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Bariatric Surgery as a Treatment to Obesity

Morgan D. Dunn

Providence College, mdunn8@friars.providence.edu

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Abstract:

This paper focuses on the efficiency and effectiveness that bariatric surgery provides as a treatment for the obesity epidemic that is ever-growing in our country. By taking into account scientific, ethnographical, scholarly, statistic-based, and various other forms of research, this paper argues for the widespread use of bariatric surgery for weight loss, decrease in obesity, and resolution of obesity comorbidities. This paper also focuses on the various factors that affect patient success in bariatric surgery, such as gaps in access, economic problems, psychological issues associated with the procedure, and more. Nevertheless, bariatric surgery, if these factors are taken into consideration, is a favorable option in treating morbid obesity and should be readily and enthusiastically utilized to treat this epidemic.

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Morgan Dunn
Dr. Levine
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Bariatric Surgery as a Treatment to Obesity

Section I: Introduction and Background on the obesity epidemic and surgical treatment

The prevalence of obesity in the United States has increased dramatically over the last few decades, which has had a profound effect on the well-being of the nation and on the U.S. healthcare costs and expenditures. The prevalence of obesity in the U.S. is currently 34%, but this is expected to reach 50% by 2030 (Persson 306). This disease is also associated with other risk factors, or comorbidities, including type 2 diabetes, hyperlipidemia, hypertension, sleep apnea, heart disease, stroke, and asthma, which collectively account for 2.5 million deaths per year worldwide (Buchwald 1724). Obesity increases the risk for diabetes by 18-fold (Hoffman 3) and increases the risk of death from heart disease by 5 times for men and 3 times for women

(Persson 308). Morbid obesity results in a 22% reduction in life expectancy and holds potential for cancer—colon and prostate for men, breast, uterine, and ovarian for women (BCBS 1). Clearly, the health outcomes associated with obesity are extremely harmful to those afflicted, and therefore, need efficient, prompt addressing in order to put an end to obesity. Obesity is a lifestyle-related disease, meaning that it is associated with ill-health caused by a person's choices. Therefore, obesity is based upon a combination of physical, biological, environmental, cultural, and socioeconomic factors, and since diet and foods are a matter of personal responsibility, it is a complicated lifestyle disease. One third of all illnesses are actually caused by the way we live our lives, but the low quality of life associated with these diseases requires dramatic, long-term treatments to correct (Persson 305).

Diet therapy, as a mode of treatment, has shown to be ineffective in obese patients, but in recent years, bariatric surgery has arisen as a possible treatment to this epidemic (Buchwald 1724). Bariatric surgery does have certain risks, including cardiorespiratory failure, wound infection, anastomotic leaks, and chronic gastrointestinal problems. Along with these medical concerns, bariatric surgery is also largely influenced by social, psychological, and economical factors. There are numerous pre-operative challenges in patient readiness for surgery, post-operative challenges in retention of surgical success, and downfalls in unequal access to insurance coverage for bariatric surgery. Therefore, in coming years, it is necessary to focus on reform that aims at addressing these complexities that hinder bariatric surgery's marked ability to treat the obesity epidemic. Despite some documented risks and complexities, bariatric surgery is the optimum treatment for many cases of obesity, due to its success on weight reduction and reduction or total resolution of associated comorbidities (Hoffman 3). Reform of the peri-

operative sociological and economic factors that challenge surgical success, followed by widespread utilization of bariatric surgery will greatly benefit the nation.

Section II: What is bariatric surgery, who is getting this procedure, and what types?

As discussed, severe obesity is difficult to treat, but bariatric surgery has been shown to be an effective treatment to the obesity epidemic, compared with relatively ineffective diet therapy, i.e. calorie counting and food monitoring, and lack of any pharmaceutical agent for the disease. In order to determine the extent to its effectiveness, it is important to know what bariatric surgery is. Bariatric surgery is a procedure that makes the stomach smaller, which in turn results in less absorption of calories and an inability for the patient to eat large amounts. Thus, it results in weight loss, especially in the morbidly obese, whose bodies are physiologically adapted to intaking large amounts of calories (Persson 306). Bariatric surgery is an interesting procedure, in that it uses surgical methods to alter healthy organs to treat the symptoms of obesity, and thus, the goal of this surgery is not to ‘cure’ anything (Hoffman 3). A growing number of people in the U.S. are eligible for bariatric surgery. “In the United States, 22,151,116 people are identified as eligible for bariatric surgery according to the National Institutes of Health’s criteria and there are about 225,000 procedures performed per year” (Hoffman 3).

