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HEALTHCARE PAYOR AND PROVIDER PRACTICE

Why governments must lead the fight against obesity

Locally led social movements are required to reverse the obesity pandemic. Governments are in a uniquely powerful position to catalyze these movements.

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The world is getting fat. In many countries, the proportion of people at an unhealthy weight has more than doubled in the past few decades. Globally, at least 1.3 billion adults and more than 42 million children are overweight or obese.

The consequences are considerable. Excess weight increases the risk of a wide range of illnesses, including diabetes, heart disease, and certain cancers; an estimated 2.6 million people die each year as a result of being overweight or obese. Some epidemiologists believe that excess weight will soon rival tobacco as the world's leading cause of preventable premature deaths—the obesity pandemic's health effects may wipe out the gains in life expectancy achieved through decreasing smoking rates.³

The obesity pandemic also has significant economic consequences. The World Health Organization estimates that in many developed countries, obesity now accounts for 2 percent to 7 percent of all health care spending. 4 Yet medical costs are only a small fraction of the pandemic's total costs. Among its other adverse economic effects are heightened absenteeism rates, reduced worker productivity, and increased food and clothing costs.

Although poor dietary choices and physical inactivity are important contributors to the pandemic, they are far from the only causes. A variety of other biological, psychological, cultural, economic, and environmental factors are also involved. (See sidebar "The many causes of obesity.") The complex, interdependent relationships among these factors make it difficult for many people to control their weight—and for health care professionals, payors, other organizations, and governments to help them do so.

To identify approaches that might be effective in halting the pandemic, we conducted extensive research into the wide range of interventions that have been used to help people lose weight or maintain healthy weights, and we worked with the International Association for the Study of Obesity to evaluate policies that have been employed around the world to promote healthy weights. We found that the best results are achieved when entire communities join together to address multiple causes of obesity simultaneously. The communities create social movements that make healthy eating and exercise the norm.

To be successful, these social movements require the involvement of a wide range of stakeholders, including health professionals, payors, schools, employers, transportation

¹Experts define adults as overweight if they have a body mass index (BMI, a ratio of weight to height) between 25 and 29.9; obesity is defined as a BMI of 30 or higher, and morbid obesity is defined as a BMI of 35 or higher (some experts prefer to use a BMI of 40 as the cutoff for morbid obesity). Children are classified as overweight or obese based on age- and gender-linked BMI norms; children whose BMI is at or above the 85th percentile for their age and gender but below the 95th percentile are considered overweight; those with a higher BMI are considered obese.

²World Health Organization, "Ten facts on obesity," www.who.int, February 2010.

³Susan T. Stewart et al., "Forecasting the effects of obesity and smoking on US life expectancy," *New England Journal of Medicine*, 2009, Volume 361, Number 23, pp. 2252–60.

⁴World Health Organization, Preventing Chronic Diseases: A Vital Investment, 2005.

The many causes of obesity

It is often said that the underlying cause of the obesity pandemic is uncomplicated: people eat too much and exercise too little. Although this claim is true, it is also overly simplistic. Many other factors are involved.

For example, evolution has left us with a biological susceptibility to weight gain. Our bodies appear to be more finely attuned to food scarcity than food abundance. Hormonal feedback loops encourage us to seek food when we are hungry and to conserve energy when food is scarce; we do not seem to have comparable feedback loops to prevent us from overeating or to burn extra calories when food is abundant.

Of course, energy expenditure depends on physical-activity levels, and modern life has drastically reduced the amount of physical activity most of us get (for example, few people walk to work or school, most adults now have sedentary jobs, and many people spend a great deal of time watching television and surfing the Internet). As a result, exercise has become something that most people must consciously choose to do, which in many cases requires them to change their habits—a difficult accomplishment for most people.

Psychological forces also come into play. Many people use food not merely for sustenance but also as a reward (even after exercise), for emotional comfort, or as a way to relieve stress. Several mental disorders, including depression, increase the risk of obesity. Most people also have conflicting desires that go far beyond the classic trade-off between eating dessert and

being slim. For example, many people want to get more exercise but use labor-saving devices (robotic vacuum cleaners, for example) to avoid doing manual chores.

