Engineering Physical Activity Back Into Americans' Lives
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By Mark Fenton

In recent months American's have heard from the Surgeon General, the Secretary of Health and Human Services, and no less than the President himself that this nation is in the midst of an obesity epidemic. Unfortunately, while rightly acknowledging the great personal and social cost of the epidemic, none of them have offered particularly enlightened solutions to the problem. In particular, none have proposed bringing to bear any of the myriad policy tools available to them, nor have they championed the types of state and local activities that make a difference at the community level. Fortunately, creative solutions are being pursued in cities and towns across the country.

The problem with how they see the problem.

Given the incessant media attention, most people now recognize that obesity is a result of a chronic caloric imbalance—eating more calories than you burn on a regular basis. Over the past decade the public health community has seen this epidemic looming and has warned of a commensurate rise in cardiovascular disease, diabetes, hypertension, and a host of related complications. Certainly there's been focused discussion on the need to improve Americans' nutritional habits. Specific initiatives are also being launched to encourage people to get more exercise. America on the Move, for example, is a program designed to get pedometers (hip-worn step counters) on people so that they become aware of and try to increase their daily step totals. More daily steps means more physical activity, goes the thinking, and thus less obesity.

Sadly, almost two decades worth of experience suggests we'll be fighting a losing battle if the goal is simply to get people to "exercise" more. The Surgeon General's Report on Physical Activity and Health, published in 1996, concluded that Americans should accumulate at least 30 minutes of physical activity every day to reduce their risk for chronic disease and an early death. Yet the Centers for Disease Control (CDC) collects annual survey data suggesting that only about 25% of the US population gets that much leisure time physical activity (in other words, conscious exercise), while nearly 30% of the adult US population is essentially sedentary, getting no activity at all during the day. Even more disturbing, despite admonitions to "just do it" and "feel the burn," those numbers haven't budged for well over a decade. So, we've been talking about exercise, and we're talking about it more now than ever. But apparently we're not prepared to do any more of it, no matter how much we're told we should.

This article is based on the premise that there's a missing link. Specifically, that the real problem isn't restricted to a lack of exercise, but also to a continually declining amount of *routine* physical activity. Not only do we have power devices—from lawn mowers to washing machines, elevators to automobiles—to do all of our work for us. But most notably, American's rarely walk or bicycle anywhere anymore. While the number of

walking trips (as a percentage of the total trips) were roughly cut in half from 1977 to 1995 based on US Department of Transportation automobile trips rose to be almost 90% of all trips. Over nearly that same time span, the rate of obesity in the US rose from about 12% to over 30% of the adult population. That is, nearly one-third of US adults are now considered obese by medical standards. (For more detailed or state-specific health data, go to www.cdc.gov/nccdphp/dnpa.)

Given that it's unlikely American's are ready to forego automatic garage door openers and washers and dryers, and there's no evidence we're inclined to increase our more structured exercise, it looks like we would do well to build more routine walking and bicycling into our daily lives. This is the opportunity our national leaders are missing. (For example, why aren't they discussing dramatically *increasing* federal transportation enhancement funding for bicycle and pedestrian facilities as part of the war on obesity?)

Thankfully those involved in local land use and transportation planning have taken up the call. Even better, many communities are seeing coalitions between planners, engineers, health professionals, educators, elected officials, concerned citizens and others join the movement—some under the banner of smart growth or sustainable development, but more and more are simply recognizing that our very health and well-being are at stake. (For extensive evidence and resources in creating active environments, see www.activelivingbydesign.org.)

Planning settings that are more physically active.

To really impact physical activity, we're not just talking about more playing fields, basketball and tennis courts. They're great for exercisers, and certainly should be widely available in every community. But they alone won't get enough people moving to truly make a difference. It's not even about more parks and purely recreational trails, though they also have great merit. What is needed are settings where people will walk and bike simply because it is safe and, for at least some trips, actually more convenient than driving a car. An extensive research literature in planning and transportation (and a growing body of research in public health) suggests five simplified elements can be used to describe places where people are more likely to walk and bike as a matter of course. (For more details and further resources on these and other ideas go to the Local Government Commission at www.lgc.org.)

