# The problem of obesity and unmanaged disease characteristics

Health & Medicine, Obesity

## Obesity

Obesity is a medical condition when an individual's weight is higher than what is considered as a healthy weight for a given height (Centers for Disease Control and Prevention, 2016). A screening tool used to define obesity is a BMI or body mass index. A body mass index between 18. 5 and 25 is considered normal. Overweight people have a BMI between 25 and 30. A BMI that is higher than 30 places a person in the obese category.

## A1. Pathophysiology

Obesity is a disease characterized by the exaggeration of normal adipose tissue. Obesity is a contributing factor in developing numerous diseases. Also, it causes a metabolic dysfunction that involves lipids and glucose. When obesity is present, every organ system suffers. The cellular basis of obesity is adipocyte; adipocyte secretes hormones and cytokines. Obesity develops when these hormones and cytokines are alternated. In obese people, adipocytes increase in size or number. The core pathophysiology of obesity consists of the derangement of the central regulation of energy balance with alteration of neurochemical and feedback signaling. This, in turn, produces an inappropriate expansion of the adipose organ with progressive hyper-production of adipokines and especially of inflammatory cytokines (Mingrone & Castagneto, 2015).

## A2. The Standard of Practice

The standard of practice for obesity uses the evidence-based approach. The team working on obesity treatment consists of nurses, nutritionists,

physicians, and pharmacists. The whole team should constantly reinforce knowledge and motivation to the obese patient. The patient should consider weight loss as a lifelong commitment instead of a short-term goal. The standard of practice would include a behavioral and lifestyle approach, dietary approach, physical activity approach, and pharmacotherapy. Nutritionists would work with patients to set new nutrition goals and develop the diet plan specific for each patient. Their job is to teach patients to make good meal choices. Physically active people spend more calories which causes the weight loss. The burning of calories through physical activity, combined with reducing the number of calories in food, creates a calorie deficit that results in weight loss (Centers for Disease Control and Prevention, 2016). The combination of work out and diet seems like an ideal plan to lose weight. Pharmacotherapy is usually used for people with a BMI higher than 30 or if the patient has a medical condition that is related to obesity. Those medications either reduce the appetite or block the body from absorbing the fat. Lastly, surgeries should be planned if any of the above-mentioned practices do not help.

## A2A. Pharmacological treatments

Healthcare providers should first encourage patients to become more physically active, pay close attention to their nutrition, and make certain behavioral changes. If none of this helps a patient to lose weight, pharmacotherapy could be considered. Pharmacological treatments are usually prescribed to patients with comorbidities such as diabetes or hypertension. The most commonly prescribed medications in California are

Xenical, Alli, Belviq, and Qsymia. Xenical reduces the amount of fat that has been absorbed while Belviq has effects on the serotonin receptors in the brain (National Institute of Diabetes and Digestive and Kidney Diseases, 2016). In my community, these medications are prescribed together with the physical activity and diet as a part of the treatment. Medications affect the management of obesity in my community by having increased compliance among obese patients. According to Juarez C. MD, the results show that patients on a drug therapy lose around 10 percent of their weight. In the past, the most frequently prescribed medicine was sibutramine which was withdrawn from the market after a series of cardiovascular side effects. The study showed that the combination of two drugs, phentermine and topiramate, produces a weight loss of 8-10 kilograms (Joo & Lee, 2014). The side effect of most medicines is that the patient starts gaining weight once he or she stops taking the medicine.

## A2B. Clinical Guidelines

The clinical guidelines consist mostly of assessment, diagnosis, and patient education. If primary care physicians believe that their patients are obese, they will start the screening process. They will try to find out the past medical or family history. In that way, doctors could see if there is any family predisposition for comorbidities such as diabetes, hypertension, and obesity. A part of the assessment is weighing the patient and counting a body mass index. As stated before, a BMI of 18. 5 to 25 is categorized as normal. People with a BMI greater than 25 are considered overweight. In order to confirm

the diagnosis of obesity, physicians will also do a general physical exam, order labs, and measure the waist.

After the physician diagnoses the patient with obesity, through life changes would be suggested. The two most important and probably the hardest life changes are nutrition and physical activity. Dietary suggestions would consist of numerous diets that produce a caloric deficit or very low-calorie diets for a short period of time (Department of Veterans Affairs, 2014). The patient should be consulted by a nutritionist who would make a unique dietary plan for this individual. Physical activity helps people lose weight by decreasing total body fat. It is recommended to spend two to three hours per week of moderate to vigorous physical activity.