Furthermore, many decisions about food are made rapidly, at times when people are distracted or pressed for time. Food manufacturers, grocery stores, and restaurants take advantage of this fact by appealing to our desires for convenience. These organizations have also long intuited what neurological imaging has only recently proved: a variety of external stimuli (sights, smells, tastes, and even the simple availability of attractive food) can activate specific neural networks that increase our appetites sufficiently to override the few innate mechanisms to curb food intake that we do have.

The obesity pandemic also appears to have made it psychologically easier for people to accept their own increasing weight. Studies have shown that a person's chances of becoming obese² increase by 57 percent if he or she has a friend who has recently become obese. This is yet another reason that it is crucial that efforts to halt or reverse the obesity pandemic involve the entire community; widespread support is required to offset this type of social contagion and ensure that cultural norms shift toward healthy behaviors.

Changes in the economics of food production have also contributed to the pandemic. Advances in food production have markedly reduced the cost of many types of food, which has made it easier for people to overindulge,

especially in developed countries. For example, the availability of inexpensive food enables many people to dine out frequently. At most restaurants they are highly unlikely to be able to determine the calorie content of what they are eating but, given typical portion sizes, highly likely to overeat.

Compounding this problem is the fact that in most countries, healthy foods (fresh fruits and vegetables, for example) are often more expensive than unhealthy choices; most inexpensive food is nutrient-poor but full of sugar, salt, and fat. In developing countries, the adoption of a Western diet full of nutrient-poor processed foods helps explain the coexistence of obesity and malnutrition.

A number of other groups have inadvertently promoted the obesity pandemic. Many schools, for example, feed students fast food at lunch and permit vending machines with highcalorie snacks on their premises. Many employers require their staff to work long hours at sedentary jobs yet permit vending machines with highcalorie snacks in the workplace. Many employers also have maternity-leave policies that make it difficult for new mothers to breast-feed (a practice that decreases the risk that their children will become obese). And few employers make it easy for their staff to bicycle or walk to work or to get regular exercise in other ways. Town planners often widen streets for cars but fail to include bike lanes or sidewalks. Their landuse policies may make it difficult for people to get to supermarkets and other sources of healthy food or to find open areas for recreation.

In some places, health officials have also inadvertently helped promote the pandemic. If, for example, they impose restrictions on pregnant women's access to prenatal care and counseling, they increase the likelihood that both the women and their children will become obese.

The factors just described, and the many others that contribute to the obesity pandemic, are interconnected and often mutually reinforcing. Unless effective actions are taken soon, the pandemic could become self-perpetuating. For example, many parents who are overweight or obese inculcate eating patterns and other habits in their children that make it quite difficult for those children to control their own weight later in life.

It is possible that being obese could become the norm, but the consequences for societies should this occur would be severe—worsening health, premature mortality, and drastically increased costs. Only governments, we believe, are in a position to address all the factors contributing to the pandemic and thereby ameliorate its impact on their citizens.

¹The link between depression and obesity is somewhat difficult to study because it is often bidirectional: depression can lead to obesity, for example, but obesity can lead to depression. Most authorities agree that obesity should not be classified as a mental illness, but many mental illnesses and the drugs used to treat them can increase the risk of obesity.

²Nicholas A. Christakis et al., "The spread of obesity in a large social network over 32 years," *New England Journal of Medicine*, July 2007, Volume 357, Number 4, pp. 370–79.

authorities, food production and distribution companies, and the media. Although it can be quite difficult to enlist all these stakeholders, there are specific actions governments can take to encourage their participation in community efforts. Indeed, we believe that only governments—national, regional, and local—have the scope, scale, and mandate to ensure the participation and collaboration of all stakeholders. Governments are in a uniquely powerful position to encourage local organizations to undertake initiatives to promote healthy weights and to lay the foundation required to allow those efforts to succeed.