1. Continuous networks. The pathways, trails, and lanes for walkin and cycling must be complete and create an effective network. Generally the best sidewalks are wide and separate from traffic blocks are short, and intersections frequent, providing many route choices. Bike lanes provide safe riding in areas of higher volume traffic. The ideal result is that the walk or bike distance between two points isn't dramatically longer than the straight line (or "as-the-crow-flies") distance.

2. Land Use. There are two keys here: Communities (or at least neighborhoods) must be compact enough that total travel distances aren't too great. And there must be a high mix

of uses, with residential, retail and commercial activities, schools, recreation, and transit access all interspersed, and thus within walking and biking distance of one another.

3. Safety. People feel safe both from crime and from traffic when out on foot or on a bicycle. This requires that elements of both the social and built environments be favorable. For example, there should be minimal illicit activity and lots of lighting, as well as separation of walkways from travel lanes and slow traffic speeds.

4. Site Designs. Even if sidewalks are available and safe and destinations are plentiful, people will not walk to uninviting buildings, especially if they are set well back from the road behind acres of parking. But buildings near the street with obvious entrances and bicycle parking and many windows are not only more inviting to pedestrians and cyclist. They also provide comfort to those simply walking past.

5. Civic Commitment. Though the softest of the bunch, this may be the most important for long-term, large-scale change. Everyone from elected officials and bureaucrats to the average citizen has to embrace the idea of a more walkable community—and vote with their feet! The best measure of a successful pedestrian environment is whether you see people out and about on foot.

How to build more active communities? Creative approaches and new partners.

Many in planning are developing and testing tools and approaches around zoning and site requirements, the two areas most planning entities control. The following show great promise in helping to create places where more people are likely to walk and cycle

- **Require the network.** Mandate sidewalks in all development, and bicycle lanes where appropriate. (See the "Pedestrian Facilities Users Guide" and the "Bicycle Lane Design Guide" at www.pedbikeinfo.org.) One approach is to construct sidewalks and bike lanes opportunistically—say, when streets are being paved or sewers redone. Note that in many communities health officers review all development plans (often as oversight of water and sewer issues), meaning they can and should be an ally in supporting completion of the bike and pedestrian network

- **Mix uses.** Zone for corner stores or small business districts in neighborhoods, encourage upper floor apartments above first floor retail or businesses.

- **Increase residential and business densities.** One approach is to simply reduce lot sizes; but you can go further and provide density bonuses to developers. These allow overall greater numbers of units if built in a more compact pattern that encourages biking and walking while preserving open space. Even in already-developed, low-density suburbs you can encourage apartments over garages, in basements, as "garden apartments," etc.

- **Slow down traffic.** Simple traffic calming tools—for example, narrower lanes, median islands, chicanes, and speed tables—have been shown again and again to slow speeds in residential and downtown areas, to the benefit of both pedestrians and drivers. Though not always in a planner's purview, this is a critical adjunct to the other activities described here.

- **Preclude drive-through retail settings.** Don't allow fast food or other services to cater entirely to automobiles at the expense of bicycle and pedestrian traffic. Even fast food outlets and national retailers can succeed—in fact thrive—in more appealing and functional settings.

- **Set maximum setbacks.** Suburbs have typically had minimum setbacks, requiring that structures be greater than some minimum figure from the front lot lines. This generally undermines pedestrian friendliness in two ways: A building set far back from the sidewalk provides little of the oversight or comfort that makes a sidewalk an inviting place to be. And parking is often placed on the lot between the sidewalk and the building, making for more challenging bicycle and pedestrian access. Whenever possible, bring building fronts to the sidewalk edge.

- **Reduce or eliminate on-site parking requirements**. For new construction maximize on-street parking or shared parking between and behind—but not in front of—buildings. Diagonal parking, for example, increases capacity over parallel parking and can also serve to narrow the travel lanes. Ideally, give bicycles the very best parking spaces.

So if this all works, who needs the health community?

What's so unique about this? Most of these suggestions you'd find in any smart growth manifesto, or in guidelines for creating a "New Urbanist" or more sustainable community. This argument adds two key ideas to those approaches.

