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CHALLENGING MINDS, CHANGING LIVES

Commentary

Strategies to make long term obesity treatments more effective

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Obesity, one of the most common and serious public health problems we are facing as a nation, seems never end. More than 34.9 percent of American adults are obese and more than 17 percent of children and adolescents are overweight (CDC, 2012). In 2014, Robert Woods Johnson Foundation and Trust for America's Health reported that Mississippi and West Virginia now tie for the fattest state in the United States. In the mean time, the national obesity rate passed 35 percent for the first time in three decades. The average American is 24 pounds heavier, and obesity rates across the country is doubling among adults and tripling among children in a single generation in the last 35 years (Fierce Healthcare, 2014). Obesity is one of the highest risk factors to cause type 2 diabetes, high levels of cholesterol, gallbladder diseases, gout, hypertension, sleep apnea, heart disease, joint pain, and certain types of cancers (CDC, 2012). Currently, Mississippi is the poorest and fattest state in all 50 states. Mississippi has a near 3 million population, 35.1% of Mississippians are obese, and 69.3 % of Mississippians are obese and overweight. Mississippi has been ranked as the fattest state for 9 years (BRFSS, 2013). Obese people, especially Mississippians are seeking ways to lose their extra weight, and reduce the risks of all obesity's complications.

There are countless weight-loss strategies available to be considered effective. The major therapies are dietary and behavior modification, medication, and surgery (UCSF Medical Center, 2014). The classic theory of obesity is considered as energy balance, which is energy in equals energy out. Either energy in over or less than energy out will cause health problems. Obesity is the one condition which is caused by energy in is over energy out. When people are seeking weight loss, the diet is usually the first attempt. The most popular diet is low caloric diets, which people take 500 to 1000 calories a day less than they burn, or limit intake to only 400 to 800 calories a day (UCSF Medical Center, 2014). However, the research showed that when you reduce the number of calories you consume, your body reacts by slowing your metabolism to burn fewer calories, rather than promote weight loss. When people go back to a normal diet, 90 percent of people will regain weight (Kolata, 2011).

The goal of behavior medication therapy is to change your eating and exercise habits to promote weight loss. Most patients experience success with behavior modification; however, they achieve only short-term weight loss for the first year. Physical activity is the key component for any long-term weight management program. Physical activity can help speed up your metabolism; effectively reduce a sort of thermostat in the brain that makes you resistant to either weight gain or loss. Walking, riding, swimming, or taking stairs are considering the most effective forms of exercise, which is the most difficult form to keeping.

Medications for obesity have been very popular both over the counter and prescriptions. There are four major categories: Fastin, orlistat, phentermine, and siburamine. They help patients lose weight by stimulating the increase of fat metabolism, blocking dietary fat from being absorbed, and suppressing appetite (UCSF Medical Center, 2014). The medications are an important part of the morbid obesity treatment process, but weight-loss drugs can have serious side effects.

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Surgery may be the last effective way to lose weight for some morbidly obese people. Bariatric surgery, the most popular surgery performed for weight loss, is effective by diminishing most of the stomach to reduce the quantity of food you can consume. There are two limitations: 1) your weight has to be more than 100 pounds than the ideal recommended body weight; 2) have a body mass index (BMI) of 40 or higher. To qualify for surgery, you must complete a medical and psychological pre-evaluation process, and show how you are committed to the long-term, follow-up care after surgery. After the surgery, many complications of obesity, like sleep apnea and high blood pressure are reversed. Multiple studies have found that 80 to 85 percent of diabetics can stop medication after the first year (Smith, 2011).

Although we have various weight-loss therapies, most often, obesity has a good outcome only in the short-term (Wadden, 2004). When they return to their normal life and their familiar community and environment, most of them will get extra fat back to their body. According to a recent study from University of Mississippi Medical Center, the patients who were able to lose weight with obesity therapy often regained much of the weight after 1 year and returned to pre-treatment weight after 5 years (UMMC, 2014). No doubt, this is a brutal challenge to all public health people and medical people. If we don't reverse this trend, the nation will stay on course towards disastrous health and cost outcomes. If we don't stop or slow these trends, Mississippi, the fattest state in the United States, what future will bring to the Mississippian? The question now is how to make long-term obesity treatment more effective, even little by little?