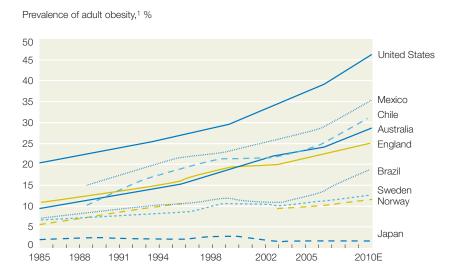
The pandemic's health and economic costs

In almost all developed countries and in many developing ones, obesity rates have risen dramatically (Exhibit 1). Almost half of all US adults are obese. So are more than one-third of Mexican adults and one-quarter of adults in Australia and the United Kingdom. Even in sub-Saharan Africa, obesity rates are rising sharply, particularly among urban residents. Many developing countries now face yet another health dilemma: obesity rates are increasing even though many people remain significantly malnourished.

The consequences of rising obesity rates are considerable. Excess weight increases the risk of diabetes, heart disease, stroke, osteoarthritis, several forms of cancer (including

Exhibit 1

Around the world, the prevalence of obesity is rising.



¹Body mass index of 30 or higher for people age 16 or older. Source: World Health Organization Global Infobase

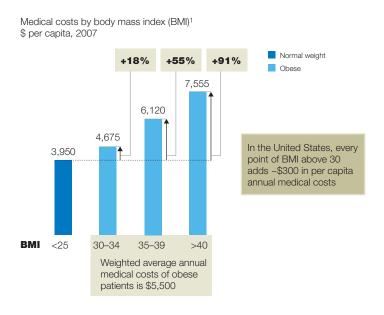
⁵Abdhalah K. Ziraba et al., "Overweight and obesity in urban Africa: A problem of the rich or the poor?" *BMC Public Health*, December 2009, Volume 9, Number 465.

esophageal, colorectal, breast, endometrial, and kidney cancer), and many other illnesses. (See sidebar "Saudi Arabia's diabetes epidemic.") As the prevalence of obesity rises, the prevalence of these conditions is also likely to rise. For example, the number of adults and children with type 2 diabetes is expected to increase sharply in coming years, particularly in developing countries, as a direct result of the pandemic. Furthermore, a person's risk of death increases by almost one-third for every five-point rise in body mass index (BMI).⁶ In adults, obesity has been linked to a two- to four-year decrease in life expectancy; morbid obesity is linked to an eight- to ten-year decrease. The younger a person is when he or she becomes obese, the more years of life are likely to be lost.

The pandemic's economic impact is equally severe. Many developed countries are already paying billions of dollars annually to manage the medical costs associated with obesity. Those costs are likely to escalate in the future, and not simply because obesity's prevalence is rising. Our calculations reveal that medical costs are directly proportional to BMI; in the United States, every point of BMI above 30 is associated with about an 8 percent increase in a person's annual health care expenses (Exhibit 2). Furthermore, obesity's nonmedical

Exhibit 2

As weight increases, so too do the associated medical costs.



¹For the US adult population (ages 20-64).

Source: McKinsey analysis; D2Hawkeye database of ~20,000 people with biometric data; National Bureau of Economic Research; 2007 census data for population by age

⁶Prospective studies collaboration, "Body mass index and cause-specific mortality in 900,000 adults: Collaborative analyses of 57 prospective studies," *The Lancet*, March 2009, Volume 373, Number 9669, pp. 1083–96.

costs are several times larger than its medical costs. (See sidebar "The economic impact of the obesity pandemic.")

A few recent reports suggest that in some countries, including the United States and the United Kingdom, the rate of increase in the prevalence of obesity is slowing. This is good news. However, unless these and the other nations find a way to lower their obesity rates, a growing number of their citizens will face an increased risk of chronic illness and premature death, and a rising percentage of their GDP will be spent coping with the pandemic's consequences. For countries looking to rein in health care spending, reversing obesity's rising prevalence is an imperative.

What works?

To identify the interventions that are most effective in helping people lose weight or maintain a healthy weight, we evaluated more than 1,000 studies published in the past ten years. The studies covered a wide range of approaches, including medical management, commercial weight-loss programs, and community-based health-promotion efforts. Our research revealed that single-intervention programs, such as low-calorie diets and exercise regimens, generally produce only modest weight loss. Better results are obtained when several interventions are used together. In addition to diet and exercise, the interventions can include nutrition classes, one-on-one counseling, drug therapy, bariatric surgery, and financial incentives.