In order to meet the criteria and qualify for bariatric surgery, a patient must have a BMI of at least 40 kg/m² or BMI of at least 35 kg/m² in addition to one or more of the obesity comorbidities discussed earlier (Rohaila). BMI, or Body Mass Index, is a type of measurement used to determine a person’s size using a calculation of their height and mass. While the population of people that meet these criteria are well balanced between men and women, interestingly, the majority of patients who undergo bariatric surgery are female (78.5%), white (65.6%), younger than 65 years old (93.8%), and insured with managed care (53.6%) (Zhang 1).

The majority of these procedures are performed in high-volume hospitals. These statistics hold significance in analyzing bariatric surgery's accessibility to some patients more than others, which will be discussed later in this paper.

There are a few different types of bariatric surgery. Up until 2011, gastric bypass, also called Roux-en-Y, was the most common surgical intervention for weight loss, due to its safety and reversibility (Zhang 6). This procedure involves rerouting the stomach and intestines, such that digested food bypasses much of the stomach. Today, the most common type of bariatric surgery is the sleeve gastrectomy, which removes a large portion of the stomach, such that it cannot physically intake as many calories. This procedure is favored since it is laparoscopic, and thus, has more favorable post-operative effects and less long-term risks than bypass surgery (Zhang 7).

Section III: What are the pre-operative factors that go into bariatric surgery decision-making and policies?

While it may seem that patients eligible for bariatric surgery have no trouble deciding to employ this mode of treatment, that is oftentimes not the case. Bariatric surgery is unlike surgeries that treat cancer or fix broken bones, since the surgery itself and the patient's obesity are subject to a great amount of biases from medical professionals and the general public. Because of this, the complex decision to undergo bariatric surgery is one that hinges upon personal, medical, psychological and societal factors, and thus pre-operative decision-making and policies are critical in deciding the outcome and success for the patient. A big pre-operative challenge for the patient is facing the stigma of bariatric surgery and obesity. Obesity, and particularly undergoing surgery to treat it, are oftentimes about more than simply improving one's health. While the decision to undergo this surgery seems like a personal one, it is not since "the dramatic lifestyle changes experienced by patients who undergo bariatric surgery occur not

in a vacuum but within the framework of the social network that surrounds them” (Snyder 146). Obesity, especially since it is categorized as a lifestyle disease, is often considered to be the consequence of the patient’s lack of self-control and weakness of character (Hoffman 5). Obesity is seen as a social, aesthetic, and moral failure; a failure that is externally and overtly apparent and is seen to violate cultural norms on the standard of beauty (Park 242). It is a commonly held belief that the “body is malleable within an individual’s control,” (Park 243) and thus, those who have failed to control their own body face social rejection.

Bariatric surgery, therefore, is seen as an unnecessary, lazy, and cheating way to correct one’s dietary mistakes. To those who aren’t obese, there exists a “public revulsion with the idea of ‘choosing’ to alter one’s gut and stomach” (Trainer 896). Stigma around this procedure, therefore, is very apparent, and causes this procedure to appear less valuable than surgeries for other diseases. These stigmas have a profound impact on patients and might influence why women, who are historically more affected by social stigma, are more likely to undergo bariatric surgery. Because of this negative social image of obesity, many patients seek surgery as a treatment to free the patient from this stigma post-op, and while health reasons are the primary motivation for seeking the surgical procedures, improvement of non-health-related quality of life (e.g., appearance, social acceptance, psychological well-being) was reported as the secondary reason (Park 243). In fact, “52% rated health concerns or medical conditions as the most substantial motivational factor, while 32.3% indicated appearance or embarrassment as the main factor in their decision to undergo surgery” (Park 243). In this way, bariatric surgery is often used as a means to an end goal of freedom from negative social stigmas, not an end in itself. Thus, bariatric clinics have a role that they need to play in also addressing the social concerns of their patients in order to eradicate any stigmas that might affect their patients (Trainer 895).

These social concerns must be addressed outside of clinics as well, in order that negative cultural perspectives of the obese be dissolved.

