts the density of retail establishments (Schilling and Linton, 2005). Public health and legal experts are calling for changes to existing legislation that would promote active living environments (Hirschorn, 2004, Pollard, 2003, Sitkowski and Ohm, 2002), but advances here are likely longer-term solutions.

Specific interventions cannot be isolated from the overall environment. A significant barrier to increased physical activity is perceived safety (Bennett et al., 2007). Absent systematic efforts to improve safety in high crime areas (which would require additional costs), creating walking paths or parks may have limited impact. The evidence is mixed, though. In a study of parks in Los Angeles, proximity was a key determinant of utilization, but residents' concerns about park safety were not associated with park use or frequency of exercise (Cohen et al., 2006).

Assessing the political environment

Integrating economic and public health perspectives will improve political feasibility, but proposals need to match the political environment. Understanding issue framing and effectively engaging key stakeholders/decision-makers are important for the successful adoption of physical activity policies. So too is effectively identifying and capitalizing on policy windows—discrete opportunities to draw attention to or motivate action on a particular issue (Kingdon, 2003a,b).

How an issue is framed can shape public response to that issue (Schneider and Ingram, 1990) and public opinion has been repeatedly shown to shape government decision-making (Page and Shapiro, 1983). In the broader case of obesity, experts generally view obesity as an environmental problem while the news media has predominately identified obesity as a personal responsibility, although this has shifted over time (Lawrence, 2004). So, it is not surprising that the public mostly perceives obesity as an individual problem and opposes policies that may limit their choices (Bleich and Blendon, 2009). Whether physical inactivity is portrayed as an individual or societal issue will alter the environment in which active living policies are considered. This is exactly why policy solutions that address market failures will be more acceptable than policy solutions that are based on the premise of “irrational” individual behavior.

Buy-in from a key set of stakeholders and decision-makers is also required for successful policy formation (Kingdon, 2003a,b). Any change from the status quo creates winners and losers, and opposition reduces the ability for change. In order to engage relevant groups it is critical to make issues meaningful and salient. Perhaps *the* key issue in political decision-making is the distribution of costs and benefits, an issue at the center of economics. To motivate initial buy-in as well as long-term sustainability, policy alternatives need to: effectively assess the distributional consequences, be directly related to the core priorities of the interested groups, include all affected interests in the policy development process and articulate a clear set of reasonable goals.

Not surprisingly, competition for priority status on the political agenda is fierce. Therefore, the success of various alternatives to

promote increased physical activity will largely depend on the ability to capitalize on policy windows which are infrequent and often stay open for short periods (Kingdon, 2003a,b).

Moving forward

Market failures that create environmental incentives which lower physical activity are undesirable from both economic and public health perspectives. Modifying existing legislation (e.g., zoning) or developing new policies that remedy the under-provision of public goods (e.g., parks, safety) and externalities (e.g., traffic, congestion, sprawl) can address environmental incentives that discourage physical activity. Important policy levers include: 1. Incorporating the social cost into activities that cause negative externalities; 2. Reducing the barriers to entry for communities that support active living and other design approaches that make physically active choice the preferred or default option; and 3. Redistributing or providing more public goods to encourage physical activity. As long as there are actual market failures, public health and economics pursue the same goal, although from an economic perspective, it is also possible to over provide public goods. For each of the levers, effectively assessing the political environment is critically important for the successful adoption of active living strategies.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

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