

**Title: Patient Education Obesity Project**

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**Abstract**

The purpose of this project is to provide educational materials for patients on obesity. It is my goal to inform patients about what drives obesity, and how it affects health. I will also ask patients to choose from three options on ways to make a small lifestyle change and monitor their progress over four weeks. I will make an educational handouts that will give tips on how to improve your health and reverse obesity it will include understanding the equation to weight loss, body mass index (BMI), portion control, and getting started tips. I will also give a pre and post survey about obesity to gather dietary history from patients, help guide the action plan and to gauge their understanding of obesity.

**Keywords:** Obesity

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## Introduction

Obesity is excess weight, defined as BMI of 30 or more. It is a major public health issue, which contributes to 112,000 Preventable deaths per year. Obesity-related medical treatment costs between \$147 and \$210 billion a year, this is 10 percent of annual medical spending.(2006 data). Compared to an average patient: obesity cost an extra \$1429- \$2741 per year. Obesity is a serious issue, according to Dr. Regina Benjamin: "Today's epidemic of overweight and obesity threatens the historic progress we have made in increasing America's quality and years of healthy life." Obesity is linked to increased risk for many diseases and conditions such as: Diabetes, Sleep Apnea, Endometrial, breast, gallbladder and colon cancer, high blood pressure, GERD (Acid Reflux). It essentially affects every organ of the body and increases the risk of stroke and joint damage. (Alabama Department of Public Health)

Bringing the obesity issue closer to home: Alabama is the 5th most obese state with a rate of 33.0% of adult obesity. In 2012: Louisiana was 1<sup>st</sup> with a rate of 34.7% adult obesity rate, Mississippi was 2<sup>nd</sup> with 34.6%, Arkansas was 3<sup>rd</sup> with 34.5% and West Virginia was 4<sup>th</sup> with a rate of 33.8%. ( f as in fat). The trend of adult obesity in Alabama throughout the years: 2010-32.3%, 2011-32% 2012-33%. If rates continue to rise by 2030 obesity rates will be 62.6%. However, if obesity rates were reduced by 5 % by 2030 the rate would be 55.1% this will be discussed later. Nationally, if rates continue to rise by 2030 13 states will have adult obesity rates above 60 percent, 39 states will have rates above 50 percent, and all 50 states will have rates above 44 percent. To emphasize the gravity of obesity increasing the risk of chronic diseases in 2011 Hypertension rate in Alabama was 40%-1<sup>st</sup> among states and in 2012 Diabetes rate in Alabama

was 12.3%- 3<sup>rd</sup> among states. As obesity increases the risk of these diseases also increase. (F as In Fat,2012) (CDC, 2012).

