Globesity: Tackling the world’s obesity pandemic

Dr. Sneh Khemka President, Population Health, Aetna International
Dr. Stella George Senior Medical Director, Aetna International
Dr. Lori Stetz Senior Medical Director, Aetna International
Dr. Mitesh Patel Medical Director, Aetna International
That pithy slogan echoed the chocolatier’s previous tagline: “Mars feeds you goodness three good ways,” which in turn echoed advertisements from the 1940s that promised “chocolate to sustain, glucose to energise, milk to nourish”. Indeed, generations were led to believe that Mars bars not only tasted good but were good for you.

How times have changed.

In early 2016, Mars – now one of the world’s largest food producers – announced that it would begin to distinguish between its “everyday” products and those “occasional” products that have high salt, sugar and fat content. Through new labelling, Mars promised to recommend how often occasional products should be consumed, based on “how long it takes the body to restore balance after eating these meals”.

Following the announcement, Fiona Dawson, Mars Food’s global president for food, drinks and multisales, pledged a new era of openness. “The real confusion in the food industry has come from hidden fats, salts and sugars, where people are really surprised or didn’t realise,” she said. The company’s announcement was a step in the right direction.

But many more steps are needed – and not only by Mars Food.

THE RISE OF “GLOBESITY”

The world has a weight problem. According to the World Health Organization (WHO), obesity rates have more than doubled since 1980. Today, 13 percent of adults around the globe are obese, while nearly four in 10 are overweight. The situation among children looks good only by comparison; the WHO reports that 6.3 percent of children under five years of age are overweight or obese; without intervention, they are likely to struggle with weight into adulthood.

More than that, however, obese children and adults are likely to struggle with a range of health problems that are profoundly debilitating and largely preventable. According to the U.S. Centers for Disease Control and Prevention, obesity is a prime cause of hypertension, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnoea and several forms of cancer, not to mention clinical depression, low quality of life and difficulty with physical functioning. Admirable work is being done to tackle the problems obesity causes, but much less progress is being made toward reducing obesity itself.

Obesity can have a devastating effect on the individual, and that’s just part of its impact. According to Cornell University researchers, medical costs associated with obesity totalled $315.8 billion worldwide in 2010 – a 48-percent increase since 2005 after adjusting for inflation. And the societal costs of obesity only begin with medical care. Each year in the United States alone, obesity accounts for $8.65 billion in lost productivity, while $2.5 billion in excess fuel is used to transport overweight and obese Americans. Add in the cost of heavier office chairs, sturdier examination tables and outsized MRI and CT scanners, and you begin to sense the scope of the problem. And those costs affect everyone.
as medical care becomes more expensive for all, not just those who are obese. It’s no wonder the World Health Organization coined the term “globesity” in 2001.

The consequences of globesity are stark but, in many cases, the causes are simple: People become obese when they take in more calories than they burn. If people were to eat less and move more, the pandemic would largely come to an end.

Of course, eating better and exercising more is easier said than done. Governments around the world offer simple dietary guidelines – America’s MyPlate scheme and the UK’s Eatwell Guide, for example – and the marketplace is full of solutions ranging from fad diets to exotic exercise regimens based on circus skills, military training and underwater bicycling. Yet the pandemic rages on unchecked.

One reason, as scientists are now discovering, may be the impact of genetics both on individuals’ behavioural choices and on how bacteria in the gut affect how the body functions and stores fat. Until results are conclusive – and research continues in this area – the focus needs to remain on what we know to be true: that an active lifestyle and a healthy diet offer the best hope for beating obesity.

Unfortunately, modern society makes eating easier and physical exertion less necessary. We pick up lunch at the drive-thru window instead of walking into the restaurant. We chat with co-workers via text message to save a trip down the hall. We order our ever-larger clothing online and have it delivered to our doorstep. When Honda redesigned their Fit subcompact car for 2009, no one remarked on the irony of a sporty, five-passenger vehicle boasting of 10 beverage holders.