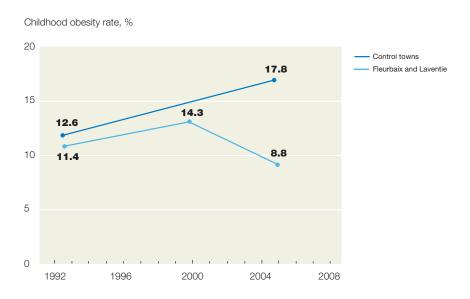
The Dow Chemical Company, for example, randomly assigned half its work sites to a multipronged health-promotion program; the other half served as controls. At the intervention sites, employees were offered health assessments, educational materials, and online behavioral-change programs; in addition, they were given easier access to exercise (walking trails were built, for example) and provided with much healthier food choices in cafeterias and vending machines. At both one- and two-year follow-up, the company found that employees at the intervention sites had maintained their weight and BMI, whereas the employees at the other sites had increases in both metrics. Significant differences between the intervention and control sites were also found in average blood pressure and cholesterol levels.

The best results are achieved with multipronged programs that involve an entire community. For example, two towns in northern France (Fleurbaix and Laventie) undertook a regional initiative to reduce childhood obesity rates. They began by educating children about the consequences of obesity and the importance of healthy eating habits.

⁷Ron Z. Goetzel et al., "Second-year results of an obesity prevention program at the Dow Chemical Company," *Journal of Occupational and Environmental Medicine*, March 2010, Volume 52, Number 3, pp. 291–302.

⁸Monique Romon et al., "Downward trends in the prevalence of childhood overweight in the setting of 12-year school- and community-based programmes," *Public Health Nutrition*, October 2009, Volume 12, Number 10, pp. 1735–42.

A multipronged approach significantly reduced childhood obesity.



Source: J. M. Borys, "EPODE: A methodology to prevent childhood obesity, involving local stakeholders in a sustainable way," April 2008, www.health.sa.gov.au

In addition, they improved the food offerings in school cafeterias, provided nutritional family breakfasts at the schools, and started cooking classes for children and their parents. After a few years, Fleurbaix and Laventie expanded their efforts by hiring dieticians and a sports educator to create programs on nutrition and physical activity in the schools. They also built new sports facilities, launched walk-to-school groups, and developed family activities to promote exercise. Furthermore, they encouraged general practitioners to identify all overweight and obese children and refer them to the initiative's dieticians, who then put the children on programs to help them lower their BMI. The towns also undertook an aggressive social-marketing campaign to promote healthy behaviors.

The results were striking (Exhibit 3). The prevalence of childhood obesity in Fleurbaix and Laventie decreased substantially—but it rose in nearby towns. The initiative was so successful that more than 200 other towns in France have adopted it; many of them have already reported marked decreases in the prevalence of children who are overweight or obese (Exhibit 4). The new program is dubbed EPODE—*Ensemble, Prévenons l'Obésité Des Enfants* (Together, Let's Prevent Childhood Obesity). The methods Fleurbaix and Laventie developed have also been adapted for use in Belgium, Spain, and other countries.

Saudi Arabia's diabetes epidemic

One country facing an obesity problem and a high prevalence of related chronic conditions is Saudi Arabia. Its disease burden is driven in large part by genetic factors and lifestyle choices. Diabetes mellitus is the kingdom's single greatest health care challenge: nearly 1 in 5 Saudi adults has it, compared with 1 in 20 worldwide. Moreover, Saudi Arabia has the world's second-highest prevalence of diabetes and the second-highest level of spending on this disease as a proportion of total health expenditures. Diabetes is closely correlated with obesity, which therefore ranks as a major driver of the diabetes epidemic, so these two problems must be addressed by an integrated program.

Success in tackling obesity and diabetes in Saudi Arabia would encourage the other nations of the Gulf Cooperation Council (GCC),¹ the Middle East as a whole, and North Africa to address this epidemic (three of the five countries with the highest prevalence of diabetes are in the GCC). And the kingdom has the means to move ahead—several health care subsystems responsible for the delivery of care, such as the National Guard Health Affairs organization, could carry out pilots and monitor some of the programs recommended below.