## **Background**

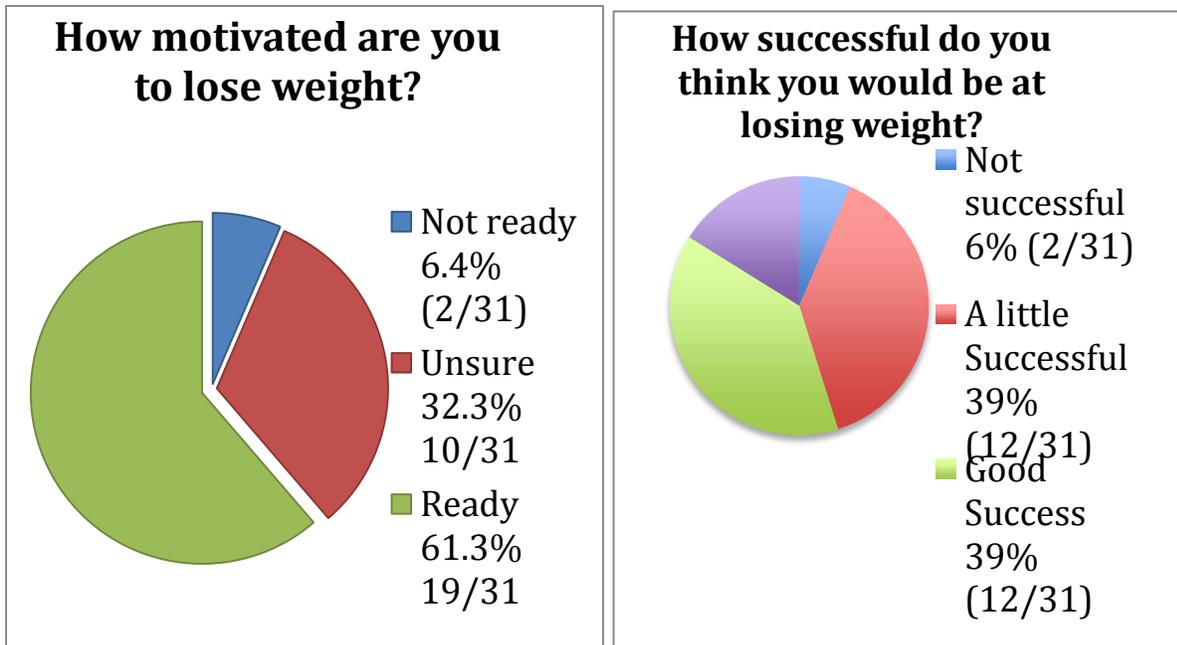
Growing up in New Orleans, Louisiana food was and still is a huge part of our culture. We eat large portions of fried, spicy foods including: jambalaya, fried chicken, gumbo, baked macaroni, barbeque ribs etc.. We pride ourselves on being a city where people travel miles and miles for great spicy, creole southern cuisine. We gather to eat for any occasion including a casual weekend, birthdays, holidays, etc.. I have seen many people in my community with diabetes and other preventable diseases due to bad diet and lack of exercise. It saddens me that these chronic diseases cause many complications and mortalities. I'm further distraught because these diseases are preventable. Stemming from this background I developed a personal interest in primary care and preventative medicine. I am a strong advocate for preventative medicine believing that we must strive to change that which we have control over. The Bayou Clinic has a high population of obesity from June 7<sup>th</sup> to July 15<sup>th</sup> 119 people with a BMI of 30 or above visited the clinic. Among those who visited during that time many had diseases linked to obesity such as Sleep Apnea, Depression/Anxiety, Diabetes Mellitus, Arthritis, GERD, Cancer and high blood pressure. I chose to do my project on obesity after consulting with the site supervisor and physician assistant, realizing there were no educational material specific to obesity and its health effects. I also wanted to help the community make small changes to their lifestyle and become fit.

## **Methodology**

Patients with a BMI (Body Mass Index) of 30 and above were given an obesity survey between June 23- July 3, 2014 at the Bayou Clinic in Bayou La Batre, Alabama. The survey consisted of two parts. The first part (Appendix A) consisted of 6 questions and gave patients the option to participate in obesity education and/or take action by participating in a 4-week weight loss program. In this survey 2 questions were asked based on a modified version of the change readiness ruler. This ruler has a scale of 1-10 and categorizes how ready patients' are to change: not ready, unsure or ready. I modified it to say: How motivated are you to losing weight? The results are listed in the next section. The second part (Appendix B) was 25 questions in length inquiring about obesity knowledge, their dietary and exercise history etc. After completing the survey patients were educated and given handouts on obesity explaining health risks of obesity, BMI information, the equation for weight loss, portion control, exercise and healthy lifestyle tips. Another Handout "What if I change my Drinks" handout was given to patients. This included information about how switching from sugary drinks such as Powerade, sweet tea, and soda to sugar free, calorie free drinks could help in weight loss. Finally, if patients selected to take action the "Lets Get Started Making Better choices" action program handout was given and the program was explained. The goal of this action program was to help patients make a small change by selecting 1 of 3 plans: Exercise more, Food switch or Drink Switch. (Patients were allowed to choose a maximum of 2 plans). The obesity survey was used to give insight to the patients' dietary history and information about their lifestyle. Upon reviewing the survey, 2 plan options were suggested. The patients then chose their plan based upon what best fit their lifestyle. Success in this program was for patients to do their plan. Patients were informed that in 1 week they would receive a follow-up call to check on their progress. In 2 weeks the patients would return for weight checks and a post survey. Patients were cautioned against focusing on the weight loss. Web Md

states that the slower you loose weight the longer you keep it off. It was reiterated to the patients that the goal of this program was making a small healthy lifestyle change and success would be sticking to their plan.