Another preoperative factor that goes into decision-making on surgery is a psychological assessment, which is often mandated by insurance companies. This preoperative dietary counseling seeks to determine the patient's psychological readiness for surgery, ensure the patient has realistic expectations of what changes will occur and along what timeline, and check the patient's motivation and attitudes about the lifestyle change that the procedure will bring about (Snyder 144). For example, a study found that patients expected to lose about 50-60% of their excess weight after surgery, which is about double the realistic weight loss (Park 248). The pre-operative counseling seeks to alter misconceptions like that, so as to best prepare the patient for the procedure. Thus, this "therapeutic approach is grounded in social-cognitive behavior therapy" (Lerdal 2). These psychological assessments and counseling programs have been shown to greatly influence success post-op because they affect the coping and adjustment to the lifestyle changes associated with the surgery by setting realistic expectations and giving support to patients. Bariatric surgery requires highly restrictive, long-term behavioral changes afterwards, so this preoperative counseling is important in initiating that change in a patient (Snyder 144).

The large majority of patients seeking bariatric surgery not only face medical problems due to their obesity, but they also face psychological and mental consequences. Therefore, the pre-op counseling also holds a large role in addressing any psychiatric condition(s) that would impair surgical success. Obesity is considered a "conversion of an emotional, mental, or psychosocial problem to a physical one," since the reason for immense weight gain is often attributed to mental and psychological illness (Hoffman 6). In fact, 60% of candidates for bariatric surgery have psychiatric disorders, and one third of candidates were subject to

childhood maltreatment and sexual abuse (Hoffman 6). Pre-operative counseling for obese patients is extremely important, since “severely obese individuals have more diminished psychological well-being than those in remission of and suffering from recurrence of severe forms of cancer” (Persson 308). Additionally, “people with a BMI greater than 40 kg/m² were five times more likely to have an episode of depression in the past year than those of average weight” (Snyder 146). Most candidates for bariatric surgery suffer from binge-eating disorder, night eating syndrome (when 35% of daily calories are consumed after dinnertime), and other psychiatric disorders that pose a challenge for successful surgical outcomes (Snyder 145). Thus, pre-operative counseling is necessary to assist patients with these psychological problems, so that patients are better equipped to deal with the emotional and psychological changes that will occur in their relationships with food after this life-changing surgery. Clearly, bariatric patients are deeply affected by psychological factors, and therefore, the efficacy of the procedure relies on this pre-operative assessment and counseling, and thus, it should be implemented in the U.S. as a requirement for all bariatric procedures, in order to address these complexities that might serve to hinder marked surgical success.

Section IV: The results and successes of the surgery on weight loss and reduction in comorbidities

Once the pre-operative challenges have been addressed, and a patient has undergone psychological evaluation and decided on surgery as the best mode of treatment for his or herself, the patient can undergo the procedure, and begin their road to recovery from obesity. Numerous studies have been conducted that prove, scientifically, the efficacy of bariatric surgery as a viable treatment for obesity, compared with conventional medical therapies. A study by Buchwald et al. surveyed 22,094 patients that underwent bariatric surgery, this population being characterized by 19.4% of the patients being male, 72.6% being female, a mean age of 38.97 years old, and a

mean BMI at the start of 46.85 (1724). This systemic review found that the surgery resulted in a mean of 61.2% weight loss (Buchwald 1724). In terms of associated comorbidities, diabetes was completely resolved in 76.8% patients and greatly improved in 86%, hyperlipidemia improved in 70% or more of patients, hypertension resolved in 61.7% of patients and improved in 78.5%, and obstructive sleep apnea was resolved in 85.7% of patients and improved in 83.6% (Buchwald 1724). Thus, surgery was extremely successful in not only immense weight loss post-op, but also led to drastic improvements in the risk factors associated with morbid obesity. Shockingly, this study found that “resolution of diabetes often occurred days following bariatric surgery, even before marked weight loss was achieved,” (Buchwald 1732) due to changes in gut-related hormones after surgery. This positive change in obesity-related diseases post-op is also due to the fact that bariatric surgery has an effect on adipose tissue fatty acid profiles (Walle 1). Circulating fatty acid profiles are associated with metabolic disorders associated with obesity, such as type 2 diabetes. Walle et al., in their study, found that obesity surgery leads to beneficial changes in these fatty acid profiles, which serves to reverse the damage done to the FA profiles by obesity, and thus, resolve obesity risk factors through weight reduction. Even moderate weight loss, therefore, is important in improving patient health. Buchwald’s study shows that surgery does, in fact, lead to significant weight loss, and thus, improved quality of life for patients, since weight loss of 9 kg was associated with a 53% reduction in all obesity-related deaths (1736).