First, we must all wear the mantle of public health advocates when making the case for more walkable and bicycle-friendly settings. The focus of the argument for better bike and pedestrian facilities at the beginning of this article was to help people be more physically active, and thus to help fight the very real obesity epidemic. But there are two further health arguments. As automobiles are among the greatest contributors to air pollution in this country, replacing some number of car trips with walking or cycling trips can dramatically help improve air quality, and thus health. Also, reducing bicycle and pedestrian crashes, injuries, and fatalities is a key goal, and is a result of better-designed facilities—this argument is especially critical around schools, where child pedestrian traffic is likely to be greatest.

Second, we must use the skills and infrastructure of the public health community to advance the cause. Health advocates tend to be skilled at working in and even facilitating multi-disciplinary teams because it's so often required in their work. Whether collaborating with travel authorities when trying to contain an infectious disease

outbreak, hydrologists and engineers to maintain clean water supplies, or education officials and parents to assure vaccinations are universal, public health officials are accustomed to working intersectorally. Thus, they are ready and willing allies in creating more bicycle and pedestrian friendly communities, once the clear connection to their goals—more physically active and thus healthier citizens—is made. Here are several examples of specific initiatives to launch in your community.

National: Walk to School programs. Sometimes called Safe Routes to School, the approach is often to build interest among children and parents with an event on International Walk to School Day (usually the first Wednesday in October), and then build a coalition to improve safety and increase routine walking by building better facilities where needed. School or community health officers are often integral to such efforts. (See www.walktoschool.org for details and a national event registry.)

State: Active Community Awards. The Michigan Department of Community Health encourages communities to do an on-line self-assessment of "activity-friendliness." It covers a variety of areas including land use and planning, non-motorized transport facilities and safety, parks and recreational programming, schools, worksites, and public transportation. The assessment asks communities for intended next steps and provides a score. It both recognizes success (Michigan's governor personally handed out the 2003 awards) while identifying the areas needing improvement. It also begins a process by forcing communities to pull together an interdisciplinary team simply to complete the survey; that team can become the basis for on-going work. A similar effort at community assessment is being pursued in North Carolina. (See www.mihealthtools.org/communities for Michigan's survey and information; or see www.eatsmartmovemoreNC.org for North Carolina's assessment tools.)

Local: Bike/Pedestrian Network Building. There are numerous examples from visionary communities nationwide of efforts to complete their bicycle and pedestrian networks. These include passing bonds to underwrite sidewalk and trail construction, or aggressively pursuing "road-diets," the conversion of four-lane roads to two-lanes plus a turning lane, with the left-over space dedicated to bike and pedestrian right of way. One especially creative approach: towns that purchase homes at the end of cul-de-sac streets when they go on sale, construct cut-through pathways to adjacent streets, parks, or trails, and then resell the homes with the pathway easement owned by or permanently deeded to the town. It's a powerful way to increase bike and pedestrian access in otherwise impenetrable dead-end neighborhoods. (See www.walkablecommunities.org and www.pedbikeinfo.org for detailed design and engineering information, resources, and an extensive image library.)

Whatever you pursue, keep in mind all of your potential allies—in Cohasset, MA it's been the health officer, not planners or bike advocates, who has led the charge to get local conservation funds put in place for a feasibility study of a trail along an historic rail corridor. Perhaps the health officer in your community is equally enlightened.

And what about *you*? Quite simply, you should put up or shut up. The final but perhaps most effective way to create a more active community is to get involved personally. It's easy to visualize this happening at four levels; everyone can start at the first, but for greatest effect should work all the way to the fourth.

- **Be a role model.** Forego at least one car trip every day, and bike or walk instead. Even better, walk a child to soccer practice, or walk with friends to dinner or a movie to broaden your impact.
- **Be a lone voice.** Show up at planning and zoning meetings, ask questions, and at least make people explain why it's being done the way it is.
- **Infiltrate existing entities.** I ran for my local planning board and find that nothing is as effective as being on the "inside." Simply put, if all I do is get the sidewalk network closer to completion in my community, it will be time well spent. But it's clear one could have an impact working on the zoning board, school or town council, recreation or conservation commissions, neighborhood association—in other words, any one of myriad elected, appointed, or volunteer boards.
- **Create a new coalition**. Cross disciplines: get public safety, health, transportation, planning, public works, education and other officials together with citizen advocates, and make the creation of more walkable and bike-friendly settings a community-wide focus.

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