At Aetna International, we believe that only a newly formed holistic approach – one that involves food manufacturers, retailers, governments, employers and, yes, insurance companies – can help to stem the tide. While individuals must ultimately make the decision to become healthier, not everyone can come to this realisation, alter their behaviour and implement safe, informed changes to their diets and lifestyle without support.

---

ROLE OF GOVERNMENTS

Many decry the interference of the “nanny state,” but governments play an essential role in helping consumers improve their diets and lifestyles. Through a thoughtful combination of education programmes, taxes and incentives, governments can nudge consumers and food producers in the right direction. And research has shown that when governments act they can have a positive effect.

In 2005, the Japanese government unveiled the Japanese Food Guide Spinning Top. This model illustrates the proper balance and quantity of different foods – milk and fruit are at the bottom, grain and vegetable dishes are at the top – while emphasising the importance of physical activity. (That’s the spinning part.) To gauge the model’s effectiveness, researchers surveyed nearly 80,000 patients at 11 public health centres across the country to determine their adherence to the dietary guidelines. (The survey covered 147 food and beverage items and nine frequency categories, ranging from rarely to seven or more times a day). Patients whose scores were in the highest quartile had a 15-percent lower mortality rate than those whose scores were in the lowest quartile.⁹

Comparable results have been documented in China, whose Chinese Food Pagoda model offers similar guidance as the Japanese Food Guide Spinning Top; in fact, the highest quartile of that model has been associated with a 33-percent reduction in mortality among men and a 13-percent reduction among women. Clearly, following the dietary scheme for one’s country has a measurable impact on one’s health.

But most consumers don’t have time to seek out dietary guidelines. Instead, harried shoppers rely on food labels to determine what to buy and what to leave on the supermarket shelf. Here too governments can play a role by mandating labelling that offers clear, simple nutritional information.

In 2011, the European Commission implemented mandatory labelling of calories, total fat, saturated fat, carbohydrates, sugars, protein and salt, typically on the back of food packages. Unfortunately, research to date has not shown a clear impact. Consumers seem to be influenced more by brand, taste, convenience and family preference than by a calorie label they spend just 25–100 milliseconds scanning.¹⁰

One challenge is that consumers have a hard time connecting data on a label with health impacts. In fact, more than a third of Europeans mistakenly think that a child needs more calories than an adult male.¹¹ More explicit labels are clearly needed.

Recently, researchers in the United States tested the relative effectiveness of warning labels versus calorie labels on sugar-sweetened beverages (SSBs). Parents who saw a label reading “Safety Warning: Drinking beverages with added sugar contributes to obesity, diabetes and tooth decay” were significantly less likely to purchase SSBs than those who saw a simple calorie label. Most said a warning label would change their belief about a beverage’s healthfulness and would encourage them to purchase fewer such beverages for their children. And nearly three in four were in favour of adding warning labels to SSBs.¹²

Governments have an even more powerful tool they can use: fiscal policy. In March 2016, the UK government announced a new levy on sugary drinks after campaigns by the British Medical Association and the celebrity chef Jamie Oliver. When implemented in two years’ time, the levy will raise the cost of a can of Coca-Cola by 11 percent, while leaving the cost of pure fruit juices and milk-based drinks untouched. It is also expected to generate £520m, which will go toward boosting primary school sports programmes.

Will the new levy make a difference? According to the World Health Organization’s Global Action Plan for the Prevention and Control of Noncommunicable Diseases, the right mix of

---

9. www.bmj.com/content/352/bmj.i1209
12. http://pediatrics.aappublications.org/content/early/2016/01/13/peds.2015-3185
taxes and incentives can have a demonstrable effect on nutrition. In a meta-review of 11 studies, the WHO found strong, consistent evidence for taxing SSBs in the range of 20–50 percent and providing subsidies on the purchase of fruits and vegetables in the range of 10–30 percent. The report also advocated taxes on foods that are high in saturated fats, trans fatty acids, free sugars and salt.\textsuperscript{13}

Two recent studies from the United States demonstrate the impact carefully crafted fiscal policies can have. The first related to a tax on SSBs; the second related to rebates on the purchase of fruits and vegetables.