To bring the diabetes epidemic under control, the kingdom must establish a comprehensive national diabetes-prevention and -treatment program that covers the whole value chain of obesity, pre-diabetes, and diabetes management for all Saudi citizens. Efforts to shape the program should start with a bold vision: to make the

reversal of the obesity and diabetes epidemic Saudi Arabia's biggest public-health success, copied across the world. The vision should include specific targets: making the prevalence of obesity stable for adults and lower for children within five to ten years, getting at least 80 percent of the high-risk (obese and pre-diabetic) population enrolled in diabetes-management programs, and reducing the prevalence of complications by 20 percent no later than the end of the next decade.

Underlying this outcome would be a vision: encouraging Saudi Arabia's population to view a healthy diet and exercise as the norm. A ground-breaking behavioral-change effort should be complemented by an integrated medical program that would monitor diabetics and use global best practices to manage the complications of the disease.

To succeed, the program must adopt a systematic, sustained approach: it ought to be viewed as a multiyear journey involving early wins and long-term changes. Further, it should span the health, education, urban-planning, and transportation sectors and actively involve both public- and private-sector employers.

The program's prevention element would focus on the full range of factors that influence obesity. One such factor, social norms (for instance, dieting, smoking, and exercise), could be influenced through media and advertising policies. Another, the quality and content of food, could be influenced through agriculture and food

policies (for example, on labeling for nutritional information). The availability of food could be influenced by school and workplace nutrition policies and by policies that affect infant nutrition; infrastructure, by urban design and transportation policies; and education, by the nutrition policies of schools and employers and by physical education, including access to sport and play facilities outside of school hours.

Meanwhile, the program's monitoring, early-intervention, and treatment element would focus on early detection and on the development of integrated approaches to health care. Such approaches would include initiatives to raise the awareness of physicians (and pharmacists), who could be influenced through education and through incentives to screen patients at any given point of interaction. Comprehensive screening initiatives could include annual testing for raised blood sugar, hip-to-waist ratios, hypertension, blood cholesterol, and lipid levels. (Individuals should get incentives, guided by the principles of behavioral economics, to undergo screening.) Disease-management initiatives, influenced by the government, insurers, and employers, should take a long-term perspective. Targets would be influenced by the medical profession, which would actively measure compliance through HbA1c (blood sugar) monitoring-for example, early and frequent checking for and treatment of complications.

These initiatives ought to be grounded in the best scientific evidence. Progress should be measured against a performance scorecard of scientifically valid endpoints, such as the proportion of patients with pre-diabetes and diabetes, compliance with therapy, and patients who undergo regular HbA1c monitoring.

The interventions selected should also draw extensively on international best practice. Canada, for example, has undertaken a successful program to reduce the morbidity associated with hypertension. It implemented a nationwide campaign to standardize the definition of hypertension, developed optimal treatment protocols, and created incentives for all health care players (including pharmacists) to monitor and improve their management of the disease. A multiyear effort was needed to align all stakeholders, but the result has been a tremendous improvement in the number of patients diagnosed and of patents whose condition is now controlled effectively.

By following such steps, with decisive leadership from the kingdom's health care leaders, a national diabetes-prevention and -treatment program can make a rapid and dramatic impact on the health of Saudi Arabia's people.

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¹ Bahrain, Kuwait, Oman, Qatar, and the United Arab Emirates.

On the other side of the world, the town of Colac, Australia, used a similarly comprehensive community approach to prevent excessive weight gain in its children. Colac put dieticians in its schools, improved cafeteria menus, and provided nutritional education for teachers, students, and parents. In addition, it increased the number of physical-activity programs the schools offered and inaugurated walk-to-school days. The town also worked to reduce the amount of time children spent watching television; it added lessons about this issue to the schools' curriculum and used social marketing to promote a "TV power-down week." Local community centers offered targeted programs to the parents of overweight and obese children.

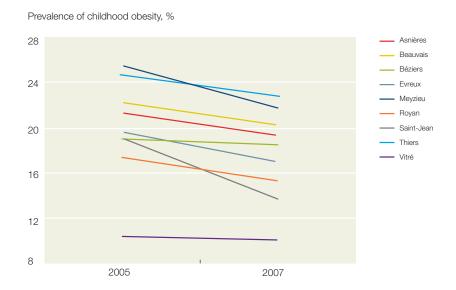
Over the course of four years, the children of Colac improved their dietary habits significantly and increased their physical activity. As a result, the children in Colac gained considerably less weight than did the children in nearby towns.

