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America's Other Growth Rate: What the U.S. Obesity Epidemic and Healthcare Cost Crisis Mean for the Rest of the World

Ranu Dhillon
Earth Institute
Columbia University, New York
email: rd2245@columbia.edu

Abstract

Increasing obesity rates in the United States have fueled soaring healthcare costs and exacerbated recent fiscal and economic challenges. This phenomena, however, is not unique to the U.S. and many countries, including low and middle-income countries, are seeing increasing numbers of people who are obese or overweight. Finding ways for societies to achieve the benefits of economic growth without suffering concurrent epidemics of obesity and related diseases represents a central challenge to sustainable development. For countries where this epidemic has already taken hold, new policy thinking is needed to mitigate this burden. Meanwhile, emerging nations must define new pathways for development that bypass or minimize these pitfalls. Proactive public policies, innovations in healthcare delivery, and refashioning the lifestyles adopted with growth represent potential avenues through which countries can navigate this issue.

While prospects for American economic growth appear thin, the U.S. obesity epidemic continues to grow. This trend has contributed to rapidly increasing healthcare costs that are undermining other aspects of U.S. social and fiscal health. Significantly, other rich countries are also experiencing this simultaneous escalation of obesity and health care spending, while emerging nations are already seeing rises in the proportion of their populations that are obese or overweight in the early stages of development. Finding ways for countries to attain higher levels of growth while preventing, mitigating, and managing concomitant increases in obesity is a central challenge to sustainable development in the 21st century.

1. Obesity and Healthcare Costs in the United States

One in three Americans is obese and an additional 34% are considered overweight.[1] [2] The prevalence of obesity is increasing 3% each decade and a third of Americans younger than 19 are already obese or overweight.[3] [4] Consequently, conditions such as diabetes and cardiovascular disease now affect over 26 million people in the U.S.[5]

The American obesity epidemic has colluded with a host of factors – expensive new technologies,[6] an aging population,[7] costly end-of-life care,[8] [9] lack of competitive price pressures in the healthcare industry,[10] and inefficient delivery systems[11] [12] – to fuel skyrocketing healthcare costs which now constitute 18% of GDP, up from 7% in 1970.[13] [14] [15] The rise in obesity in particular is responsible for almost a third of this increase.[16] U.S. healthcare spending is now nearly twice the 9% of GDP spent in other OECD countries and continues to increase 6% per year, outpacing 2 to 3% projected economic growth.[17] [18]

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[1] Obesity is defined as body mass index (BMI) greater than 30 kg/m^2. Overweight is BMI between 25 and 30 kg/m^2.
[2] Flegal KM, Carroll MD, Ogden CL, Curtin LR. 2010. Prevalence and Trends in Obesity Among US Adults, 1998-2008. *JAMA*. 303(3): 235-241.
[3] Flegal *et al.* 2010.
[4] Ogden CL, Carroll MD, Curtin LR, Lamb MM, Flegal KM. 2010. Prevalence of High Body Mass Index in US Children and Adolescents, 2007-2008. *JAMA*. 303(3): 242-249.
[5] National Center for Chronic Disease Prevention and Health Promotion. *2011 National Diabetes Fact Sheet*. Atlanta: Centers for Disease Control, 2011.
[6] Congress of the United States, Congressional Budget Office. Technological Change and the Growth of Health Care Spending, January 2008.
[7] Mendelsohn DM and Schwartz WB. 1993. The Effects of Aging and Population Growth on Health Care Costs. *Health Affairs*. 12(1): 119-125.
[8] http://www.reuters.com/article/2010/10/14/us-care-costs-idUSTRE69C3KY20101014
[9] http://www.nytimes.com/2009/12/23/health/23ucla.html?pagewanted=1
[10] Emmons DW, Guardado JR, Kane CK. Competition in Health Insurance: A comprehensive study of U.S. Markets, 2010 update. American Medical Association, 2010.
[11] Garber AM and Skinner J. 2008. Is American Health Care Uniquely Inefficient? *Journal of Economic Perspectives*. 22(4): 27-50.
[12] Altman, D. and L. Levitt. February 23, 2003. The Sad History of Health Care Cost Containment As Told in One Chart. *Health Affairs* Web Exclusive.
[13] http://www.whitehouse.gov/administration/eop/cea/TheEconomicCaseforHealthCareReform
[14] Truffer CJ, Keehan S, Smith S, Cylus J, Sisko A, Poisal JA, Lizonitz J, Clemens MK. 2010. Health Spending Projections Through 2019: The Recession's Impact Continues. *Health Affairs*. 29(3): 522-529.
[15] Centers for Medicare and Medicaid Services. *National Health Expenditure Data*.
[16] Thorpe KE, Florence CS, Howard DH, Joski P. 2004. The Impact of Obesity on Rising Medical Spending. *Health Affairs*. W(4): 480-486.
[17] OECD Health Data 2011
[18] Truffer *et al.* 2010.