## Results



100% (31/31) of patients were receptive to Obesity education. Which was very encouraging to me. 71%(22/31) considered themselves overweight. 3% (1/31) considered themselves obese. 29% of patients (9/31) did not have money at the end of the month for food. 62%( 18/31) of patients thought eating healthy costs a lot of money. Patients want to learn more about how to lose weight, cook healthy meals and exercises to help lose weight. Most patients buy groceries from Greer's Food Tiger, Family Dollar and Dollar General.

Obesity Education	100%	31/31
Action Plan Enrollment	77%	24/31
Successful Follow up Calls	67%	16/24
Unable to make Contact	12.5%	3/24
Dropped from Program	21%	5/24
% Follow up Calls Continuing Plan	81%	13/16
% Weight Check	69%	11/16
% Decrease in Weight	36%	4/11

The above chart shows the breakdown of the program participants' data.

## Discussion

The results show that most patients are ready to lose weight, however patients are tied between being a little successful and having good success at losing weight. This showed that there is a disparity between motivation to lose weight and how successfully they would complete the task. When I asked patients why they felt this way most had tried to loose weight in the past and didn't keep the weight off and some had never tried to lose weight before and that was scary for them. Furthermore, during my service-learning project I encountered Obesity education issues. One issue was perception: patients didn't identify as obese and they believed eating healthy cost a lot of money. 3% (1/31) of patients considered themselves obese when in actuality 100% of them were obese. The criteria for participants in this obesity education project were based on a BMI of at least 30 and above which is labeled obese. Although only one patient identified as obese, 22/31 (71%) of patients did believe they were overweight. This shows that patients identified themselves as overweight, and gives hope to premise that they understand their current situation. Additionally 63% (18/31) of patients believed eating healthy cost a lot of money. Within this category I had differing perspectives, for some patients fresh fruits were not affordable, while others just didn't

make an effort to shop for healthy foods because they knew it was expensive. The issue I identified is something I categorize as “all or nothing”. Instead of patients making a small effort to gradually add healthy foods to their diet and grocery list they strayed away and continued the bad habit of purchasing affordable unhealthy foods. As a society we have to address this long lasting trend. People should have access to healthy foods at affordable prices.

Another issue was access to an affordable grocery market. Bayou La Batre, Alabama is the seafood capitol of Alabama. There is one grocery store in town, the nearest Wal-Mart is about 25 minutes away and many don't have transportation to make it there. I personally researched the prices of fresh fruit and vegetables and they are inflated when compared to Wal-Mart. I've heard from patients that different fresh fruit stands have come and gone but none have stayed long-term. My scope as an osteopathic medical student extends beyond the patient and focuses on the environment of my patient including family, community and work environment among many other factors. A patient is a product of all of these things. If we can change the community and make it more affordable to live a healthy life we can help to patients adapt a healthy lifestyle.

Additionally, a misperception was commonly encountered on healthy drinks. I had a discussion with each patient on sugary drinks including: juices, Gatorade, sweet tea and soda. Surprisingly I had a patient who didn't view sprite as a soda because it was clear. Another misperception was what the normal number of meal intake per day was. I had a patient who was frustrated about weight loss because he worked all day and only had time for a big meal in the evening. He didn't understand why he wasn't losing weight if he only ate once a day. All of these instances show the importance of patient education. Once patients are educated, they have knowledge, which is the power to make a choice about their lifestyle.

Furthermore there were some questions raised and barriers during this service-learning project. The first was patients lack motivation on follow-up calls. As aforementioned every patient that joined the action plan knew they would be contacted within one week. When contacting patients a few hadn't started or weren't successful at doing their plan. When I inquired about the reason for the delay and lack of success, most patients lacked motivation. Upon looking at their survey, I realized there confidence declined since being in the clinic a week before. This lead me to do more research on how to keep patients motivated when loosing weight. One suggestion was to praise the positive things they are doing such as if their blood pressure and blood sugars have improved. Also understanding where the patient is and reformulating a plan can help to keep the patient motivated. (NIH, 2012).The truth is, there is not one way to loose weight, and live a healthy lifestyle. Patients can sometimes lack motivation because they feel like failures or because change seems harder than they anticipated. To overcome the patients' lack of motivation I listened, encouraged, and we came up with a different action plan moving forward.