Lessons learned

Our research confirms that successful weight-management programs, like most successful public-health efforts, have clear goals and clear ways to measure progress against those

Exhibit 4

EPODE¹ is helping to counter obesity in many French towns.



¹Ensemble, Prévenons l'Obésité Des Enfants (Together, Let's Prevent Childhood Obesity).

Source: J.M. Borys, "EPODE: A methodology to prevent childhood obesity, involving local stakeholders in a sustainable way," April 2008, www.health.sa.gov.au

⁹A. M. Sanigorski et al., "Reducing unhealthy weight gain in children through community capacity-building: Results of a quasi-experimental intervention program, Be Active Eat Well," *International Journal of Obesity*, June 2008, Volume 32, Number 7, pp. 1060–67.

goals. They predefine their target population (children, adults, or both) and their objectives (whether to reduce the prevalence of obesity or to prevent further weight gain). They also carefully assess how well the various interventions are being used and what results are being achieved.

Three other important lessons can be drawn from successful programs to help people lose weight or maintain a healthy weight. First, there is no "silver bullet," and short-term efforts have little impact. Successful programs use multipronged approaches that are sustained over several years. Second, customization is important, because the specific factors contributing to the obesity pandemic vary from area to area. In some cities, for example, there may be no open spaces available for recreation; in other cities, open spaces may be available but deemed too dangerous to use. In some rural and inner-city neighborhoods, there may be few supermarkets or other sources of healthy foods (these areas have been called "food deserts"). In other places, healthy food may be available but cost considerably more than less healthy choices. The interventions selected for a program should be targeted to primary problems in each locale.

The economic impact of the obesity pandemic

In countries around the world, the obesity pandemic is increasing health care spending considerably. For example, estimates suggest that in 2007 the United Kingdom was already spending more than £4 billion annually on medical costs related to the pandemic; this amount could rise to £9.7 billion by 2050. Our calculations indicate that the United States currently expends about \$160 billion on these costs—twice what it was paying only a decade ago. The country's obesity-related medical costs could double again by 2018.

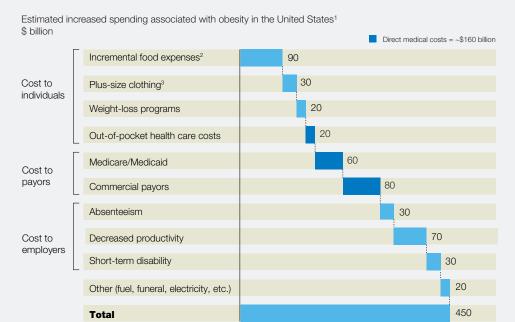
As striking as these numbers may seem, they represent only a small fraction of the pandemic's total economic burden on societies. We estimate that obesity

currently costs the United States at least \$450 billion annually—almost three times the direct medical costs (exhibit). Other countries have also found that the indirect costs of obesity far exceed the direct costs.

Some of the indirect costs are borne by individuals (for extra food and plussize clothing, for example). Many of them are paid by employers: obese people have higher absenteeism rates and lower productivity than normal-weight people do, and they are much more likely to need short-term disability leaves. Other costs represent the accommodations that various industries must make to allow for an increasingly obese population. Airlines must use more fuel to fly planes; similarly, fuel

Exhibit

Total US obesity costs are nearly three times direct medical costs.



¹Rounded estimates.

Source: McKinsey analysis; Centers for Disease Control and Prevention; 2006 National Health Expenditure Accounts; Euromonitor

requirements for cars and buses rise when passengers are obese. (And higher fuel usage, of course, translates to higher carbon emissions.) In addition, transportation authorities must run more trains and buses to compensate for the fact that fewer people can fit into each vehicle. Theaters, sports arenas, and restaurants must enlarge the seats they offer customers, which forces them to reduce their total number of seats. Hospitals must order oversize

diagnostic imaging machines, as well as larger wheelchairs, stretchers, and beds. Furniture must be built more sturdily. Even the mortuary industry is affected: caskets must be larger.

¹Bryony Butland et al., *Tackling Obesities: Future Choices—Project Report*, second edition, UK Government Office for Science, 2007.