In recent years, municipalities across the United States – including several in the San Francisco, California metropolitan area – attempted to enact special taxes on SSBs. In November 2014, the city of Berkeley succeeded, imposing a $0.01-per-ounce tax on the distribution of soda, energy and sports drinks, fruit-flavoured drinks and sweetened water, coffee and tea. One year later, researchers found that SSB consumption in Berkeley had decreased by 21 percent, while consumption in nearby cities that had failed to pass tax measures increased by 4 percent. At the same time, the tax generated $1.5 million in just eight months, money Berkeley earmarked for programmes to address obesity.\textsuperscript{14}

Meanwhile, across the continent in Hampden County, Massachusetts, a study was conducted in 2011–2012 to test the impact of incentives on the purchase of healthy foods. Randomly selected recipients of food assistance through the Supplemental Nutrition Assistance Program received 30-percent rebates on targeted fruits and vegetables. (These generally included fresh, canned, frozen and dried fruits and vegetables without added sugars, fats, oils or salts, as well as 100-percent fruit juices.) Families that were eligible for rebates increased their consumption of the targeted fruits and vegetables by 26 percent compared with families in a control group.

Governments also need to protect their economies from the impact of obesity and associated diseases, because these problems can have a profound effect on commercial productivity, medical costs, social services and culture. By reforming approaches to nutrition, exercise and health in schools, by promoting development and infrastructure projects that support healthy lifestyles and by influencing the food and beverage industry, governments can reduce the impact of globesity in measurable ways.

One U.S. official, Oklahoma City Mayor Mick Cornett, has demonstrated the impact governments can have. On New Year’s Eve 2007, Mayor Cornett stood in front of the elephant enclosure at his local zoo and announced that his city was going on a diet to lose a million pounds. Less than five years later, the city had accomplished that goal and moved from the list of America’s fattest cities to the list of its fittest cities.

\textbf{Longevity and obesity}

\textit{Eleven minutes}. That’s how much a single cigarette can shorten one’s life, according to rough calculations published in the British Medical Journal in 2000. Thus, a pack of 20 cigarettes means that the individual loses the time equivalent of two football matches or a Eurostar journey from London to Paris, while a carton of 200 cigarettes costs the time equivalent of a romantic night away.\textsuperscript{15}

It would be eye-opening to assign similar values to a doughnut, a sugar-sweetened beverage or a plate of fish and chips, but here the evidence is harder to come by.

The risk of premature death does not increase in lockstep with BMI. Instead, the survival curve is U-shaped: Those who are severely underweight or obese are most at risk, while those who are normal weight – or even slightly overweight – enjoy the best longevity. In fact, a Mayo Clinic review of 40 different studies showed that the risk of death for overweight people (BMI from 25–30) was 12 percent less than for normal-weight people (BMI from 20–24.9). There’s no clear reason why that is so, but one explanation may be that some level of fat has a protective effect that helps the body overcome disease.\textsuperscript{16}

A public-health message based on this so-called obesity paradox would likely confuse those who have been buffeted by conflicting messages about whether sugar or fat is the leading culprit in obesity. Instead, physicians and health advocates should focus on encouraging people to eat healthy foods and lead a healthy lifestyle, whatever their BMI happens to be.

\begin{itemize}
\item 13. www.who.int/dietphysicalactivity/publications/fiscal-policies-diet-prevention/en/
\item 14. www.researchgate.net/publication/306434916_Impact_of_the_Berkeley_Excise_Tax_on_Sugar-Sweetened_Beverage_Consumption
\item 15. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1117323/
\end{itemize}
In the five years after the Food Standards Agency set salt-reduction standards, salt content in foods dropped by 10–40 percent, preventing an estimated 9,000 deaths annually.”

