Background

- It is a fact that about 74 percent of the adult U.S. population age 20 years and older is either overweight or obese.
- Overweight and obese are categorical continuums of being above normal weight based on Body Mass Index (BMI) calculation. This has serious health implications for all Americans, not to mention the huge medical cost implications associated with obesity, estimated at $168.4 billion, or 16.5 percent of national spending on medical care for U.S. adult noninstitutionalized population.
- The percentage of obese people has increased significantly in a little over a decade. In 1994 the rate was 22.9 percent, and it rose to 30.5 percent in 2000 and 34 percent in 2005.
- People who are obese spend at least $2,800 (2005 dollars) more for medical care than normal weight people.
- Increase in obesity prevalence alone accounts for 12 percent of the growth in health spending.
Ideally, the problem would be addressed simply by people eating more nutritious diets, in moderate portion sizes, and exercising more frequently. But today there are many cultural, lifestyle and psychosocial issues that make it difficult for people to improve their habits.

- Fast food is cheaper than healthy foods, such as fresh fruits and vegetables.
- Access to unhealthy foods is easier than healthy food options, especially for certain high-risk populations in low socioeconomic communities.
- Travel by automobile is still the norm for most adults.
- Many more job roles are sedentary, and job demands provide little opportunity for incorporating physical activities.
- Working adults, especially those with children, find it difficult to fit exercise into their increasingly hectic schedules.
- The stresses of modern life lead many to perpetuate unhealthy habits as a way to manage stress.
- Some ethnic or regional communities have traditional foods and eating habits that are less healthy.

**Employers’ Call to Action**

Why should employers address overweight and obese conditions in their workforces? Being above normal weight is a big contributing factor in the development of certain conditions and diseases, and it makes those conditions and diseases more severe, higher risk and higher cost. Even though there may be other contributing factors, weight is so far-reaching and impactful that reducing weight is a key step vital to improving any condition or disease. The impact of being overweight or obese carries forward into the workplace in terms of productivity, fitness to work, and the impact of illnesses related to weight in terms of presenteeism or absenteeism.

This trend toward unhealthy levels of increased weight can be changed. Addressing the obesity epidemic requires a multifactorial approach undertaken by individuals, employers, communities, schools, the media and other sources of lifestyle support and interaction. There are many direct ways to influence and reduce weight. There are more indirect, complex, system-level changes that need to take place at many levels to reduce the source driving weight gain and improve the environment in which we find ourselves. Action must take place at all levels to improve the population weight in a sustained manner. This includes action within the workplace.

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**Table 1: BMI Categories**

<table>
<thead>
<tr>
<th>Description</th>
<th>BMI</th>
<th>Obesity Class</th>
<th>Disease* Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Low Waist Circumference</td>
</tr>
<tr>
<td>Underweight</td>
<td>18.5 or less</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Desirable weight</td>
<td>18.5 to 24.99</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Overweight</td>
<td>25-29.99</td>
<td>-</td>
<td>Increased</td>
</tr>
<tr>
<td>Obesity</td>
<td>30-34.99</td>
<td>Class I Obesity</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>35-39.99</td>
<td>Class II Obesity</td>
<td>Very High</td>
</tr>
<tr>
<td>Extreme Obesity</td>
<td>40 or more</td>
<td>Class III Obesity</td>
<td>Extremely High</td>
</tr>
</tbody>
</table>

*Disease risk for Type 2 diabetes, hypertension and CVD.*
The workplace is where employees spend up to a third of their working days. Employers indirectly influence employees’ choices in terms of the facility, culture and resources available at work. They can more directly influence employees through programs and services that promote healthy choices and behaviors. Every employer can make an impact by ensuring a culture of health and taking the steps to establish policies and amenities that are conducive for employees to make healthy choices while at work. Every employer can support healthy eating and some degree of physical activity at the workplace in key areas:
- Vending machine choices
- Filtered water
- Fitness for duty requirements
- Physical activity breaks
- Smoke-free workplace policy
- If present, cafeterias and food vendors offer healthy food choices
- Incentives or subsidies for healthy behaviors

Additionally, stakeholders in the community can band together to change the way the physical space in which we live and work supports the right health and behavior choices outside of the home and workplace. Employers can be a key stakeholder in this effort.

Physician-developed clinical practice guidelines recommend prevention of obesity and medically supervised weight loss as the first line treatments for excess weight. Overweight and obesity can be treated with behavior modification, pharmacotherapy and bariatric surgery in any combination; pharmacotherapy and bariatric surgery are never stand-alone options. For severe obesity, physician organizations have concluded that bariatric surgery is the most effective intervention.