This has ominous fiscal implications at a time of growing concern over U.S. indebtedness. The healthcare cost crisis also undermines future growth and employment prospects by placing an ever-growing financial burden on companies to insure their workers and on average households to pay more in premiums and co-pays.[19] [20] The crisis even hurts public education – another area of concern with far-reaching effects for American competitiveness and job creation – as funds allocated for supporting schools are instead being diverted to cover the rising costs of teacher health benefits.[21]

1.1 Roots of the Epidemic

What has brought on the American obesity epidemic? Three overlapping factors have driven this phenomenon. First, rising U.S. incomes over the past 50 years have led to increased demand for meat-heavy, higher-calorie diets and resulted in a structural change in food supply from more balanced home-cooked meals to fattier sweetened foodstuffs. For example, in just 15 years between 1985 and 2000, Americans consumed 12% more calories with about 90% of this increase coming in the form of added fats, sugars, and grains, all of which can contribute to obesity and related diseases.[22] This trend in eating habits led to the ubiquitous availability of such less healthy foods, as epitomized by the fast food industry.[23] Thus, even as real incomes have dwindled in recent years, poorer households are increasingly dependent on less healthy foods because they tend to be cheaper and more accessible.[24] [25] A recent Harvard study, for instance, calculated that eating healthy costs an additional $550 per person per year, or over $2,000 for a family of four, while another study showed that income neighborhoods have access to 30% fewer supermarkets than areas with the highest incomes.[26] [27] Both the costliness and rarity of healthy foods thus encourage low-income families to adopt unhealthy, obesity-risking diets.

In addition to demanding heavier diets, Americans in the last half of the century have adopted an increasingly sedentary lifestyle with greater time spent in front of the TV.[28] As an example, about 40% of children walked or biked to school

[19] Thomson Reuters. *Facts for Healthcare: Healthcare Costs Rise More than 7 Percent for U.S. Employers in 2009.* Ann Arbor: Thomson Reuters, 2010.
[20] Kaiser Family Foundation and Health Research & Educational Trust. *Employer Health Benefits: 2010 Annual Survey*. 2010.
[21] Moscovitch E. *School Funding Reality: A Bargain Not Kept*. Boston: Boston Foundation, December 2010.
[22] Putnam J, Allshouse J, Kantor LS. 2002. U.S. Per Capita Food Supply Trends: More Calories, Refined Carbohydrates, and Fats. *Food Review*. 25(3):2-15.
[23] Piernas C and Popkin BM. 2010. Trends in snacking among U.S. children. *Health Affairs*. 29(3):398-404.
[24] Giang T, Karpyn A, Laurison HB, Hillier A, Perry RD. 2008. Closing the grocery gap in underserved communities: the creation of the Pennsylvania Fresh Food Financing Initiative. J Public Health Manag Pract.14(3):272–9.
[25] USDA. *Access to Affordable and Nutritious Food: Understanding Food Deserts and Their Consequences.* 2009.
[26] Rao M, Afshin A, Singh G, Mozaffarian D. 2013. Do healthier foods and diet patterns cost more than less healthy options? A systematic review and meta-analysis. *BMJ Open*. 3: epub.
[27] Weinberg Z. *No Place to Shop: The Lack of Supermarkets in Low-Income Neighborhoods*. Washington, DC: Public Voice for Food and Health Policy, 1995.
[28] Prevalence of Sedentery Lifestyle – Behavioral Risk Factor Surveillance System, United States 1991. 1993. *MMWR*. 42(29):576-579.

in 1969; by 2001, this number was down to 13%.[29] Another study reported that only about a quarter of American adults reach the recommended levels of physical activity.[30]

Third, the U.S. workplace has mirrored this shift to a less active way of life as the American economy has transitioned to more sedentary knowledge, service, and technology-based jobs with fewer people engaged in manufacturing, agriculture, and other physically active sectors.[31] The proportion of people working in low-activity "office" jobs increased from 23% in 1950 to 41% by 2000, while those in high-activity physical labor-oriented jobs declined from 30% to 22% over the same timeframe.[32]

2. Obesity around the World

Why does the U.S. obesity and healthcare cost crisis matter for the rest of the world? The fiscal implications and consequences for the competitiveness of the world's largest economy have obvious repercussions for the evolving geopolitical landscape. More pointedly, the U.S. obesity epidemic is not wholly unique. The same factors kindling the U.S. crisis have, in part due to the globalization of American fast food culture, led to rising rates of obesity throughout the world.