Studies that look at the difference in weight loss results and reduction in comorbidities between patients that receive bariatric surgery and those that receive conventional medical therapy, such as dietary and behavioral counseling programs or certain FDA-approved medications, further shed light on the superiority of bariatric surgery as a long-term treatment for

obesity. One such study was conducted by Schauer et al. and it concluded that changes in “body weight, BMI, weight circumference, and waist-to-hip ration were greater [12 months] after gastric bypass and sleeve gastrectomy than after medical therapy” (1570). This study found that medical therapy coupled with bariatric surgery provided the best treatment for obesity, and that without surgery, only “modest improvement is feasible with the use of intensive medical therapy alone” (Schauer 1574). Therefore, conventional medical treatment alone is not sufficient enough a treatment to face the stature and threat of the obesity epidemic in the United States. This study also focused on the way in which bariatric surgery can serve to resolve diabetes in patients with uncontrolled type 2 diabetes. The study had a target blood-glucose level that the patients should achieve, one group being the surgical group, the other being the control group that received only medical therapy. In the control group, only five out of the 41 patients hit the target blood-glucose level, whereas 21 out of 50 of the surgical group subjects hit the mark within 12 months (Schauer 1569). Therefore, surgery has a clear effect on diabetes as well, and is actually shown to eliminate the need for diabetes medication in some patients and decrease the dosage needed significantly in other patients. Thus, bariatric surgery stands as a viable option for improvements in weight and diabetes within a year post-operation.

On a more long-term scale, one study by Sjostrom et al. looked at the effect of bariatric surgery on lifestyle, diabetes, and cardiovascular risks for ten years after surgery. Once again, this study involved a surgical group and a control group and compared the weights and risk factors associated with each group over the ten years. Over the ten years, the control group faced, on average, a 0.1% increase in weight, while the surgical group achieved a 23.4% decrease, on average (Sjostrom 2687). This, in turn, resulted in improved lifestyles for the surgical patients, and surgical patients also achieved amelioration in many risk factors associated with obesity,

including insulin resistance, diabetes, and hypertension (Sjostrom 2684). While glucose and insulin levels increased in the control group, the surgical group had a substantial decrease in these levels, and many patients actually obtained complete recovery from hypertension, diabetes, low HDL cholesterol, and other diseases that arose from their obesity (Sjostrom 2690). Thus, bariatric surgery is a favorable option, even in the long-term, for obesity and the associated risk factors.

These studies, taken together, demonstrate the efficacy of bariatric surgery in treating obesity and the related comorbidities. This does not, however, imply that this procedure does not pose any risks for complications or other health-related issues. The risk of major complications in the first 30 days post-operation is 5%, and many patients do face more minor complications shortly after surgery, including bleeding, surgical-site infection, anastomotic leaks, and micronutrient deficiencies (Rohailla). Bariatric surgery, since it does result in substantial weight loss, also has the negative byproduct of an ‘apron’ of excess skin left after a reduction in weight, primarily in the abdominal region. While this excess skin is not lethal or bad for health, besides the possibility of infection if not cleaned, it is an unintended consequence of weight loss surgery that a patient must bear in mind (Throsby 11). About 30-40% of patients, therefore, undergo a secondary procedure to remove this skin after bariatric surgery weight loss (Hofmann 4). Nevertheless, the proven results of bariatric surgery in weight loss and resolution of obesity-related diseases outweighs these risks and complications. Bariatric procedures led to a marked reduction in weight, which lends itself to a decrease in comorbidity risk, a reduction in mortality, and an increase in a patient’s quality of life. Therefore, obesity can and should be treated through surgical means.

Section V: What are the post-operative changes and support needed to foster long-term success rates?