²Based on estimated cost of incremental calorie intake to maintain obese weight.

³Based on incremental costs of plus-size clothing.

Third, broad engagement is crucial—the program must involve a wide range of stakeholders throughout the community. For most people, behavioral change is difficult, and the forces contributing to the obesity pandemic are diverse and strong. As a result, a program will not succeed without widespread support. Among the organizations and individuals who should be involved are government officials, payors, health professionals, dieticians, physical-activity trainers and coaches, employers, schools, parents, community groups, retailers, restaurants, and the local media. Colac, Fleurbaix, and Laventie succeeded because their programs involved the entire community—they engendered social movements that made healthy behaviors the norm.

The uniquely powerful role of government

If locally led social movements can halt or reverse the obesity pandemic, why have there not been more of them? These movements often begin with small groups that are willing to take action to encourage healthy eating and exercise. However, many small groups are intimidated by the pandemic's scope and complexity, as well as by the number of interventions needed to achieve impact. Several of the interventions require the organizers to push against entrenched interests in a range of interlocking areas: individuals want to relax and watch television rather than exercise; companies want to profit from their high fat, salt, or sugar products; television stations want to profit from the ads for those products, and so on. Small groups need support and encouragement to believe that they can take on these entrenched interests.

Payors (both public and private) can lend strong support to these groups; they can also undertake initiatives on their own to promote healthy eating and exercise. Their contributions can be invaluable. However, even very large payors lack the scope to address all the factors underlying the pandemic.

Governments—national, regional, and local—can play a uniquely powerful role in providing this support and encouragement and thereby catalyzing the creation of enough locally led social movements to change the pandemic's course. They are in a singular position to offer incentives to, and align the efforts of, all the organizations that have a stake in this issue. Only governments have the authority to issue the policies and regulations needed to combat some of the forces contributing to the pandemic. Governments have responsibility for the health and economic well-being of their populations, and they must shoulder many of the pandemic's costs. This is not to say that governments can succeed on their own, but we believe that only they can lay the foundation that will permit the efforts of small local groups to grow into community-wide social movements and make it easier for those movements to halt or reverse the pandemic.

What exactly should a government do? The first step is to make it clear to all that the obesity pandemic is one of its top priorities. Its efforts to promote healthy eating and exercise should be given visible, high-level leadership; a national government, for

Governments should focus on key actions in six areas.

Food production/ standards	Urban design/ transportation	Media	Health systems	Schools	Employers
Minimum actions	5	ı	ı		
Regulations on: Quality standards for fat, saturated fat, trans fat, salt, and sugar content of foods, including infant foods Nutritional labeling on packaged foods and in fast-food/ food-to-go restaurants Incentives to promote: Food market locations/access Access to fresh foods (eg, subsidies for fruits/vegetables, potentially funded by taxes on sugary beverages)	Regulations mandating the availability of: • Sidewalks and bike lanes • Open spaces for recreation and play • Public transportation in cities and towns	Regulations that: • Control advertising of HFSS¹ foods and beverages, especially to children Incentives to promote: • Use of media to educate and influence	Regulations or incentives to promote access to: • Low-cost, convenient checkups for weight, blood pressure, glucose, and cholesterol • Low-cost, convenient nutritional counseling (including prenatal counseling)	Regulations (and funding) for: Physical activity during and after school Healthy food in cafeterias and restrictions on vending machines Educational activities related to weight Screening for weight and availability of nutritional counseling	Incentives to encourage: • Experimentatio with innovative programs to encourage physical activity and nutrition • Employer coverage of nutritional counseling • Provision of time/space for new mothers to express breast milk • Funding for and participatic in community-wide initiatives to address obesity
Other actions to	consider				
Regulations limiting fast-food/food-to-go restaurant locations and access Bans on promotions that encourage larger portion sizes Taxes on HFSS1 foods	Building code policies that encourage physical activity (eg, buildings with wide, well-lit staircases) Incentives to discourage driving in towns (eg, free public transportation vouchers or free/low-cost bicycle rental programs; fees for driving in certain areas)	Banning ads for HFSS¹ foods/ beverages entirely or at some times (eg, during early-morning weekend hours) Mechanisms to ensure compliance with media policies	Prenatal counseling/care Parenting courses Free or low-cost access to primary care services	Incentives to encourage children to walk or bicycle to school	Incentives to provide workplace weight-management programs Incentives for employees to walk or bicycle to work Healthier foods in cafeterias and vending machines Easier access to physical activity Incentives for employees to walk or bicycle to work Healthier foods in cafeterias and vending machines Easier access to physical activity

 $^{^1\}mathrm{High}$ in fat, salt, or sugar.

example, could appoint an "obesity czar." This level of visibility will give local groups the encouragement they need to move forward.