In half of OECD countries, 50% of people are overweight and roughly one in five is obese.[33] In Europe, 20% are obese and a quarter of children are already overweight or obese.[34] [35] Japan and South Korea are notable exceptions with obesity rates of only 4%; however, about 25% of people in these countries are overweight with rising levels of obesity particularly among middle-aged citizens.[36] [37] [38] These developed countries have also seen healthcare spending simultaneously increase from an average of 7% of GDP in 1995 to 9.5% in 2009, though still far below U.S. levels.[39] Greater overall spending in U.S. is driven primarily by higher prices for similar services caused by its private, largely fee-for-service system. Nonetheless, despite greater incentives and opportunities for cost control in the publicly-governed systems of other OECD countries, healthcare spending in these nations is also rising steeply at about 4% a year.[40]

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[29] McDonald NC. Active transportation to school: trends among U.S. schoolchildren, 1969-2001. 2007. *Am J Prev Med*. 32:509-16.
[30] Brownsen RC, Boehmer TK. TRB Special Report 82: Patterns and Trends in Physical Activity, Occupation, Transportation, Land Use, and Sedentary Behaviors. Transportation Research Board and Institute of Medicine.
[31] Church TS, Thomas DM, Tudor-Locke C, Katzmarzyk PT, Earnest CP, Rodarte RQ, Martin CK, Blair SN, Bouchard C. 2011. Trends over 5 Decades in U.S. Occupation-related Physical Activity and Their Associations with Obesity. *PLoS ONE*. 6(5): e19657.
[32] Brownson RC, Boehmer TK, Luke DA. 2005. Declining rates of physical activity in the United States: what are the contributors? *Annu Rev Public Health*. 26:421-43.
[33] Sassi F. *Obesity and the Economics of Prevention: Fit not Fat*. OECD, 2010.
[34] World Health Organization (WHO) Europe
[35] WHO European Childhood Obesity Surveillance Initiative
[36] OECD Health Data 2011
[37] Lee MJ, Popkin BM, Kim S. 2002. The unique aspects of the nutrition transition in South Korea: the retention of healthful elements in their traditional diet. *Public Health Nutrition*. 5(1A):197-203.
[38] McCurry J. 2007. Japan battles with obesity. *The Lancet*. 369: 451-452.
[39] OECD Health Data 2011
[40] Squires D. *Explaining High Health Care Spending in the United States: An International Comparison of Supply, Utilization, Prices, and Quality*. The Commonwealth Fund, 2012.

Even emerging societies like Brazil, China, and the upper classes of poorer countries like Nigeria are experiencing greater numbers of people who are overweight, as they contend with widespread malnutrition and poverty-related diseases.[41] In Brazil, rapid growth and the popularization of commercialized foods has led to a jump in the proportion of overweight people from 20% in 1990 to now almost 50%; approximately 15% are obese.[42] This will only become worse as fast food companies plan for further expansion in the growing Brazilian market.[43] Similarly, in 2010, Yum Brands, which operates several fast food chains including KFC and Pizza Hut, earned more profit in China, where 25% of people are overweight, than in the U.S.[44]

3. The Policy Challenge

Have we created a new stage in the developmental trajectory of human societies where growth eventually spurs fundamental transitions in food supply and lifestyle that, in turn, lead to epidemic obesity? With globalization positioning American culture as the desired ideal, is it inevitable that other countries evolving from agriculture-based subsistence to industrial, knowledge, or service-based economies will also fall into this pattern? Can societies attain the benefits of modernity without facing the ills of these structural shifts in food supply, lifestyle, and labor?

If the overweight society is a new stop on the development pathway, then the new policy frontier for developed countries is to craft strategies to tame obesity and the toll it takes on population and, in the American case, fiscal health. For emerging nations, the challenge will be to define a new vision of development where the fruits of growth can be garnered without these unintended side effects.