While it may seem that a patient can receive surgery, begin to lose weight, and easily keep that weight off in the coming years, this is not the case. The care that obese patients require does not stop after receiving bariatric surgery. In fact, the care and support that these patients receive after the surgery are the most important factors in terms of long-term results and retention of treatment success. Immense lifestyle changes are required after bariatric surgery in order to prolong success and obtain more favorable weights and health levels. These lifestyle changes include changing dietary behaviors, leading a more active lifestyle, and more, all of which assist in the positive health improvements post-op, in terms of both weight loss and reduction in comorbidities (Sjostrom 2683). For bariatric patients, these lifestyle changes can be challenging to uphold, due to the mental and psychological conditions that the majority of this population faces, as discussed in section III. Therefore, there exists a need for certain post-operative support and counseling, in order to assist patients in treatment success. Chief among these necessary post-operative interventions are psychological support programs and dietary counseling, both of which hold important implications for healthcare expenditures through the success of these treatments coupled with the bariatric surgery.

Psychological support for obese patients after surgery is extremely important. As previously discussed, many of these patients that have received the procedure have eating disorders stemming from mental illnesses, such as binge-eating disorder, depression, anxiety, and more. Bariatric patients often have complex relationships with food, so after surgery many patients feel void, alone, and like they have lost the comfort they once received from eating. A study on the support needs of patients post-surgery found that patients also were defeated by mixed expectations of surgical outcomes, disappointment in body post-op, body dysmorphia, and sociological isolation (Sharman 39). Many patients cited peer psychological support, from other

patients that have undergone surgery, as vital to remedy these post-op downfalls, in that sharing experiences, gaining new information, and discussing challenges was shown to assist in further success, even if this connection is online (Sharman 41). Psychological support through therapy was also proven to be effective in sustained behavior change unique to this procedure, which had a positive correlation with weight loss (Sharman 43). This type of professional support serves to address disordered eating behaviors, deficits in nutritional status, and challenges faced by patients in adjusting to the post-operative lifestyle and dietary changes. This study found strong support for the idea that meeting a patient's psychological support needs after surgery mediated the outcomes of surgery, whether the patient was successful or not in prolonged weight loss (Sharman 35).

There exists a discrepancy, however, since this type of support is an important factor in surgical success, but, in practice, it is infrequently or inadequately accessible and provided to patients (Sharman 35). Psychological support, especially in the first year post-op, is important, yet this post-op intervention remains overlooked and underrated. Therefore, post-surgical psychological support programs, be it peer or professional, need to be better incorporated into the surgical models of care for bariatric surgery. Bariatric surgery itself has shown to be an effective treatment to obesity, but the coupling of the procedure with support is necessary for long-term retention.

Similar to the need for psychological support, the implementation of increased access to dietary counseling for patients after bariatric surgery is extremely important. Dietary counseling, including professional dietetic input on what to eat and drink, how to maintain proper hydration and physical activity levels, and how to integrate cognitive restraint with eating behaviors are necessary to optimize post-op outcomes (Sarwar 561). A study by Sarwar et al. found that

bariatric patients that participated in dietary counseling by a registered dietician after surgery had a greater amount of weight loss and more positive improvements in dietary intake and eating behavior, compared with those who didn't (561). Patients who take part in dietary counseling interventions after surgery were shown to intake less calories, sugar, and fats, and were found to consume more protein, compared with bariatric patients that didn't partake in dietary counseling (Sarwar 565). Thus, it is clear that post-operative dietary counseling is an important component of continuous care interventions that increase the success of bariatric patients in the long-term.

Another aspect of post-operative care that is often wrongfully overlooked is the importance of medical support of bariatric doctors, especially in the form of regular follow-up appointments. Ideally, post-operative follow-ups should take place, at least, at 3, 6, 12, 18, and 24 months after surgery (Twells 1). Patients cite gaps in information provided by the surgeon, such as information on "excess skin, details of procedure, necessary diet changes, complications, and exercising guidelines" as a major issue in post-op failures and shortcomings (Sharman 40). Follow-up appointments with the specific bariatric programs are where these gaps in information on medical knowledge can be filled. Despite this, Sarwar et al. found that only 40% of bariatric patients returned for each of their first 4 annual follow-up visits with surgeon (562). Those that did attend follow-up appointments lost significantly more weight. Thus, the responsibility in implementing this medical support into post-operative interventions relies on a combination of patient responsibility and doctor accessibility and availability. Obesity, as a chronic disease with many biological, psychological, and sociological factors, requires continued treatment beyond the surgical procedure. These treatments, as mentioned, include post-operative dietary counseling, changes in mental and behavioral relationships, physical activity, and regular follow-up. Therefore, for continued efficacy and success of the outcomes of bariatric patients,

multidisciplinary care and interventions must be readily accessible and utilized to optimize post-operative success.

