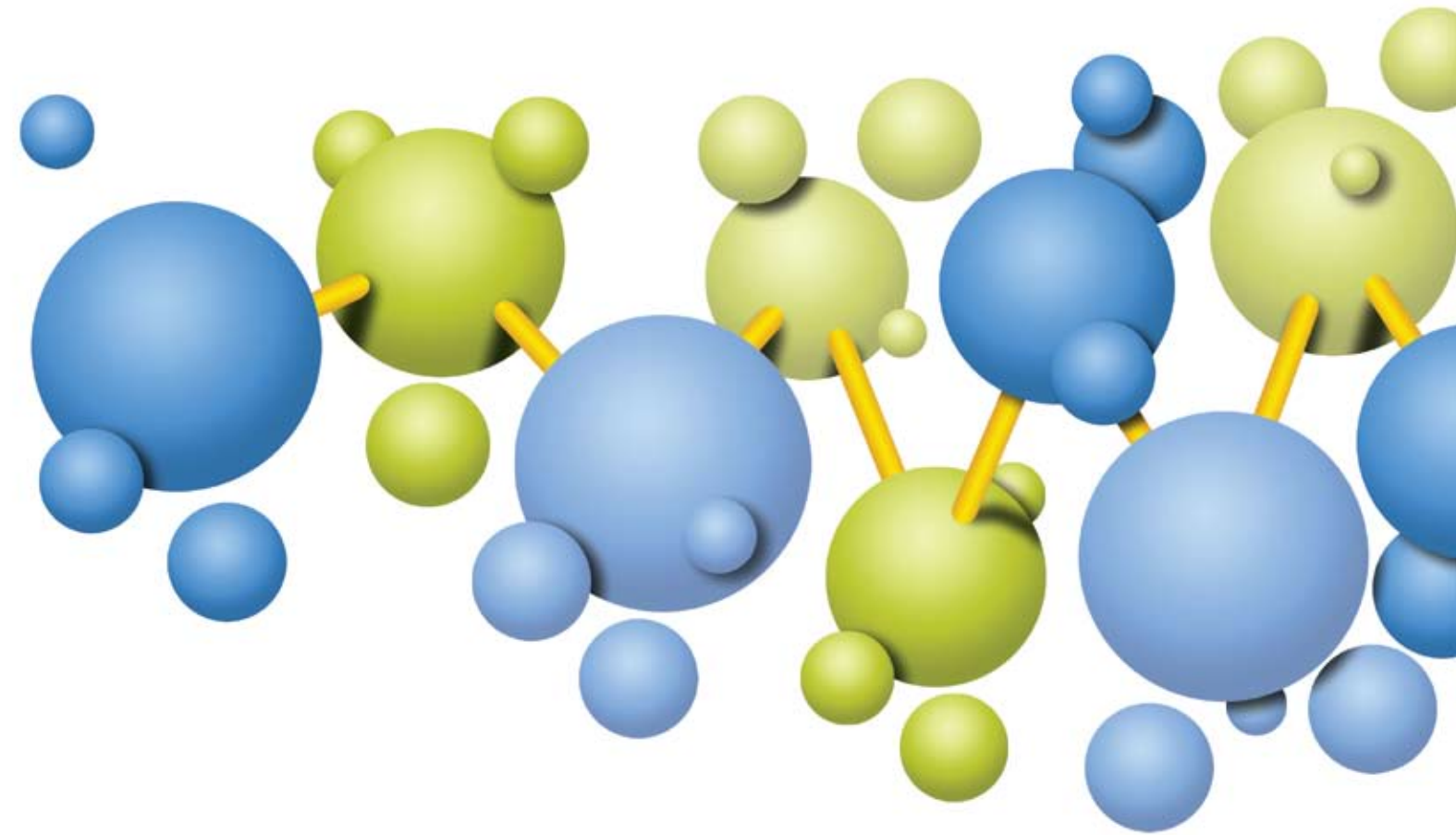


Improve health:

an introduction to upstream determinants of health



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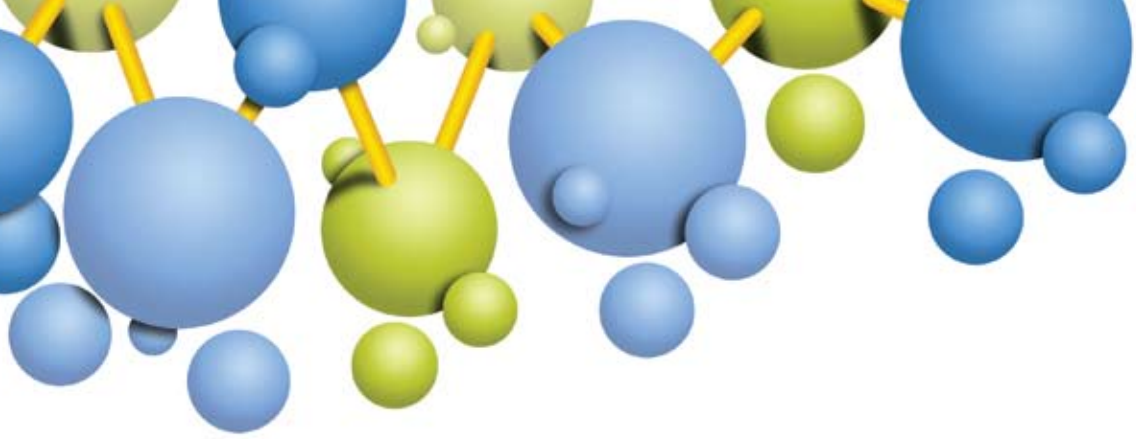
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Communities of Health

by jeffdoemland | December 2008



Introduction

Efforts to slow rising rates of disease and illness in the U.S. take many forms. Those that have gained the most attention focus on improving the health care system and changing the behavior of individuals. Whether it's about providing more Americans access to health care services or how to improve the quality of those services or how to get individuals to live healthier lives, the national dialog on health is largely focused on health *care* and individual behavior. What we can call the medical-behavioral model.

Receiving far less attention are efforts intended to keep people from getting sick in the first place. These prevention efforts themselves take many forms and can be understood in terms of how far upstream they occur. This paper will provide a brief background on the territory uncovered when we begin the journey upstream.

First, an orientation to upstream and downstream. When we focus downstream we encounter the familiar and immediately apparent indicators of health and risk, things such as biometrics, behavior and the presentation of symptoms. This is where health is fixed in a medical-behavioral frame; it is where health is understood to be the result of biology and behavior.

Venturing upstream we encounter factors that also determine health, yet are unresponsive to the medical-behavior model: social factors such as public service disparities, employment factors such as degrees of autonomy, civic factors such as zoning policies. These and many others lie beyond the reach of the medical-behavioral model and have been found to have a surprising and disruptive affect on health. Addressing these upstream factors relies on a non-medical, community-based model of intervention.

Communities of Health is joined to a growing movement of organizations making the journey upstream.

Downstream/Upstream Example: Childhood Obesity

Looking at childhood obesity is a good way to map the complex territory between downstream and upstream factors. While obesity itself is not a disease, it is a known risk factor for a host of serious diseases, including heart disease, diabetes and hypertension. In this sense, addressing childhood obesity is already a move upstream.

In the U.S. childhood obesity is on the rise. "The prevalence of obesity among children aged 6 to 11 more than doubled in the past 20 years, going from 6.5% in 1980 to 17.0% in 2006. The rate among adolescents aged 12 to 19 more than tripled, increasing from 5% to 17.6%." ¹ Few would argue that this trend doesn't have serious long-term implications for health in the U.S. Fewer still might argue that we're doing everything possible to arrest this trend.