Another barrier encountered was decreased follow-ups to the clinic. This was a result of lack transportation to the clinic, unable to contact via telephone and other medical issues such as surgery, doctors appointments and decline in health. It should be noted that 100% of patients agreed to return to the clinic upon taking the survey. Patient finances also came up as a barrier to healthy living. Many patients couldn't afford to purchase fresh fruits and vegetables. Also 29%(9/31) of patients didn't have money at the end of the month for food. This statistic was most devastating for me every one should have food security; it is a necessity of life. The ultimate barrier in this obesity project was time. My project lasted four weeks and I would have loved to have several follow-ups with the patients and even see their progress 6 months down the road. This is a

limitation to my project, however I was able to gather some insightful information during my service learning project time.

Looking to future research projects I would love to focus on modest weight loss of 5-10%. As mentioned earlier the projection of obesity in Alabama in 2030 can be 7% lower than projected if we can get obese patients to lose 5-10% of their body weight. (NHLBI,2014) Additionally, I would love to target overweight patients with a BMI of 25 and above and encourage them to live healthy lifestyles. This fits nicely into advocating preventative medicine. Before a patient becomes obese and has a higher risk of chronic disease, educating them on a healthy lifestyle would be very beneficial. I would also focus on patient perception issues, making sure obesity and its' health effects, BMI and its link to health risks and sugary drinks vs. healthy drinks are explained to patients. Also accessing motivation techniques for patients could be a project within itself. Arming patients with motivation handouts or motivating them somehow after their office visit may affect the outcome of follow-up calls and visits to the office. Long term I would love for Bayou Clinic to monitor and reassess weight loss monthly to adjust goals and or treatment.

## **Recommendations**

I would recommend obesity education be continued at the Bayou Clinic with an emphasis on harmful effects of obesity, sugary drinks, portion control and understanding calories and healthy weight loss. Also, setting weight loss goals for patients, to make an initial 5% of patients' weight. Encouraging healthy lifestyles in patients overweight: BMI 25 and up to help prevent obesity and its' increased risk factors for chronic disease. Also assess where patients are on change readiness ruler and make adjustments accordingly. This will help the physician to monitor the progress of patient's whether they are not ready to make a change, unsure or ready to

make a change. Patients who are ready would benefit from a written action plan, multiple options for weight loss, information to help stop cravings, and follow-up calls/visits. Most importantly we must create ways to get our environment and community active and healthy. The Bayou Clinic is currently in a Gulf Coast health policy grant one part focuses on obesity. This grant bridges together the communities needs with health policy. It endeavors to identify what the community needs and what institutions can be planted to meet these needs long term. A patient will be much more successful with living healthier lives if their environment is supportive of that. I look forward to follow-up on the grants progress and what specific measures are set in place to help the Bayou La Batre and southern gulf coast communities.

## **Conclusion**

Obesity education is important to decrease incidence of preventable diseases and mortality. My project at Bayou Clinic gives us insight into the communities' outlook on obesity, healthy eating and readiness for change. There are many health and financial benefits on the state and nationally level if obese patients loose 5% of their weight. The Change Readiness Ruler is a tool that could help providers gauge patients' motivation for weight loss. Finally, at the end of each obesity education session I read this quote by Heather Morgan out loud with my patients: "Every time you eat or drink you either feed disease or fight it." We will fight together!

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## **Appendix A: Patient Survey Part 1**

### **Patient Survey**



**2. Body Mass Index (BMI) is?**

- A. How fat you are
- B. Number calculated from weight and height.
- C. I have never heard of Body Mass Index

**3. What conditions do you have right now or have had before? (Circle all that apply)**

- A. Type 2 Diabetes
- B. Sleep apnea
- C. Depression
- D. Arthritis
- E. GERD (reflux)
- F. Cancer
- G. High Blood Pressure

**4. Do you want to get in better shape?**

- A. Yes
- B. No

**5. Have you tried losing weight in the past?**

- A. Yes
- B. No

**5.5 Were you successful?**

- A. Yes
- B. No

**6. Are you doing anything to improve your health or lose weight? (Circle all that apply.)**

- A. Eating healthier foods.
- B. Watching portion sizes.
- C. Exercising
- D. Dieting on your own.
- E. Dieting with a plan, (Weight Watchers or Jenny Craig.)
- F. No, I'm not doing anything.