In addition, the government should devote resources (money, staffing, or both) to these efforts at a scale commensurate with the pandemic's severity. Adequate resources send another strong signal to local groups that the government is serious about the pandemic. From a pragmatic standpoint, the groups will need funding if they are to coordinate the multiple interventions required. (EPODE's organizers estimate that the program's coordination cost is between €2 and €4 per inhabitant per year, depending on the number of new interventions needed.)

How much money will be needed will vary significantly from country to country, depending on a number of factors, including the services already offered by local health systems and schools, the availability of sports facilities and other places to exercise, and the additional problems that must be addressed. On a per-person basis, the costs may not be high, but the aggregate cost may seem daunting at a time when many governments are suffering revenue shortfalls because of the global recession and loss of liquidity. However, the pandemic's staggering health and economic costs clearly demonstrate that an adequate level of investment is necessary—even though the payoff on the investment may not materialize for several years.

Next, the government should use both incentives and mandates to make it easier for locally led social movements to overcome entrenched interests and achieve impact. In our work with the International Association for the Study of Obesity, we identified more than 40 policy levers that governments have employed successfully to encourage healthy eating and exercise. Obviously, no government can pull all of these levers simultaneously. We have therefore identified a smaller set of actions that we believe governments should take in six key areas: food production and standards, urban design and transportation, media, health systems, schools, and employers (Exhibit 5). These actions may require legislative or regulatory changes, but together they enable locally led social movements to make headway against the forces contributing to the obesity pandemic. And once these actions are under way, governments can consider taking other steps, depending on local needs and the availability of resources.

Whether incentives or mandates should be used for specific actions will often vary, depending on the type of government (national, regional, or local) considering the actions, and the sociopolitical environment within the country. In some countries, only national governments have the authority to ban trans fats from foods; in other countries, local governments may do so. Countries also differ when it comes to which governments have the right to restrict the location of fast-food restaurants near schools. Similarly, limits on the advertising of foods with high fat, salt, or sugar content may face greater legal

Related thinking

"Battling childhood obesity in the US: An interview with Robert Wood Johnson's CEO"

"Three imperatives for improving US health care"

"Engaging consumers to manage health care demand" challenges in some countries than others. Governments that do not have the authority to take certain actions can use incentives to promote the same ends.

In some cases, incentives may be more appropriate than mandates. Employers, for example, may respond better if they are given financial inducements to offer workplace nutritional counseling than if they are simply told to do so. The incentives can be positive or negative. Schools and health systems, for example, can be offered greater funding to enable them to implement certain actions; employers can be offered tax breaks. Negative incentives could include high taxes on sugary beverages and fees that discourage car use in cities.

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Governments should also make sure that the incentives they use are aligned properly to ensure collaboration among stakeholders and to promote innovation. Obesity is a tough problem to deal with, and so it is crucial that existing interventions are tested in a wide range of settings and new approaches are tried. Governments can then use their convening power to help local organizations compare results and learn from one another. In addition, governments can monitor the results being achieved to keep alert for unintended adverse consequences (a rise in the prevalence of anorexia, for example).

Because of the obesity pandemic, today's children may have a shorter life span than their parents do.¹⁰ The steps necessary to halt or reverse the pandemic are far from easy, but success is possible. We believe that governments must lay the foundation so that locally led social movements can shift cultural norms toward healthy behaviors. As a result, citizens will be healthier and health care costs will be less difficult to control. •

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¹⁰S. Jay Olshansky et al., "A potential decline in life expectancy in the United States in the 21st century," *New England Journal of Medicine*, 2005, Volume 352, Number 11, pp. 1138–45.