One population of bariatric patients for whom post-operative success retention is of particular importance are adolescents. The number of adolescents seeking bariatric surgery is on the rise, and this holds a significant threat, since severe obesity in teens persists into adulthood, making obesity a lifelong chronic disease with many harmful effects, if not treated (Santos 52). Since younger bariatric patients have more years of life after surgery, success retention is even more important, and these patients must endure continued engagement in treatment after surgery (Santos 52). Adhering to the lifestyle changes after surgery is necessary, but especially difficult for adolescent patients, since this group “may be at risk for suboptimal weight loss, mental health concerns, substance abuse, or pregnancy after surgery” (Santos 53). Therefore, it is important that adolescents attend follow-up appointments and that providers implement continued access for patients between these appointments, such as “afterhours phone calls, flexible scheduling, clinic visit transportation, newsletters, drop-in home visits, and cell phone reimbursements” (Santos 59). Especially among adolescents, there is a flawed perception that as a patient loses weight, they do not have to remain in the post-surgical treatment or continuing going to follow-ups. Adolescent patients have a lot to lose by not focusing on continued, enduring treatment, so follow-up post-operative treatment is necessary to avoid negative consequences. In addition, follow-up retention is also cost-effective for treatment clinic in the long run (Santos 59). In all, post-operative treatment for adolescents, as well as adult patients, is a field that deserves attention in ensuring continued success of the positive effects of bariatric surgery.

Section VI: What are the policies that govern bariatric surgery? How to develop support for large-scale usage and accessibility

Bariatric surgery has the potential to treat obesity and related comorbidities, as shown throughout this paper. If the pre-operative and post-operative factors that affect surgical success are answered, bariatric surgery can treat all those afflicted by the obesity epidemic. Therefore, as a treatment for obesity, bariatric surgery should be given high priority in the healthcare system, large-scale usage, and vast accessibility to eligible patients. Obese patients are in great need, since they suffer physically, mentally, and emotionally due to their health condition, and they have the potential to continually suffer in the future (Persson 320). Bariatric surgery is the most effective treatment to obesity in terms of the positive results post-operation, but also in its cost-effectiveness, which is why bariatric surgery should be given priority in allocations of the healthcare system (Persson 320). Though bariatric surgery is an expensive procedure, costing in the “\$11,500 to \$26,000 range, that cost is offset by reductions in subsequent overall healthcare costs related to obesity comorbidities” (Chawla 630). Therefore, surgical treatment of obesity is proven to be associated with a net cost-savings due to “sustained weight reduction, decreased use of medications (especially for diabetes and cardiovascular disease), reduced outpatient and physician visits, and improved quality of life.” (Twell 30). Both the short-term and, especially, the long-term health care expenditures are reduced because of bariatric surgery, and this is why “private health plans cover bariatric surgery more readily than diet or exercise plans” (Persson 309). Clearly, bariatric surgery is chief among the obesity interventions not only in its success in health improvements, but also in its cost-effectiveness, due to the immense burden that obesity places on health care expenditure.

The healthcare costs for obese patients are 36-39% higher than non-obese patients, and a person with obesity, throughout their lifetime will have 81% higher health care expenditures. Obesity, in total, accounts for about 7% of the annual US healthcare expenditures, and this will

only increase as obesity becomes more prevalent (Hoffman 4). A particularly costly side effect of obesity is the expense that diabetes causes in the healthcare system, since “healthcare expenditures attributable to diabetes accounted for 11 % of global healthcare expenditures in 2014, and are projected to increase by 30–34 % by 2030” (Chawla 630). At this point, it is commonly-held public knowledge that obesity has mal-effects on a person’s quality of life and health status, but it is less known the extent to which obesity has a negative impact on healthcare expenditures and the economy. Clearly, the economic burden of obesity on the healthcare system is substantial, and thus, the government is looking for ways to reduce the prevalence and frequency of morbid obesity (Arterburn 324). Bariatric surgery has shown itself to be the answer to the obesity problem, so now the focus must be placed on evaluating the current barriers with regard to accessibility to surgery and ways that this inaccessibility to surgery can be fixed, such that bariatric surgery can face the large-scale usage that it deserves as the best treatment to obesity in the US. This paper will now go into these topics to argue for reform of and support for bariatric surgery use within the healthcare system and insurance policies, such that this surgery can be utilized to its utmost potential in treating the epidemic.

