Obesity Cost Calculator Worksheet

**Directions:** Please use the Obesity Cost Calculator Worksheet to collect information to better approximate the costs of obesity to your organization. If you do not have some of this data for your company, the Obesity Cost Calculator will provide default values from nationally representative datasets to calculate the cost estimates. The cost of obesity must be calculated before determining your return on investment. You will need to decide the appropriate inputs for this calculation based on your budgeted costs for the intervention, anticipated participation rates, employee co-payments, annual work days missed (current and anticipated post-intervention rates), and expected weight loss of employees.

**CALCULATE THE COST OF OBESITY**

**Step 1: Company Profile**

Describe your company

1. Identify your type of industry (choose one):
   - Multi-industry / Other
   - Agriculture
   - Construction
   - Education and Healthcare
   - Entertainment and Food Service
   - Finance, Insurance and Real Estate
   - Information
   - Manufacturing
   - Other Services
   - Professional, Management, and Administrative Services
   - Public Administration
   - Transportation and Utilities
   - Wholesale and Retail Trade

2. Identify your state or select multi-state if appropriate.
   - Multi state/United States.
   - State _________
Step 2: Employees’ BMI

Your company's obesity prevalence is calculated based on employees’ Body Mass Index (BMI).

1. Do you have Body Mass Index (BMI) information for your employees?  
   o If you have measured and documented each of your employees’ BMI, answer “Yes” to this question. If not, answer No, and these values will be estimated for you.

   o Yes, provide the following data (choose a, b, c, or d):
   o No, skip to question #2 (allow the cost calculator to make an estimate).

   a. Total

      | Normal | Overweight | Obese 1 | Obese 2 | Obese 3 |
      |--------|------------|---------|---------|---------|
      | < 25   | 25-29.9    | 30-34.9 | 35-39.9 | 40+     |
      | _______| _________  | _______ | _______ | _______ |

   b. By gender only

      | Normal | Overweight | Obese 1 | Obese 2 | Obese 3 |
      |--------|------------|---------|---------|---------|
      | < 25   | 25-29.9    | 30-34.9 | 35-39.9 | 40+     |
      | Males: | _________  | _______ | _______ | _______ |
      | Females:| _________  | _______ | _______ | _______ |

   c. By age group only

      | Normal | Overweight | Obese 1 | Obese 2 | Obese 3 |
      |--------|------------|---------|---------|---------|
      | < 25   | 25-29.9    | 30-34.9 | 35-39.9 | 40+     |
      | Ages 18-44: | _________  | _______ | _______ | _______ |
      | Ages 45+: | _________  | _______ | _______ | _______ |

   d. Combination of employees by gender and age group

      | Normal | Overweight | Obese 1 | Obese 2 | Obese 3 |
      |--------|------------|---------|---------|---------|
      | < 25   | 25-29.9    | 30-34.9 | 35-39.9 | 40+     |
      | Males, ages 18-44: | _________  | _______ | _______ | _______ |
      | Males, ages 45+: | _________  | _______ | _______ | _______ |
      | Females, ages 18-44: | _________  | _______ | _______ | _______ |
      | Females, ages 45+: | _________  | _______ | _______ | _______ |

2. The calculator provides default values from nationally representative datasets to assist with completing the cost estimates. Would you like these averages based on industry or state values?

   o Industry
   o State
3. Select the most detailed category for which you have an estimate of the number employees in your company (choose e, f, g, or h):

   e. Total number of employees: 

   f. By gender only
      Males: ____________________
      Females: ____________________

   g. By age group only
      Ages 18-44: ____________________
      Ages 45+: ____________________

   h. By gender and age group
      Males, ages 18-44: ____________________
      Males, ages 45+: ____________________
      Females, ages 18-44: ____________________
      Females, ages 45+: ____________________

Step 3: Wages and Benefits

The cost of increased absenteeism due to obesity is estimated based on the wages and benefits earned by your employees. You may enter different wage information for employees that receive health benefits and those that do not.

1. Do you know the average hourly wages of employees in your company?
   o Yes, enter your employees’ average hourly wages (choose a, b, c, or d)
   o No, skip to question #2 (allow the cost calculator to make an estimate)

   a. Total
      Employees with no benefits
         Avg. hourly wage
         $________
      Employees with benefits
         Avg. hourly wage
         $________

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b. By gender only

<table>
<thead>
<tr>
<th>Employees with no benefits</th>
<th>Employees with benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. hourly wage</td>
<td>Avg. hourly wage</td>
</tr>
<tr>
<td>Males</td>
<td>$______</td>
</tr>
<tr>
<td>Females</td>
<td>$______</td>
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<td></td>
<td>$______</td>
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Males: $______
Females: $______

2. Do you know the percent of employees receiving health benefits?

If you select "No", the percent of the employees in your company who receive benefits is estimated based on an industry-based average.