In the past 30 years, Colorado always keeps as the skinniest state. Many scientists have tried to open the Pandora box of obesity from Colorado. They may not have found the secret treasure, but there is something that may help us rethink obesity. Culture, environment, and physical activity, are considered the key factors and play important roles in the prevention, intervention, and long term effects of obesity treatment. Colorado is considered a wonderful place for physical activity. Everybody in this state is moving actively.

Unfortunately, Mississippi is not a wonderful place like Colorado. In Mississippi, everything revolves around food, reunions, funerals, and parties. The French fries, fried chicken, fried catfish, and sweet tea are favorites of Mississippians. And Mississippians don't move actively. Every Mississippian knows they need to move, every Mississippian knows they need to lose weight. However, due to economic, environment, safety, and health policy limitation, helplessness Mississippians choose to lose weight by self-help. Self-help is a way to lose or maintain weight without seeking professional treatments. Self-help is also a financially feasible way for millions of overweight Americans to care for themselves and address their weight problems. According to different levels and independence, self-help is typically divided into several formats including purely self-guided help, computer-guided help, guided self-help and group self-help (community or commercial programs). The purely self-guided help is more independent and less formally structured, and group self-help is less independent and more formally structures. The National Weight Control Registry (NWCR) is a group of more than 5,000 individuals who have achieved mean weight loss of 70 lbs and have kept them off for an average of 5.7 years. Approximately one third of this group lost their weight on their own, without using any formal program. However, most successful cases have made repeated failed attempts before their eventual success (Butryn, 2007). Self-help is not appropriate for every person or problem. Self-help, especially purely self-guided help, is the least restrictiveness and without professional involvement, unrealistic weight loss expectations and no life style changes followed, may lead people to undervalue their weight loss accomplishments and relapse (Cooper, 2001). Compared to purely self-guided, the group self-help may have some special advantages such as group support, encouragement, and leadership. For example, compared to participants who received a primarily self-guided intervention and lost 1.5% of their weight after 1 year and 0%

after 2 years, Weight Watchers participants lost 5.3% and 3.2%, respectively (Heshka, 2003). However, the commercial programs charge fees for participation. People who have lost weight often feel that the benefit of weight loss, relative to its cost, drops to nearly zero after 6 months (Jerry, 2004). Individuals who have lost weight and are attempting to maintain their weight loss have consistently identified the need for maintenance programs that include ongoing support offered at low or no cost (DePue, 1995).

For a long time, obesity was considered to be only a condition or disorder. An obese person was considered a "normal" heavy person, because everybody looks the same; therefore, obesity was not treated like other types of diseases such as cancer which could threaten a person's health. As a result, obesity didn't have reimbursable codes in many insurance or medical systems. Now, obesity is considered to be not only just overweight, but also a threatening bomb to our health and even life. In 2013, the American Medical Association meeting officially recognized obesity as a disease. The public needs to look at obesity from a different point of view and rethink the effects brought by the extra fat. It can be anticipated that more and more obese people will try to seek solutions for this special issue.

It has been well known that treating obesity is very costly. Each year, more than $210 billion is spent due to obesity in health care, and $450 billion will be spent due to the non-medical costs of obesity (Brill, 2013). Another $33 billion a year is spent on weight-loss products and programs, most of which comes right out of consumers' pocket (Boston medical center, 2013). Obesity impacts Medicare, Medicaid, and commercial insurances. Dr. Eric A. Finkelstein is a nationally acclaimed health economist on the subject of economics and obesity. When Dr. Finkelstein's research team analyzed medical expense spending patterns and actual dollars spent, they found that obesity has pushed up Medicare spending by 8.5 percent, which means obesity was associated with $34.3 billion in higher Medicare spending. Similar patterns could be found in Medicaid. Obesity was associated with an 11.8 percent increase in total Medicaid expenditure, which was $27.6 billion in higher Medicaid spending. They also found obesity has an even greater impact on costs in the commercial health insurances. The overall effect was a 12.9 percent spending increase associated with obesity, which was $74.6 billion (Finkelstein, 2008). According to the estimate of Congressional Budget Office (CBO), the obesity spending by 2020 will grow between 3.6 to 4.2 percent a year (O'Grady, 2012). Obesity will be not only the heavy weight on body, but also a huge economic burden to obese people and the whole society. The bad news is Mississippi is the poorest state in the United States with 22.3% of population below poverty level compared to 14.9% of nationwide and median house household income $38,882 compared to $53.046 of nationwide (U.S. census bureau, 2013).