If this is, indeed, a new frontier, then the U.S. stands closest to the brink, if not partially in the abyss. America's ability to find a way to manage obesity will, in part, dictate its capacity to control healthcare costs and, by extension, influence its economic outlook. The Affordable Care Act – known more commonly as 'Obamacare' – includes several provisions to tackle obesity, such as access to preventive screening, controversial incentive-based 'wellness' programs, and grants for community-based innovations.[45] Their ability to actually curb obesity will be watched closely. If the U.S. cannot create a new cultural model that balances the upsides of development with healthier lifestyles, the hegemony American culture has enjoyed over the past half century may be put into question as up-and-coming societies will look elsewhere for healthier, more effective models to follow.

Emerging countries, including China, are uniquely positioned to fill this void. With rapid growth and nascent obesity that is neither entrenched nor full blown, these

[41] WHO
[42] http://www.ft.com/intl/cms/s/2/6e0319c2-5fee-11e0-a718-00144feab49a.html#axzz1R5ss0BpL
[43] http://www.ft.com/cms/s/0/6a463c4a-977c-11e0-af13-00144feab49a.html#axzz1QlRzGLYL
[44] http://www.ft.com/intl/cms/s/0/7a28d7c0-2e28-11e0-8733-00144feabdc0.html#axzz1R5ss0BpL
[45] http://www.nejm.org/doi/full/10.1056/NEJMp1008560

nations have the resources and growing presence, especially in their regions, to define a new model of developed culture that can be a competitive alternative to the American way. Furthermore, the leadership of these countries – and China's autocracy in particular – are not mired in the type of partisan political gridlock that paralyzes the U.S.'s ability to take action, something that has hampered the American response to the healthcare crisis thus far.

These advantages notwithstanding, emerging nations are already overwhelmed with the formidable task of navigating their societies through accelerating and dynamic change. Countries like China, India, and Brazil have the added challenge of creating healthcare systems that must meet the divergent needs of both rural and urban communities and, simultaneously, wealthy and poor populations. Finding the space to step back and consider a path that avoids the downsides of overly industrialized food supplies and sedentary lifestyles is a distant priority in the face of such immediate needs.

The worldwide trend towards obesity is taking place against a backdrop of rising global food prices, persistent hunger among the poorest sixth of the world, and concerns over the future sufficiency of the human food supply as climate change, population growth, and fuel demands threaten stores.[46] Ideally, an integrated framework for international food coordination could guide strategies to reduce obesity, ensure adequate global food production, and harmonize allocation so that imbalances of over/underconsumption are reduced and basic nutrition is guaranteed for all. Of these complex, if not utopic propositions, reducing obesity is currently the most doable.

At the national level, countries can address the obesity conundrum through three broad areas of strategic action:

3.1 Behavior Change Policies

Ad campaigns, nutrition labels, and traditional public health messaging have not been enough to produce the behavior changes needed to rein in obesity. Draconian measures to mandate exercise or restrict food choice would be anathema to personal liberty as well as wildly unpopular and likely ineffective (think U.S. Prohibition of the 1930s or the drug war of the current day). However, policies that 'nudge' desired behaviors can play a crucial role and have worked in the instance of reducing cigarette use in New York City through a ban on outdoor smoking. The state of Arizona previously considered a monthly 'tax' of $50 for all obese persons to compel lifestyle changes.[47]

While such measures may be ethically questionable, tax breaks for gym memberships or taxes on unhealthy foods to subsidize more nutritious alternatives could address some of the structural factors causing people to be overweight. Indeed, several European countries including France, Finland, and Hungary have

[46] http://www.nytimes.com/2011/06/05/science/earth/05harvest.html?_r=1&pagewanted=1
[47] http://www.nytimes.com/2011/05/31/us/31questions.html?_r=3&scp=2&sq=Arizona&st=cse

talked about or implemented taxes on salty and sugary foods.[48] Adjustments to public transportation systems can also promote more physical activity. Local governments should create integrated strategies to address obesity in their community and development plans. In Louisville, for example, where more than 60% of adults are obese or overweight, the city has redesigned public spaces to be more conducive to biking and walking while linking education campaigns for healthier eating to initiatives that make fresh produce more accessible.[49] While it is still early to see the results of these efforts, similar approaches are being trialed in other parts of the country with evaluations forthcoming.[50]

3.2 Reimagining Health Care Delivery

In the U.S. in particular, reforms to address the healthcare cost crisis (and, by extension, the obesity epidemic) are already being discussed. This includes paying healthcare providers for keeping their patients healthy, rather than simply reimbursing them for tests and procedures or managing certain conditions, so as to incentivize doctors to encourage healthier lifestyles.