**Estimated Increased Spending Associated with Obesity in the United States***

*(in billions)*

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Medical Costs</td>
<td>$160</td>
</tr>
<tr>
<td>Medicare/Medicaid</td>
<td>$60</td>
</tr>
<tr>
<td>Commercial payors</td>
<td>$80</td>
</tr>
<tr>
<td>Out-of-pocket healthcare costs</td>
<td>$20</td>
</tr>
<tr>
<td>Incremental Food Expenses</td>
<td>$90</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>$30</td>
</tr>
<tr>
<td>Decreased productivity</td>
<td>$70</td>
</tr>
<tr>
<td>Weight-loss programs</td>
<td>$20</td>
</tr>
<tr>
<td>Plus-size clothing</td>
<td>$30</td>
</tr>
<tr>
<td>Other (fuel, funeral, electricity, etc.)</td>
<td>$20</td>
</tr>
<tr>
<td>Short-term disability</td>
<td>$30</td>
</tr>
</tbody>
</table>

**Total = $450**

*Estimated Increased Spending Associated with Obesity in the United States* is a chart illustrating the increased spending associated with obesity in the United States. The chart shows the distribution of costs across different categories such as direct medical costs, Medicare/Medicaid, commercial payors, out-of-pocket healthcare costs, incremental food expenses, absenteeism, decreased productivity, weight-loss programs, plus-size clothing, and short-term disability.

*Cost to individuals*

*Cost to payors*

*Cost to employers*

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*Rounded estimates.
† Based on estimated cost of incremental calorie intake to maintain obese weight.
‡ Based on incremental costs of plus-size clothing.

Source: McKinsey analysis; Centers for Disease Control and Prevention; 2006 National Health Expenditure Accounts; Euromonitor
At the core, eating a healthier balance of food and moderating portion size needs to be part of all our lifestyles. Some individuals are more susceptible to the negative impact of unhealthy food, but avoiding those foods is important for everyone. Unanimously, avoid as much as possible:
- Processed food
- Food containing high amounts of processed sugar, e.g., high fructose corn syrup
- Saturated fat and trans fat

Because our eating habits are so terrible, sticking to a diet, any diet that reduces calorie intake, is better than not following any dietary principles and will produce weight loss. Certain diets carry their own risks, benefits and considerations. The right diet is the one that individuals can stick with over long periods of time. People need to:
- Reduce total calories
- Consume fat sparingly and avoid the bad fats
- Include many types and colors of vegetables and fruits in small quantities
- Limit treats to small amounts and on rare occasions

The more calories individuals burn through physical exercise, the easier it is to manage weight. So, diet and nutrition go hand-in-hand with structured physical activity. Like diet, any increase in physical activity is an improvement given the sedentary lifestyles that many of us lead. Only certain individuals are drawn to the high-energy exercises in gyms and competitive sports. Others will need to find ways to increase physical activities in their normal daily lives. Simple things that add up over time when done consistently include looking for ways to walk more, taking stairs as an alternative to escalators or elevators, doing manual chores around the house, etc.

Certain medications may help with the weight loss effort, especially if they address certain underlying psychosocial factors. They are by no means the “silver bullet.” These medications may carry risks that are yet to be discovered, such as recent recall of Meridia. Pharmacologic interventions must be supplemental to the core behavioral interventions addressing diet and physical activity in order to achieve the desired level and sustained weight control.

”Because our eating habits are so terrible, sticking to a diet, any diet that reduces calorie intake, is better than not following any dietary principles and will produce weight loss.”
Beyond the mechanics of how weight can be reduced by lifestyle changes and choices, there are reasons why those changes and choices are very difficult for certain individuals to make. Without understanding and addressing those reasons, individuals can only acknowledge that they are aware that eating better and being more physically active are important, but cannot effectively act on that knowledge. The underlying factors, such as stress, need to be addressed in order to be ultimately successful. Identifying these individuals early through risk assessment is important so they get the necessary support and approaches that will really be impactful.

Bariatric surgery is similarly by no means the “silver bullet.” Even more importantly, the surgery is only a tool to assist, in weight loss; it is not a cure. However, surgery, mainly the types that restrict the intake or absorption of food, is currently the most effective weight-loss treatment in severely obese patients. Surgically induced weight loss results in a marked reduction in some of the comorbidities associated with obesity and an improvement in quality of life.

Bariatric surgery is only effective if the patient complies with all recommended pre- and post-op treatment plans (the surgery doesn’t remove any weight; it makes it easier to reduce weight). The individual must have demonstrated some success in losing weight through diet and exercise, but failed to achieve enough weight loss to further reduce the effects of morbid obesity. In addition, the safety and cost-effectiveness of bariatric surgery is heavily dependent on who and where the surgery is performed. Therefore, to ensure the best chance of success and desired and sustained outcomes, very specific patient and surgical qualifications as well as treatment protocols have been established.