- Yes, enter the percent of employees receiving health benefits (choose e, f, g, or h):
- No, skip this question (allow the cost calculator to make an estimate).

e. Total

   _____%

f. By gender only

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
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<tbody>
<tr>
<td>_____%</td>
<td>_____%</td>
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Males: _____%
Females: _____%

g. By age group only

<table>
<thead>
<tr>
<th>Ages 18-44:</th>
<th>Ages 45+:</th>
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<tr>
<td>_____%</td>
<td>_____%</td>
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</table>

Ages 18-44: _____%
Ages 45+: _____%

h. By gender and age group

<table>
<thead>
<tr>
<th>Males, ages 18-44:</th>
<th>Males, ages 45+:</th>
<th>Females, ages 18-44:</th>
<th>Females, ages 45+:</th>
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Males, ages 18-44: _____%
Males, ages 45+: _____%
Females, ages 18-44: _____%
Females, ages 45+: _____%
CALCULATE THE INTERVENTION RETURN ON INVESTMENT

The cost of obesity must be calculated before determining your return on investment (ROI). You will need to decide the appropriate inputs for this calculation based on your budgeted costs for the intervention, anticipated participation rates, employee co-payments, annual work days missed (current and anticipated post-intervention rates), and expected weight loss of employees.

To analyze the return on investment of an intervention, you will be asked to enter the following:

**Intervention Name**

1. Enter your own name for an example scenario:
   - For example, fitness center, bariatric surgery, weight management program, etc.

**Participation**

2. Target Population (choose one):
   - All Overweight and Obese = (BMI>=25).
   - All Obese = (BMI>=30)
   - Obese 1 = (BMI 30-34.9)
   - Obese 2 = (BMI 35-39.9)
   - Obese 3 = (BMI 40+)
   - Overweight = (BMI 25-29.9)

3. Expected participation rate of target population:
   - The percent of the target population likely to participate in the intervention. For example, if the target population is Obese 3 individuals (BMI 40+), then an expected participation rate of 50 percent means that half of the Obese 3 individuals at the company will participate.

   _____%

**Cost**

4. Express costs (choose one):
   - Select "Per participant" to enter into the "Annual Cost" field the average cost of implementing the intervention with each participant over one year for use in the calculations. Select "In total" to instead enter a value for the total cost of implementing the intervention with all participants. You typically want to choose "Per participant" if the intervention's costs depend heavily on the number of participants and "In total" if the costs don't tend to vary with participation level. Examples of interventions that
would fall in these categories, respectively, are a one-on-one weight loss counseling program and a fitness center.

- **Per Participant**
- **In Total**

**Annual cost:**

1. Enter the direct cost of implementing the intervention each year either per participant or in total, depending on your selection for "Express Costs" above. These costs may be different over time; therefore, you may enter different costs for the first year of implementation and all following years. For example, if the intervention that you want to observe costs $1000 in the first year and $500 in subsequent years to implement with 50 participants, then you should enter $1000 in Year 1 and $500 in Subsequent years if "In total" is selected above OR $20 and $10, respectively, if "Per participant" is selected.

5. **Year 1:**
   - $________

6. **Subsequent years:**
   - $________

7. **Intervention co-payment for employees (% of cost):**
   - Portion (0-100%) of the intervention cost that participants pay. The calculator uses this value to calculate the intervention costs paid by the employer, which are assumed to be equal to the remaining portion of the costs after participant copay.
   - _______%

8. **Annual workdays missed due to intervention (per participant):**
   - Average number of days that an intervention participant misses from work due to participation in the intervention. For example, if the intervention is a medical intervention such as bariatric surgery, this would include days for pre-op, surgery, and recovery. These values may be different over time; therefore, you may enter a different number of days for the first year of implementation and all following years.

8. **Year 1:**
   - _______ days

9. **Subsequent years:**
   - _______ days
10. Number of years cost incurred (1 - 20):
   - The number of years the costs of the intervention are incurred can range from one to 20 years. The number of years will apply to both the direct costs of the intervention to the company as well as to the work days missed. It is assumed that the company has a stable cohort of employees.

   ________ years

11. Annual discount rate on cost and benefits (0 - 8)
   - The discount rate is used to convert the value of costs and savings in the future to current dollar values. It should equal the rate of return on investments after adjusting for inflation. Setting the rate to 0 will assume that the value of a future dollar and a current dollar are the same. Typically discount rates are set in the range of 3-5%.

   ________%

Effect

12. Enter effect in terms of (choose one):
   - Expected weight loss resulting from participation in the intervention can be entered either as i) average pounds (lbs) or kilograms (kgs) or ii) average percent of body weight and is allowed to vary over time. Always express weight loss as relative.

   o Lb loss
   o Kg loss
   o % of body weight loss

Expected weight loss (vs. baseline) from participation
   - Enter the expected number of pounds, kilograms, or percent of body weight (depending on your selection for "Effect in terms of" above) that an individual can expect to lose due to participation in the intervention. For example, if on average participants lose 5 pounds in the first year, 3 pounds in each of the next 3 years, and no more weight after that, then you should choose "lbs" for "Effect in terms of" above, then enter "5" for Year 1 and "3" for subsequent years, and finally "4" in the "Number of years of weight loss" field below.

13. Year 1:

   ________
14. Subsequent years:


15. Number of years weight loss:
   Number of years that participants will lose weight due to participation in the intervention on average.

   ________ years

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