Further health reforms in the U.S. should also rethink the traditional healthcare model in two important ways. First, the concept of healthcare coverage needs to expand to include lifestyle elements like food and exercise and not solely medications and procedures. For example, an elderly patient for whom I have cared for the last three years was just discharged from the hospital for the sixth time this year. If she eats too much salt, she retains extra fluid that then fills into her lungs making it hard for her to breathe. She does not always know what foods are high in salt and unknowingly eats the wrong things. Alongside better education, she would probably benefit from having meals prepared for her, something that is not currently covered by health insurance although would save money compared to what is spent on her recurrent hospital stays (which are roughly $8,000 a pop).[51]

Second, the current healthcare model in most developed countries is based on large centralized hospitals and isolated office practices with limited presence in the community. Community-based models using outreach and community health workers have revolutionized care in poor countries where social and economic factors strongly influence vulnerability to disease and efficacy of treatment. Many of the accomplishments in scaling up treatment for AIDS in these countries were facilitated by community health workers visiting patients at the household level to provide social support.[52] Similarly, the paradigm in developed countries needs to incorporate community-focused 'wrap-around' approaches that target the socioeconomic determinants that underlie behavior and the management of chronic

[48] http://www.nytimes.com/2013/03/03/world/europe/hungary-experiments-with-food-tax-to-coax-healthier-habits.html?pagewanted=all&_r=0
[49] http://www.nytimes.com/2011/06/14/health/14obese.html
[50] Ross RK, Baxter RJ, Standish M, Solomon LS, Jhawar MK, Schwartz PM, Flores GR, Nudelman J. 2010. Community Approaches to Preventing Obesity in California. *American Journal of Public Health*. 100(11): 2023-2025.
[51] Center for Medicare and Medicaid Services. *Other Inpatient Hospital DRGs of High Utilization 2005 Data.* May 31, 2006.
[52] Mukherjee JS, Eustache FE. 2007. Community health workers as a cornerstone for integrating HIV and primary healthcare. *AIDS Care*. 19(Suppl 1): S73-82.

conditions like diabetes. More continuous engagement between healthcare providers and patients, as opposed to episodic visits, can help resolve issues before they become bigger problems and proactively address social needs that may undermine treatment. Iora Health, a start-up company modeling innovations in primary care, attaches 'personal health coaches' to each patient to coordinate on care and troubleshoot issues in between office visits.[53]

The general healthcare crisis in the U.S. urges more wholesale reconsideration of the strategies used to deliver care. Many private sector innovations have been achieved not by novel technologies but rather in rethinking familiar systems and strategies.[54] Addressing obesity may benefit from scientific discoveries like diet pills, but we need innovations in how we deliver what already has proven impact. Indeed, medical research has long confirmed that certain medications minimize future complications in people who have suffered heart attacks.[55] However, one study suggests that only half of post-heart attack patients are actually on the appropriate regimen.[56]

3.3 Redefining the Lifestyles of Developed Societies

Most broadly, countries need to delineate a new way to develop without adopting such deleterious shifts in food supply and lifestyle. This will be easier for nations who continue to maintain lively manufacturing and agriculture sectors, but even these industries are taking on new technologies that limit physical activity.

Perhaps the greatest victories can be gained through a healthier food supply. South Korea has achieved notable developmental success over the past three decades. While taking on many beneficial habits of industrialized societies, South Korea has made a deliberate and concerted effort to maintain its traditional vegetable-centric diet. This has enabled it to have unexpectedly low consumption of fat and one of the lowest rates of obesity among developed nations. South Korea has done this primarily through policies and public education emphasizing the importance of retaining traditional foods.[57] While many countries can learn from the South Korean experience, it will be important for nations, particularly those whose traditional diet is not as healthy as South Korea's, to consciously and strategically prevent a shift in food supply as they develop. For some countries, this may also include supply-side policies such as agriculture subsidies to incentivize production of more nutritious foods.

[53] http://www.iorahealth.com/
[54] http://globalpublicsquare.blogs.cnn.com/category/innovation/
[55] Ryan TJ, Anderson JL, Antman EM, et al. 1996. ACC/ AHA guidelines for the management of patients with acute myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Acute Myocardial Infarction). Journal of the American College of Cardiology. 28:1328-1428.
[56] Krumholz HM, Radford MJ, Wang Y, Chen J, Heiat A, Marciniak TA. 1998. National Use and Effectiveness of Beta-Blockers for the Treatment of Elderly Patients After Acute Myocardial Infarction. *JAMA*. 280(70):623-629.
[57] Lee MJ *et al.*

The rest of the world may have some time before they must reckon with this crisis. For the U.S., however, the time for action is already here and, despite the buzz of declining American significance, the world is to take notes.