**7. If you want to get healthier and loose weight what is holding you back? (Circle all that apply.)**

- A. Stress.
- B. Lack of energy.
- C. My busy schedule.
- D. Lack of support from friends and parents.
- E. Money (because gyms, healthy foods, etc. are expensive).
- F. Food and fitness is too confusing.
- G. None of the above. (I'm in good shape or don't want to be in better shape.)

**8. Throughout a normal day how many times a day do you eat each of these items. Circle all that applies.**

<b>Desserts</b> once 2-3 times 4-5 times	<b>Vegetables</b> once 2-3 times 4-5 times	<b>Rice</b> once 2-3 times 4-5 times	<b>Fried foods</b> once 2-3 times 4-5 times
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<b>Fruit</b> once 2-3 times 4-5 times	<b>Meat</b> once 2-3 times 4-5 times	<b>Potato chips</b> once 2-3 times 4-5times	<b>Fish</b> once 2-3 times 4-5 times
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**9. How much water do you drink a day?**

- A. Less than 1 water bottle (16oz.)
- B. I bottle of water (16oz)
- C. 2-3 bottles (32-48 oz.)
- D. None

**10. How much juice/ soda are you drinking/day?**

- A. Less than a can (112oz)
- B. 1 can (12oz)
- C. 2-3 cans (24-36oz)
- D. 3 or more (36oz or more)
- E. None

**11. I don't eat fruit and vegetables because: (circle all that apply)**

- A. They are expensive
- B. I don't like the taste
- C. Didn't grow up eating it
- D. I don't want to

**12. How often do you exercise each week?**

- A. I don't exercise
- B. Once or twice.
- C. Three or more times.

**13. What keeps you from being physically active / exercising? (Circle all that apply.)**

- A. My parents and/or family don't exercise.
- B. My body. (I get self-conscious about sweating or how I look when exercising.)
- C. My neighborhood. (It isn't safe, or there aren't sidewalks or parks that make it easy.)
- D. I am not motivated
- E. Pain from exercising

**14. What would cause you to make a change in your eating and exercise habits?**

- A. More information
- B. Sudden bad health diagnosis
- C. Improving long term health
- D. Get off medications
- E. If a doctor told me to
- F. Wellness Program
- G. Family intervention

**15. When picking foods or snacks, what influences your decision most?**

- A. How healthy it is.
- B. How much it costs.
- C. How it tastes.
- D. How easy it is to get (e.g. I can pick it up on the go, etc.).

**16. How often do you eat breakfast?**

- A. Always
- B. Sometimes
- C. Rarely
- D. Never

**17. How many meals do you eat in a day?**

- A. 1 meal
- B. 2-3 meals
- C. 4-5 meals
- D. None

**18. When you eat do you have to “clean” your plate? (eat everything on your plate)**

- A. Yes
- B. No

**19. How much sleep do you get during the night?**

- A. Less than 3 hours
- B. Less than five hours.
- C. Five to seven hours.
- D. Eight hours or more.

**20. How is your energy throughout the day?**

(Circle one)

Poor    Good    Great

**21. What information about obesity would you like to know? Circle all that apply**

- A. How to lose weight
- B. How to cook healthier meals
- C. Exercises to help lose weight
- D. How obesity affects my health

**22. If a handout were given to you about obesity would you read it?**

- A. Yes
- B. No

**23. Where do you buy groceries?**

- A. Greer’s food tiger
- B. Wal-Mart Marketplace

C. Family Dollar/Dollar general

D. Wal-Mart Supercenter

E. Other

**24. At the end of the month do you have money to buy food?**

- A. Yes
- B. No

**25. Do you think eating healthy is cost a lot of money?**

- A. Yes
- B. No