Beginning in 2012, the federal Affordable Care Act covered the benefits of screening and counseling for obesity and allowed states to select an existing insurance plan to be the statewide "benchmark" plans. This process led to 22 states placing a specific health benefit requirement to cover bariatric or gastric bypass surgery, and 16 states require some coverage and reimbursement for dietary or nutritional screening, counseling and therapy for obesity (National conference of state legislatures, 2013). According to a recent study, all Medicaid programs cover at least one obesity treatment modality, only 8 states (Delaware, Indiana, Iowa, Louisiana, South Carolina, Virginia, and Wisconsin) cover all three recommended treatments (nutrition counseling, drug therapy, and bariatric surgery) (Lee, 2010). Unfortunately, Mississippi is neither of them.

Apparently, it is very difficult for obese people without health insurance to achieve effective weight loss largely due to the cost of treatments. Does that mean having health insurance will completely solve this problem? 17.3% of populations in the Mississippi are uninsured, 37.7% are covered by government health

insurance, 24% are covered by Medicaid, and 17.5% are covered by Medicare (U.S. Census bureau, 2013). Although more than 80% of Mississippians have different kinds of health insurances, Mississippi is still suffering from being the fattest state. Why does having health insurance not effectively control the obesity trend? High cost of the treatments may be the answer to this question. For example, the bariatric surgery averagely costs $42,000, and patients have to pay from their pocket at least $15,000 which equals half of total household income for many Mississippians (insurance companies do cover benefits for weight loss surgeries under certain circumstances). There is no doubt that the poorest Mississippians can't afford it even with health insurance. Actually, a recent study indicated that there is a negative correlation between obesity and economic --- the poorer places are more likely to have a higher obesity rate (Zhang, 2014).

Without financial and health policy support from the government, obese people such as Mississippians will encounter many obstacles to losing weight. Uninsured Mississippians are hoping the new health insurance policy will bring them access to weight loss treatments. And insured Mississippians are hoping the new insurance policy can expand the benefits, cover more treatments, and medicines related to obesity. Previous studies have indicated that obesity intervention and prevention could result in great long-term return. For example, if patients can receive pharmaceutical intervention to obesity such as Xenical, the estimated cost per QALY (quality adjusted life years) saved will be $8,327 (Maetzel, 2003). If patients can receive surgical intervention, such as gastric bypass, the estimated cost per QALY saved will be $1,853 for patient whose BMI between 40 and 50 with obesity-related disease (ORD), and $3,770 for those without ORD (Chang, 2011). If patients can receive behavioral therapy, personal trainers and incentives, the estimated cost per QALY saved will be $29,759 for patient whose weight over between 31and 70 kg, age 25 to 55 years old without ORD (Jerry, 1998). Health insurance companies may be unwilling to reimburse the patients for obesity treatment costs for many reasons. However, since obesity has been recognized as a disease, insurance companies need to start covering more benefits and expand coverage related to obesity treatments. For example, fracture needs to be medically covered for surgical repair, pain medicine, and physical therapy for long term function recovery. If all commercial insurance companies, Medicare, Medicaid, and Obamacare could offer more benefits to obesity treatments, we are more likely to see decreases of obesity rates as well as the cost of obesity treatments in the near future. Moreover, if the government could make appropriate health polices to adjust the price of healthy food, give compensation to food industries, provide more weight loss programs at no or very low cost, redeem related obesity expense taxes, those obese people will have a much higher chance to maintain weight loss for a long time and help them get back to a healthy life track.

There's no magic bullet against the obesity trend. Successful long-term weight loser engage in high levels of physical activity, restrict their energy intake, keep many healthy foods in their homes, closely monitor their weight, and buy nutrition and exercise books, programs or magazines (Butryn, 2007). Obese people need effective health insurance plans and government health policies to overcoming the obstacles to maintenance loss weight and resist the current "toxic environment."

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