In a 2013 TED Talk, Mayor Cornett outlined a series of actions the city had taken, including making streets pedestrian friendly, building a new urban park, creating Olympic-calibre venues for water sports and launching fitness programs for inner-city children. Perhaps most importantly, however, the mayor’s program fostered grassroots involvement. “People were signing up, and so the pounds started to add up, and the conversation that I thought was so important to have, was starting to take place,” he said. “It was taking place inside the homes, mothers and fathers talking about it with their kids. It was taking place in churches. Churches were starting their own running groups and their own support groups for people who were dealing with obesity. Suddenly, it was a topic worth discussing at schools and in the workplace.”

ROLE OF FOOD PRODUCERS AND RETAILERS

Despite these and other successes, there is a limit to what can be achieved by governments alone. Consumers need to be presented with a better choice – not more to choose from, but better options. We buy what we can afford from what we see on the shelves at the store or supermarket. So we need to change what is on those shelves. To achieve that, the way food is produced – and how it is priced and advertised – must change.

Experience from the UK shows that major improvements are possible. In the five years after the Food Standards Agency set salt-reduction standards, salt content in foods dropped by 10–40 percent, preventing an estimated 9,000 deaths annually. (Health advocates argue 6,000 further deaths per year could have been prevented had the programme not been interrupted.) Kellogg’s claims to have reduced salt in its breakfast cereals – a surprising source of salt – by around 60 percent over a 16-year period. Since 2004, McDonald’s has reduced salt in its chicken nuggets, French fries and ketchup by 23–30 percent.

Sometimes the solution to improving diet is as simple as changing how various foods are presented. A study in the United States compared food displays in full-service supermarkets and specialty grocery stores with those in discount grocery stores and big-box retailers like Walmart. It found that fruits and vegetables dominated the view from the main entrance of 71 percent of higher-priced stores while junk foods dominated the view from the main entrance in 67 percent of the lower-priced stores.

Is it any surprise that low-income residents who shop at discount outlets are more likely to reach for junk food than their better-off counterparts who shop at upscale grocery stores?

Another way retailers can help combat obesity is by making healthy foods the default option. In 2014, food-service company Sodexo began adjusting children’s menus at the museums, zoos and science centres in the United States where it operates cafeterias. At 65 percent of its facilities, water or low-fat milk is now the default beverage and fruit or

17. http://www.ted.com/talks/mick_cornett_how_an_obese_town_lost_a_million_pounds
a non-fried vegetable is now the default side dish. Previously, families had to choose healthy options; now they must choose unhealthy ones.

While it’s impossible to gauge the impact of Sodexo’s effort on obesity, the experience at hospital system MaineHealth suggests it will be positive. In the two years after the organization overhauled its cafeteria menus, the percentage of employees eating five or more servings of fruits and vegetables rose from 17.6 percent to 52.7 percent.20

ROLE OF EMPLOYERS AND INSURERS

As the experience of MaineHealth demonstrates, employers can help their workers fight obesity simply by presenting better options in their onsite cafeterias. But that’s just one way employers can support their workers.

Consider Nomura International, which was named Britain’s healthiest large employer in 2014 and 2016. The financial services firm provides a full-time medical clinic staffed by a physician and nurse practitioner, free three-hour health assessments, a fully equipped gym with dozens of exercise classes per week, parking for 250 bicycles, showers and lockers (including free towels and shower gel) and a “cycle-to-work” scheme where workers can purchase bicycles through payroll deduction.21

But companies don’t have to spend vast amounts of money to address obesity. Changing vending machine selections, installing standing desks and facilitating social interactions that get workers out of their offices can all make a difference. Even decisions related to office location impact obesity: Employees are more likely to bike to work if the area has ample bike lanes, they’re more likely to take a walk at lunch if there’s a park next door, and they’re more likely to eat healthy food if nearby restaurants offer more than fried options.22