Many studies have shown substantial reduction in obesity comorbidities:
- Diabetes resolved
- Hypertension resolved
- Sleep apnea resolved
- Hyperlipidemia improved

Reduction of chronic conditions:
- Cancer risk reduced
- Cardiovascular risk reduced
- Risk of musculoskeletal problem reduced
- Risk of respiratory conditions reduced

There was an increase in digestive conditions which isn’t a complete surprise given the alteration of the digestive tract from the surgery.
Bariatric Surgery

There is sufficient research and clinical consensus that bariatric surgery for the right individuals can be highly effective in reducing certain disease prevalence or the severity of those conditions. Employers must consider, beyond state mandates, how this expensive treatment fits into the health benefit plan and overall mission and strategy for improving the health and wellness of their employees, spouses and dependents. There are multiple components that can be taken to ensure that bariatric surgery is part of a comprehensive corporate culture of health. These other efforts that help members reduce and manage weight are important to help minimize the chance of weight gain following surgery. There are no guarantees; the risk that an individual will regain the lost weight following bariatric surgery is a constant. Employer consideration of bariatric surgery coverage without an existing underlying culture of health within the employer that is both palpable and tangible in very real and practical terms may or may not impact the rate of post-bariatric surgery weight gain. However, not doing so seems to create mixed messages regarding the importance and corporate commitment of weight management as part of a comprehensive health risk management strategy, and seems to create risks and added challenges for employees at work to maintain the weight lost from the bariatric surgery. The correct message includes making a decision regarding what is a fair and reasonable degree of cost-sharing that isn’t going to deter necessary treatment but places enough financial value that the individual will not decide on the treatment frivolously. Ultimately, the success of employees in maintaining the lost weight is a benefit to the individual as well as the company. It is best to approach this in a way that will ensure the best chance of successful and sustained outcomes.

Pros

- Significant reduction in weight, with average loss between 54-113 pounds, based on two meta-analysis.
- Average weight loss at 12 months for diet alone ranged from 5-10 pounds and for diet and medication, about 15-22 pounds.
- As a result of weight loss, tangible reduction in related conditions, such as diabetes, hypertension, sleep apnea, reflux, etc.
- For hyperlipidemia, there was an improvement in level of severity.

Risks

- Risk of gaining back lost weight.
- The surgery itself carries risks.
- Complications following surgery occur frequently, affecting almost half of patients by 14 months.
  - Complication rates have improved in terms of frequency and severity at all points in time following surgery up to 18 months.
  - Complications more likely at low-quality hospitals.

Average after versus before surgery costs are 27 percent lower for those without complications, but 16 percent higher for those with complications6.

State Mandates

Various states have either full mandates or partial mandates. There are other states contemplating mandating the treatment of morbid obesity, including bariatric surgery. The terms and conditions of the mandate may vary from state to state. For the most current and accurate information, the best suggestion is to check with the relevant local states for the latest regulations.

"Various states have either full mandates or partial mandates. There are other states contemplating mandating the treatment of morbid obesity, including bariatric surgery."
Eligibility Overview
The clinical criteria for considering bariatric surgery are:
- Age 18 years or older
- BMI 40 or greater
- BMI 35-39.9 with at least one clinically significant comorbidity, including, but not limited to, cardiovascular disease, Type 2 diabetes mellitus, hypertension, coronary artery disease or pulmonary hypertension

Employer Considerations
The employer implications for considering coverage of bariatric surgery are related to the phenomenon of supply-induced demand, especially when there is moral hazard in which the full cost of the procedure is not the responsibility of the individual receiving the care. There must be a balance between the potential benefit of an invasive treatment versus unnecessary, inappropriate or ineffective utilization of a costly procedure.

Plan Cost Considerations
Out-of-pocket cost has been shown to be negatively and highly significantly related to the self-reported likelihood of having surgery in a bariatric surgery-eligible population. Persons with higher incomes and younger persons also reported a significantly higher likelihood of surgery. Knowing their at-risk populations will assist employers in establishing co-payment amounts, determining the potential utilization rate, net cost of surgery and potential net cost-benefit. Ultimately, the goal is not to create a financial barrier to those who would benefit from the surgery, but to establish enough cost sharing that the employees will feel vested in complying with treatment plans and ensuring successful outcomes.

Current Trends
- Bariatric surgery has increased tenfold since 1995.
- Covered by Medicare for all patients but under strict guidelines.
- Limited cost-effective studies to date, but the belief is an estimated “break-even” point where savings offset the initial costs range between two to five years.
  - Complications are the major determinant.
  - Complications lead to hospitalization and emergency room visits.
- Restrictive procedures (92.5 percent) dominate over malabsorptive procedures (7.5 percent)\(^8\).
- Laparoscopic approach increasing steadily, accounting for 69.5 percent, versus open approach (30.5 percent)\(^8\).
  - Laparoscopic approach tends to have a lower average inpatient cost (-10 percent).
  - Laparoscopic approach tends to have shorter average length of stay (2.6 days versus 3.5).