According to the medical-behavioral model, we address childhood obesity by encouraging our children to eat healthy foods and be physically active. We now see a cottage industry of school- and home-based wellness and health promotion plans aimed at the diet and lifestyles of our youth. And in cases where obesity has resulted in morbidity, we intervene with medical treatment. The startling rise in Type II diabetes calls for these interventions.

At the same time, for large segments of the population, upstream factors such as playground safety, convenient access to grocery stores and neighborhood design interfere with the best intentions of these programs.

The following exhibits describe three upstream factors related to childhood obesity: playground safety, access to grocery outlets and the built environment. In neighborhoods where playgrounds are unsafe for play, or bars and taverns outnumber food outlets, or where walking is impeded by the built environment, efforts to encourage our children to eat healthy foods and be physically active might not be enough to reduce childhood obesity.

Playground Safety in Boston

Neighborhood	% Non-white Residents	Mean Playground Safety Score
Back Bay/ Beacon Hill	15.2%	79.2
W. Roxbury	16.4%	64.9
W. Roxbury	64.4%	50.7
W. Roxbury	95.2%	50.9
W. Roxbury	96.2%	49.3

Cradock et al. *AM J Prev Med.* 2005.

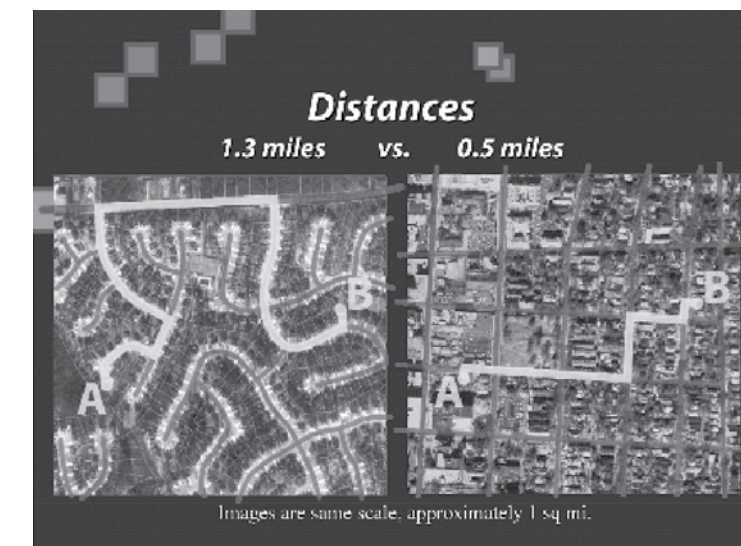
Prevalence Ratios of Services by Neighborhood Wealth

	Neighborhood Wealth				
	Low	Low-medium	Medium	High-medium	High
Super-Markets	1.0	2.8	2.6	3.6	3.3
Bars/Taverns	1.0	0.6	0.7	0.4	0.3

Morland et al. "Neighborhood characteristics associated with the location of food stores and food service places."

AM J Prev Med. 2002 Jan; 22 (1): 23-9.

Does the Built Environment Discourage Walking



Source: Frank & Engelke 2005, figure 2, p. 199

Without drawing a direct causal link to childhood obesity, these exhibits nonetheless indicate an important area for consideration: upstream social and environmental factors with the potential to limit the effectiveness of medical-behavioral interventions. In effect they tell us that raising children who eat healthy foods and lead physically active lives requires more than well-intended encouragements; it requires us to address social and environmental factors that undercut those encouragements.

Childhood obesity is just one threat to the overall health of our nation that derives force from factors lying outside the medical-behavioral model. And while individual and medically-based interventions to address health risks and illness will always be a necessity, they alone are insufficient to address the upstream factors making more and more of us sick in the first place.

1. Ogden CL, Carroll MD, Flegal KM. High Body Mass Index for Age Among US Children and Adolescents, 2003-2006. *JAMA.* 2008;299(20): 2401-2405.