## A2C. Standard Practice of Disease Management

The research that was conducted by UCLA in 2011-2012 showed that 18 million people were overweight in California with the addition of 7 million obese residents. The standard practice in California does not differ much from the national practices. Primary care physicians play the essential role in discovering and diagnosing obesity. In order to diagnose a person with obesity, doctors use a physical assessment combined with a BMI test, which is consistent with the AACE’s standards. Numerous policy reforms are announced in California with the goal to encourage healthy eating. Chain restaurants are required to display calorie information on menus; schools are prohibited to sell sodas or other sweetened beverages (Wolstein, Babey & Diamant, 2015).

## A3. Managed Disease Process

Many obese people have a reduced quality of life. Good management of obesity would consist of decreasing a BMI to at least 25, which belongs to the highest acceptable number for a normal BMI. Patients would benefit from counting their calorie intake and tracking their activity. It is very important to set realistic goals to prevent potential discouragement. Patients should make frequent visits to the primary care physician to check their progress. Good management of obesity would also include sticking to the treatment plan and taking medications as prescribed. Outcomes for a patient who manages their obesity well are always positive. The patient will lose weight; therefore, he or she will have more energy to participate in daily activities. Also, the risk of developing other diseases will decrease. The quality of life will improve by managing obesity. Obese people should make major life changes in order to reach their goals. They should spend time on the physical activity and follow a strict diet. The diet would eliminate excess intake of carbohydrates, sodas, candies, trans fat, and sugars. As already mentioned, treatment options would include exercise, weight loss, medications, and surgery as the last resort. Extreme obesity can reduce life expectancy up to 14 years (Kitahara et al., 2014). There are numerous resources in a community available to obese patients. Those patients can be a part of support groups or attend physical activity classes dedicated to obese people. Primary care physicians are a good starting point to get the information regarding how to properly manage obesity.

## A3A. Disparities

Obesity rates are constantly increasing in the USA, especially among ethnic groups. Latino children have the highest obesity rates among children. Also, black women have the highest prevalence in adults. In California, 25% of the population is obese, which places California as the 47th state on the obesity list in the USA. However, West Virginia is the first on the obesity list with 37. 7% (The State of Obesity, 2016). Rural states such as Arkansas and Alabama have a more obese population comparing to urban states of New York and Florida. Rural areas might have trouble with medical treatments since many doctors move away to big cities. Sometimes people in rural areas miss their appointments due to long-distance travels to the doctor's office. Also, some of them have limited incomes and do not have the insurance coverage. Unfortunately, the USA is the leading country in the world in obesity (" Renew Bariatrics," 2017).

Even though the USA is a leader in the obesity world, many other countries struggle too. People believe that a high number of fast food restaurants is increasing obesity worldwide. Many of those restaurants are using corn syrup, which is rich in fructose. Some countries, such as Denmark, are increasing taxes on fast food and sodas in order to decrease the number of customers. Another way of preventing obesity is labeling the food. In Greece, the food is labeled with red, yellow, and green. The food with a green color is safe for use, while red is considered dangerous. It seems that the USA is a way behind other countries in obesity prevention; it should implement one of those strategies to help people live healthily.

## A4. Managed Disease Factors

Many factors are contributing to the patient's ability to manage obesity. Some of them are financial factors, being insured or uninsured, and health literacy. People who are financially struggling will have limited chose of the food they consume. Many of them would decide for the fast food since it can be very cheap. Insured people will have access to the healthcare and follow up appointments with their primary doctors. However, being uninsured brings the risk of being non-compliant with medications as well as the inability to be followed by the doctor. Patients are required to have some knowledge about their health in order to successfully manage obesity. A low health literacy would require from the nurse or doctor to provide education in simple words.

## A4A. Unmanaged Disease Factors

The absence of financial factors, insurance or health literacy can be fatal for the patient's health. These factors contribute to the inability of managing the obesity. By having a lack of financial support, patients are not able to purchase healthier food or get essential medications. Being uninsured means that patients are not able to schedule follow up appointments with their doctors. Also, it is very hard to get the coverage for medications without the insurance. Lastly, low health literacy might lead to self-care deficit. Those patients will possibly have a hard time to manage their disease comparing to ones with high health literacy. All these factors bring a delay in diagnosis and treating the obesity.

## Unmanaged Disease Characteristics

People with unmanaged obesity most of the time develop comorbidities such as diabetes, hypertension, chronic heart failure, and breathing disorders. Those patients sometimes appear messy and unhappy. Their emotional status has been affected by obesity. Patients are often noted with low self-esteem, shame or depression. Many of them decide for isolation which significantly decreases their lifespan. Patients with unmanaged obesity feel tired and weak. Their physical activity is minimal; I picture some of them spending days in bed.