Insurers, meanwhile, can take steps that benefit both their members and their own financial results. While promoting wellness comes at a cost, there’s a measurable return on investment in terms of reduced spending on conditions like diabetes and hypertension. (Earmarking some of those savings for raising awareness of the risks of obesity would offer further benefits to both members and insurers.) Offering free annual health checks with no copays and no deductibles (excesses) is a good first step – but only a first step. Insurers can also take a carrot-and-stick approach, charging higher premiums for obese members and offering incentives to those who lose weight. (Not surprisingly “stick” penalties are viewed as less fair than “carrot” incentives.) In South Africa, for example, health insurer Discovery began offering cash-back rebates on healthy food purchases; as a result, purchases of fruits and vegetables increased by up to 8.5 percent relative to total food spending, while purchases of less-desirable foods declined by up to 7.2 percent. (Individuals received the largest rebate if they completed an online health risk assessment.)23

Predictive modelling – mining massive amounts of data to forecast health outcomes for individuals – can help insurers improve clinical results. In the United States, for example, health insurer Humana used predictive modelling to identify members who were predisposed to type 2 diabetes. (Without predictive modelling, Humana had tagged just 1 percent of these members as being pre-diabetic.) The company connected the members it identified with personalised health coaching, digital tracking tools and curriculum from the Centers for Disease Control and Prevention’s National Diabetes Prevention Program. Within six months, the members reported an average weight loss of 8.7 percent of total body weight.24

ROLE OF INDIVIDUALS AND THEIR PHYSICIANS

Ultimately, of course, the responsibility for obesity lies with the individual (and on his or her parents in the case of a child). They might do well to consider how few obese octogenarians there are in society. No combination of education, incentives, penalties and product reformulations

can force a person to buy a banana instead of a bag of crisps or to balance their intake of nutritious, good quality foods with indulging in the odd less-healthy treat.

Oftentimes, all a person needs is a nudge in the right direction. An Oxford University study tracked overweight or obese patients who visited their family doctors for consultations unrelated to weight. Half were advised to sign up for weight-loss classes, and those who did lost an average of 2.43kg each within a year; the other half were given more general advice but still managed to lose about 1.04kg each. And the advice, by design, took just 30 seconds. (Interestingly, despite physicians' fears, just 0.2 percent of the patients took offence when they were told they needed to lose weight.) Clearly, physicians need to be more assertive in counselling overweight and obese patients.

**CONCLUSION**

In announcing Mars Food’s decision to differentiate between everyday and occasional products, Fiona Dawson said, “As a busy mum myself, I know how tricky it can be to find healthy meals which everyone in the family will enjoy, and of course, they often need to be quick and easy to prepare.”

That problem becomes easier when healthy foods are more accessible and affordable, when junk food is taxed or discouraged and when governments, employers, insurers and medical professionals join up in an effort to get people to eat better and move more. We know what causes obesity, and we know the misery that obesity causes. It would be easy, of course, to lay the responsibility for fighting obesity at the door of the individual, but the conversation cannot end there. The reality is that we all need to challenge the way the world is tackling obesity, and to do so with determination and compassion. The current approach simply isn’t working, and so we must develop a new societal model, one in which health, nutrition and exercise are a priority in everything we do, from how we plan our towns and educate our children to how we produce our food and spend our research dollars. We must find ways to make it easier, safer and more practical for people to make the right choices and do the right things to preserve and improve their health.

We must also continue research into the impact of genetics on obesity. Scientific truth as we know it today is not final, and medicine is constantly evolving, so we need to continue investigations into new areas of both basic and applied science. While individuals are responsible for their own behaviour, gaining a better understanding of such issues as individuals’ genetic responses to nutrition is critically important.

In the meantime, we at Aetna International believe there is sufficient evidence to show that immediate action on a global scale is needed. One or two organisations or health bodies alone cannot win the war on globesity. Our challenge as a global society is to band together to apply what we know in a vast international effort to end the globesity pandemic, and we declare our commitment to the cause.
Aetna International is part of Aetna, one of the leading diversified health care benefits companies in the U.S., serving an estimated 46.5 million customers with health benefits and resources to support them in making better informed decisions about their health care.