Though the use of bariatric surgery as a treatment to the obesity epidemic is known and on the rise, there still exists a gap and disparity in access to bariatric surgery, especially among those populations most susceptible to obesity. This is due to certain barriers to bariatric surgery, in terms of economic, social, and policy-related problems.

Obesity disproportionately affects minority populations, particularly blacks, and those who have a low education level and less access to healthcare (Falahee 8). While blacks are more likely to be part of the population that qualifies for bariatric surgery, they are also the least likely to receive it (Zhang 7). This disparity in access to surgery is driven by a lack of insurance

coverage and unequal access to healthcare resources. Black people have a lower insurance coverage rate compared with white patients. This, coupled with studies that show black people to have a more positive attitude toward larger body size, accounts for the fact that the surgical procedure rates do not “properly represent the affected population” (Falahee 8).

In addition to race, socioeconomic status plays a large role in the gap in access to bariatric surgery, as more than “one-third of bariatric eligible patients are either uninsured or underinsured,” and 15% of eligible patients have incomes below the poverty line (Falahee 8). Therefore, the majority of patients that undergo the bariatric surgical treatment are white, female, and privately-insured, which is not a group that represents that the majority of Americans with morbid obesity. In recent years, there has been an “increasing number of Medicare beneficiaries that are eligible for bariatric surgery,” but the usage of the procedure remains low in this population” (Panagiotou E1). While Medicare beneficiaries historically didn’t get to undergo the surgery, they are actually the population shown to need it most, as they “tend to have more and more severe comorbid conditions and are more often frail compared with the non–Medicare-eligible population” (Panagiotou E14). Therefore, there clearly exists a gap between those who should be getting bariatric surgery and those who have access to it.

Many of the recipients of bariatrics surgery, therefore are covered by private insurance plans. Nonetheless, a study found that the “proportion of procedures covered by Medicare or Medicaid increased over a four-year period” (Zhang 7). This is encouraging, because it implies that a patient does not need private insurance to get the procedure, and this study even cites the idea that Medicare and Medicaid beneficiaries were more likely to undergo bariatric surgery (Zhang 7). Though bariatric surgery can be an expensive upfront cost, there exists a promising

future post-surgery in the net cost-savings it provides, and both private insurance and Medicare and Medicaid acknowledge this success.

Public health efforts must equalize and expand this type of care, therefore, in order to improve patient access to bariatric surgery. The economic burden of obesity on the healthcare system and the burden on the patients and their health have been discussed, and bariatric surgery has been shown to treat these efficiently and for the long-term. Therefore, bariatric surgery shouldn't be a last resort treatment, and it should be widely accessible and utilized within the healthcare framework. This begins with closing the inaccessibility gap, so that the surgical treatment can target those populations who need it most. About 11% of the U.S. population is eligible for bariatric surgery, but only 1% of those eligible have undergone or will undergo the surgical treatment they desire and need (Chawla 630). Publicly-funded surgeries are significantly rationed, and therefore, especially in the case of obesity surgery, focus on patient responsibility in ensuring that the surgery will produce the desired outcomes and retain those outcomes for the years to come (Owen Smith 606). Surgery has shown to be the best treatment for obesity, and therefore, the barriers to access must be diminished, for the betterment of the U.S. population.

A shift in the healthcare system that makes bariatric surgery more readily-available will allow more patients to undergo this transformative procedure, and work to reduce the epidemic that is leading our nation to a worsening state of ill-health. This can be done by adjusting public policy to focus on the advantages of bariatric surgery, educating patients on safety and effectiveness, and updating reimbursement policies to improve patient access (Chawla 629). A large portion of the responsibility in fixing this accessibility gap lies in the hands of the Stakeholders. One way that this gap can begin to be closed is by expanding bariatric surgery from a treatment for only obesity, to being considered a treatment for comorbidities, such as