## Patients, Families & Population

Obesity does not only affect patients' health, but it also limits work skills or physical activities. For example, obese people would have a hard time to play sports with their friends. Some jobs require workers to be fit and in good shape. Therefore, obese people would have certain limitations for job selection. Michigan is the only states that prohibit employment discrimination based on weight (Schulte, et al. 2007). Obesity in childhood can provoke bullying or social isolation. Those children could be stigmatized which could lead to depression.

Many times, obesity starts in the kitchen and the family can be responsible for it. For example, having healthy meals at home would decrease the need for fast food. Having fruit in the refrigerator or on the table instead of high-calorie snacks is essential to prevent the obesity. There are many families that eat outside because no one in the house knows how to cook a healthy meal. Those families are missing a lot of fun things such as family hiking,

sports or other physical activities. Obesity also has a financial impact on the family.

In the USA, there have been numerous changes in order to fit obese people in the society. A public transportation is just one of many things that were indirectly affected by obesity. There was a proposition to decrease the number of people on buses as well as to expand the size of buses by a few inches so the obese population could have more comfortable trips. The increase of obese population in the community will bring the need of cardiovascular medical centers. Obesity has been followed with numerous comorbidities. Therefore, communities around the world would need to have hospitals specialized to help their residents.

## B1. Costs

Medical costs of obesity are very high in the USA. According to the Center for Disease Control and Prevention, the average costs in 2008 were $147 billion. Nowadays, these costs drastically increased. Obese people spend 42 percent more on health care costs than people with normal BMI. Many of them get hospitalized several times per year. Also, their medication list is much longer comparing to non-obese patients. Additional costs include higher insurance premiums. Obese patients sometimes require extensive use of the durable medical equipment such as hospital beds, wheelchairs, oxygen, or Hoyer lifts.

Obesity has a great impact on the household income. Those patients are less likely able to work and provide a financial support to the family. For example,

morbidly obese patients would require certain accommodations inside and outside of the house which could be very expensive sometimes. Additional expenses would be paying a private caregiver to help obese patients with their activities of daily living.

Financial costs of obesity also affect the community. As already mentioned before, many obese patients get hospitalized several times per year and most of them require certain procedures to be performed. Therefore, the community with the increased number of obese people would need to have specialized hospitals such as cardiovascular. The community would also be responsible to provide some kind of help for unemployed morbidly obese patients. That help could be financial or providing caregivers.

## Best Practices Promotion

The best practice of promotion for managing obesity would be prevention. In the primary care setting, providing the education and information on obesity would be essential. It could be done by encouraging people to be more physically active. Also, healthcare facilities should organize health fairs where people could be educated about proper nutrition. By utilizing the evidence-based practice, primary care physicians would play an important role in providing the adequate obesity standard of care. I work as a case manager in the hospital. Every day I meet patients and their families and provide education regarding disease management. In my current organization, I would promote best practices for managing obesity by educating my patients on insurance benefits related to obesity. For example, I would notify them if their insurance plan covers outpatient obesity

counseling, weight management classes, nutrition classes, or a bariatric surgery. My goal would be to provide beneficial resources to my patients.

## C1. Implementation Plan

The first intervention for managing obesity would be the development of obesity educator position. This person would be assigned to provide obesity education to newly diagnosed patients. The second intervention is the development of the outpatient support group. This support group, with the help of therapists and councilors, would be dedicated to helping patients with their emotional needs and issues. The last intervention would be organizing a healthy living fair for patients, their families, and the whole community. Just a few days ago, this kind of fair was successfully held in the hospital where I work. The whole community would have an opportunity to be educated on many topics such as the durable medical equipment, physical therapy, nutrition, home health agencies, and caregiving resources.

## C2. Evaluation Method

The obesity educator would have a job to reduce the admissions of obese people by providing the adequate education. He or she would also be in charge to make sure that obese patients are compliant with their doctor’s appointments. The tool used to measure if this implementation has been successful is the number of readmissions. The support group will be assigned to follow patients even when they get discharged. By attending the support group sessions, patients would show the adherence to the treatment plan. Therefore, this implementation could be measured by the patient’s compliance and show the decrease in weight. Lastly, a series of surveys

should be conducted to show if the healthy living fair provided enough resources and education. People who attended should also have a chance to add their comments and suggestions.