“Bariatric surgery is similarly by no means the “silver bullet.” Even more importantly, the surgery is only a tool to assist, in weight loss; it is not a cure.”
Bariatric Surgery Recommendations

- Based on current knowledge, laparoscopic surgeries, specifically gastric banding performed at a high-quality Center of Excellence (COE) facility has the best chance of an effective result with less chance of post-operative complications.
- Leverage the CMS designation of bariatric COE as preferred facilities for bariatric surgery.
- Center of Excellence criteria include at least:
  - The institution must perform at least 125 bariatric surgeries per year.
  - Bariatric surgeons must perform at least 50 bariatric surgeries per year.
  - Bariatric surgeons must have performed at least 125 bariatric surgeries in the past.
  - The institution must have a multidisciplinary team consisting of experienced surgeons, nurses and medical consultants along with the ability to report long-term outcomes.
- Although a number of bariatric procedures are covered by Medicare, given the current data, unless clinically contraindicated, the preference is for laparoscopic gastric banding.
## Related Factors for Optimal Bariatric Surgery Plan Benefit

| Considerations for determining if and how bariatric surgery should be provided as plan benefit: | - Ensuring appropriate utilization; predicting utilization.  
- Potential cost impact based on risk population, lost time from work for surgery factoring role/responsibilities/salary range.  
  - 5-15 workdays for post-op recovery.  
- Net cost/benefit factoring savings from obesity-related medical care, injuries, productivity, and absenteeism factoring role/responsibilities/salary range.  
  - Obese men: absent 2.7-4.1 more days per year than normal-weight men.\textsuperscript{10,11}  
  - Obese women: absent 5.1-5.5 more days per year than normal-weight women.\textsuperscript{10,11}  
  - Obese adults incur 36 percent greater annual medical expenditure.  
  - 77 percent of diabetes mellitus cases were resolved.  
  - 62 percent of hypertension cases were resolved.  
  - 86 percent of sleep apnea cases were resolved. |
| Compliance with bariatric surgical qualifications both before and after surgery is essential to ensure the following: | - Appropriate treatment options for members after trial of conservative self care.  
- Demonstration by the appropriate self care.  
- Need to commit to the same self care following the surgery.  
- Minimize the risk of inappropriate bariatric surgeries for members seeking a quick fix for obesity, expecting the surgery will solve the weight problem.  
- Minimize the risk of adverse selection of members just for the bariatric surgery benefit. |
| Generally, there is higher cost effectiveness and shorter timeframe to achieve return on investment (ROI) (optimally between four and five years) if: | - Members are employees. Employees give back in terms of reduced absenteeism; spouses don’t provide that benefit.  
- Obese employees are highly compensated. Lost productivity, absenteeism and presenteeism are more impactful, and time to achieving ROI is faster.  
- Obese employees have very low turnover. Enough time for achieving expected improvement in health translated to reduced cost of medical care and secondary cost benefit of improved productivity, reduced absenteeism, presenteeism and injury.  
- High proportion of qualified women employees.  
- Employees have a co-pay for a portion of the surgery cost. |
Bariatric Surgery Plan Design

- Determine co-pay amount. Part of standard deductible and co-pay parameter? Or subsidize if qualify? With the decision to incorporate bariatric surgery coverage, employers need to weigh the cost/benefit of co-pay or coinsurance and the potential incentive/disincentive for utilization, as well as potentially subsidizing the surgery if employees demonstrate a concerted effort to reduce weight.
  - Consider differential co-pay:
    - Tiered against pay scale.
    - Fixed amount: $5,000 or $7,000.

- Pre-Bariatric Surgery Management
  - Meet qualifications:
    - BMI threshold and comorbidities.
    - Evidence of weight management program, supervised either by a physician or a registered dietitian for a minimum of six months without significant gaps. The weight management program must include monthly documentation of all of the following components:
      - Weight
      - Dietary program
      - Physical activity level
    - Willingness to comply with preoperative and postoperative treatment plans.
  - Not planning to be pregnant for at least 12 months following surgery.
  - Initial consult: medical, surgical, psychiatric, dietitian.
  - Clearance by surgeon, psychiatrist, internist, and dietitian.
  - Complete assessments.
  - Attend bariatric group education class and support group.
  - Successful smoking cessation.
  - Pre-op liquid diet trial before surgery.

- Post-Bariatric Surgery Management
  - Following post-op meal plan.
  - Post-op symptom management.
  - Post-op assessment and adjustment of medications taken to treat comorbidities.
References


5 Institute, Classification of Overweight and Obesity by BMI, Waist Circumference, and Associated Disease Risks


8 Encinosa et al. Coding of Complications Derived from a Meta-Analysis of Bariatric Complications Conducted by the Southern California-RAND Evidence-Based Practice Center. 2006 and 2009.


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