diabetes and hypertension, as well, since it is shown to significantly improve these conditions (Chawla 633). Stakeholders must also take on a role in education of both providers and eligible populations. Educating providers on the cost-effectiveness of bariatric surgery in the long run will demonstrate the economic appeal of the treatment and begin to expand access as a money-saving move, in hopes of “eliminating inconsistencies in coverage policies across regions and individual hospitals” (Chawla 637). This economic role also relies on the bariatric centers and hospitals themselves, as “individual practices can work to equalize access to bariatric care for sociodemographic minorities by reconsidering insurance options they accept” (Falahee 11). Education of bariatric-eligible patients on the safety and effectiveness of the surgery is also important, especially marketing the treatment option in areas where this knowledge might not have normally made it to (Falahee 11). Therefore, bariatric surgery can and will treat the obesity epidemic, so long as these healthcare disparities and barriers to patient access are fixed. This can be done by making small steps to work toward improving equal access to such an effective, important treatment to obesity. This way, bariatric surgery can treat as many eligible patients as possible, which will have positive economic, medical, and social outcomes across the U.S.

Section VII: Conclusion

Treating obesity is a popular, highly-debated topic in healthcare, since there is a lot at stake – obesity costs a substantial amount of money and drains resources from the healthcare system, it affects the well-being and life expectancy of American children and adults alike, and without treatment, this epidemic will only get worse. Bariatric surgery is a contested mode of treatment for obesity, since it is surrounded by extreme biases, coupled with a large gap in accessibility to eligible patients. This surgery is often seen as an easy way out for those obese people who are personally responsible for their condition in the first place and who have failed in

their role and duty as a biocitizen. Therefore, people often think that the healthcare system is not morally obligated to help these people—that obese patients need to be held accountable (Persson 314). In addition to the pre-operative challenges of the social complications associated with bariatric surgery, there also exist great post-operative lifestyle changes that are required of patients after the procedure, in order to retain the outcomes, and thus lose weight and reverse comorbidities of obesity. These pre- and post-operative challenges, along with barriers in access to surgery, hinder bariatric surgery's marked ability to treat the obesity epidemic, and thus, are the areas where reform needs to focus in the coming years. By expanding access to surgery, eliminating obesity bias that might affect patients, and offering support to patients to ensure long-term retention, bariatric surgery holds the solution to the problem of obesity in America.

Widespread utilization of bariatric surgery will greatly benefit the nation, as surgery has the “ability to reverse, eliminate, or significantly ameliorate diabetes, hypertension, hyperlipidemia, and obstructive sleep apnea,” and cause a marked increase in life expectancy (Buchwald 1730). Beyond the scope of medical and health-related improvements post-operation, bariatric surgery also holds the potential for positive benefits in the social and economic opportunities of patients who undergo the procedure, as the outcomes of surgery have a large impact on the quality of life of the patient, their perception of well-being, self-confidence, occupational opportunities and abilities, and more. Therefore, bariatric surgery is a favorable option in treating morbid obesity and should be readily and enthusiastically utilized to treat this epidemic.

Annotated Bibliography

Arterburn, D. E., Maciejewski, M. L., & Tsevat, J. (2005). Impact of Morbid Obesity on Medical Expenditures in Adults. *International journal of obesity*, 29(3), 334.

This source comes from the International Journal of Obesity, and it discusses the negative impact of obesity, but this source is interesting because, while most sources looked into these negative impacts on human health and well-being, this paper emphasizes the impact of the obesity epidemic on the healthcare system. This source is, therefore, helpful because it takes a different point of view, specifically looking into the economic burden of obesity, which is just as important to look into when researching obesity and the extent to which it needs to be addressed and treated in the healthcare system and policies today.

Blue Cross Blue Shield (BCBS) of North Carolina Corporate Medical Policy, Surgery for Morbid Obesity, 05/2018, https://www.bluecrossnc.com/sites/default/files/document/attachment/services/public/pdfs/medicalpolicy/surgery_for_morbid_obesity.pdf.

This article is directly from Blue Cross Blue Shield, and it is the formal document about their policy for bariatric surgery coverage-- the criteria for patients to be accepted, the specifics of what is covered, and other particulars about access to insurance coverage for obese patients. This source was relevant in examining what allows one to get coverage for the surgery, and therefore, was important to keep in mind when researching the healthcare barriers and inequity in access for people seeking surgical treatment of obesity.

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