Aetna International is committed to helping create a stronger, healthier global community by delivering comprehensive health care benefits and population health solutions worldwide.

One of the largest providers of international private medical insurance services, Aetna International serves more than 700,000 members worldwide, including expatriates, local nationals and business travellers. Its global benefits include medical, dental, vision and emergency assistance and, in some regions, life and disability.

Aetna International also offers customised programs, technology and health management solutions to support health care systems, government entities and large employers in improving access to quality care and health care outcomes in tandem with controlling associated costs.
Dr. Sneh Khemka
President, Population Health
Aetna International

Sneh is President, Population Health at Aetna International, where he is responsible for managing and growing a strategically important business within Aetna, one of the largest health care companies in the United States. Population Health is one of its fastest growing arms and is positioned to help governments and large organizations manage the health of their populations better, primarily through infrastructure development (major IT systems), clinical data analytics, health and disease management, and ultimately primary care.

Having trained as a surgeon, Sneh went on to successfully establish and sell his own business. He then joined the Bupa Group and was promoted through a variety of pivotal roles in the company, including Medical Director and Director of Healthcare Development. Subsequently, he was Chief Operating Officer of Advanced Oncotherapy plc, a spin-off from CERN (home of the Large Hadron Collider).

Sneh is a non-executive director of the Joint Commission International, the leading hospital accreditation authority and he has also advised and acted for a number of private equity houses in the UK and Europe.

In his spare time, he works as a radio doctor (with a weekly show on LBC), an expedition doctor, and is on the board of a major UK charity.
Dr. Stella George  
**Senior Medical Director**  
Aetna International

Dr. George is the Head of Care Management (Americas) and is responsible for the delivery of all of our care management programs through her team’s global clinical operations. She is responsible for driving the care management strategy. She has oversight on the clinical program design which is focused on developing member-centric innovative programs focused on increasing member engagement and improving health outcomes.

Prior to joining Aetna International, Dr. George was the head of a medical department for a leading third party administrator (TPA) in United Arab Emirates with operations in eight countries in Middle East and Asia.

Stella received her degree in Medicine and Surgery (MBBS) from the University of Bombay – India and obtained her post graduate Diploma in Public Health (DPH) from University of Bombay – India. She has practiced medicine in Mumbai and is a trained Leprologist. She has worked with Non-governmental organization (NGO) in India focused on leprosy early detection, treatment and prevention as part of the National Leprosy Eradication program. She received her Master’s in Business Administration (MBA) from the University of Strathclyde – UK.
Dr. Lori Stetz  
*Senior Medical Director*  
Aetna International

As Senior Medical Director for Aetna International, Dr. Lori Stetz provides guidance, support, and medical leadership for all care management activities around the globe. Lori drives medical policy, and actively participates in strategic planning and program and product development in concurrence with changing markets and technologies.

Lori also manages Aetna International’s emergency evacuation program, helping to ensure appropriate health care delivery for our members around the globe. Prior to joining Aetna in 2009, Lori practiced primary and urgent care medicine and public health in the U.S. and a number of international settings, including Kosovo, Thailand, and Nepal. Lori is certified by the American Board of Family Medicine and has special certification in Travel Medicine and Aeromedical Evacuation. Lori graduated from Haverford College, and holds an M.P.H. from Boston University and an M.D. from SUNY Downstate.
As Medical Director for Aetna International, Dr. Patel provides guidance, support, and medical leadership for care management activities in Europe. Dr. Patel also manages Aetna International’s emergency evacuation program, helping to ensure appropriate health care delivery for our members around the globe. Dr. Patel graduated from King’s College University, London and also has a Healthcare Management degree from Imperial College, London. He is also a practicing physician in Emergency Medicine.