Obesity: A Health Disparity among African Americans in Massachusetts compared to the general population

By: Ruthy Weche, Irena Yankey and Maureen Kamanu
A disparity is the difference in prevalence, mortality, incidence, and burden of a condition among a specific population in comparison to a larger group (general population).
Obesity

- Obesity is an abnormal accumulation of body fat usually 20% or more over an individual's ideal body weight.
- Obesity is defined as excess adipose tissue (excess fat).

### BMI Formula

**USA**

$$\text{BMI} = \frac{703 \times \text{weight (lb)}}{\text{height}^2 \text{ (in}^2\text{)}}$$

**METRIC**

$$\text{BMI} = \frac{\text{weight (kg)}}{\text{height}^2 \text{ (m}^2\text{)}}$$

### Weight Categories

<table>
<thead>
<tr>
<th>Weight Categories</th>
<th>BMI (kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt; 18.5</td>
</tr>
<tr>
<td>Healthy Weight</td>
<td>18.5-24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25-29.9</td>
</tr>
<tr>
<td>Obese</td>
<td>30-34.9</td>
</tr>
<tr>
<td>Severely Obese</td>
<td>35-39.9</td>
</tr>
<tr>
<td>Morbidly Obese</td>
<td>≥40</td>
</tr>
</tbody>
</table>
Evidence of Disparity

● African Americans make up only 8.1% of the population in MA,
● Account for 33.6% of the number of obese people 18+
● 20% of African American youth are obese
Factors that make obesity a disparity

- Socio-economic status
- Culture
- Health behaviors and environmental factors (accessibility to fast food)
- Health insurance status
- Education
- Amount of Exercise
Socio-Economic Status

- Income has an effect on the prevalence of obesity
- African American families make $1 for every $2 white families make in the past 30 years
- Based off of income, African Americans and Hispanic Adults are more likely to be overweight than White adults
- Statistics show that African Americans who make less money annually, have a higher rate of obesity
Socio-Economic Status

Income by Race Per Family

- African Americans
- Whites
- Asians

Income by Race

$0

$10,000

$20,000

$30,000

$40,000

$50,000

$60,000

$70,000

$80,000
Culture

- Culture plays a key role in the foods one consumes
- African Americans are known for eating foods high in salt and sugar which can result in obesity, high blood pressure, and diabetes
Health behaviors

- Lack of access to affordable, healthy food
- Less nutritious food is usually higher in calories, and less expensive
- People on a tight income are more susceptible to buying such foods
- Limited access to supermarkets/healthier food options
# Access to various foods

<table>
<thead>
<tr>
<th>City</th>
<th>Number of McDonald's in city</th>
<th>Percent of people below poverty line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worcester, Ma</td>
<td>1/ 5.5 mi²</td>
<td>17.9%</td>
</tr>
<tr>
<td>Framingham, Ma</td>
<td>1/ 11.1 mi²</td>
<td>8.0%</td>
</tr>
<tr>
<td>Marlborough, Ma</td>
<td>1/ 8.8 mi²</td>
<td>6.8%</td>
</tr>
</tbody>
</table>
### Health Behaviors or Environmental Factors

<table>
<thead>
<tr>
<th></th>
<th>Whites</th>
<th>Blacks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adults</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eat 5 or more servings of fruits and</td>
<td>24.3</td>
<td>24.0</td>
</tr>
<tr>
<td>vegetables a day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular physical activity</td>
<td>51.2</td>
<td>41.1</td>
</tr>
<tr>
<td>Any physical activity in past 30 days</td>
<td>79.7</td>
<td>70.2</td>
</tr>
</tbody>
</table>
Education and Awareness

- Education--- Knowledge--- Being informed instead of ignorant
- Black adults with a less than high school education or just some college
- Proven by statistics, the more education that any ethnicity has, including blacks, the less prevalent obesity is
- We need to start at an early age to prevent obesity by informing children and youth

Massachusetts Graduation Rate

- Caucasians 90%
- African Americans 73%
Impact on our Children

"Like mother, Like daughter"

**Obesity among children (2-19 years)**

- **Hispanics:** 22%
- **Blacks:** 20%
- **Whites:** 14%
- **Asian:** 11%
Many Massachusetts adults and adolescents fall short of the Surgeon General’s physical activity: Recommends adults to get 30 minutes or more of moderate-intensity physical activity most days of the week.

Among people who are obese, Black and Hispanic adults have lower rates of regular physical activity or any physical activity in the last 30 days than White adults.
In Massachusetts
- 2013: 90.2% of Whites and 84.15% of Blacks had health insurance coverage
- Whites uninsured: 9.8% - Lowest among any other race or ethnic group
- Blacks uninsured: 15.9%

In the U.S
- $147 billion per year spent on obesity-related health issues
Treatments and Prevention

- Awareness/Education
- Healthier School Lunch
- Eating Healthier: 7-8 servings of fruits and vegetables per day, decreasing intake of fatty foods
- Exercising: At least 30-60 min. a day
- Moderate weight loss is the best method (shedding 5-10% of body weight)
- Lifestyle
- Medication
- Surgery
Necessity for Intervention

- Obesity levels have doubled in the last 20 years.
- One third of children in MA are obese.
- Two thirds of the adult population are obese
- African American adults who are obese are 1.5x more likely to also report "fair to poor health and living with diabetes"
- Health Consequences of obesity: High blood pressure, stroke, cancer
What’s in the news?

Obesity today 2015 research

Harvard Medical School

- One-day course providing education on obesity

Puerto Rico

- Lawmakers are considering a bill that would fine the parents of obese children

Healthy Hunger-Free Kids Act

- was aimed at creating healthier school lunches, but several schools have rebelled against new rules
Conclusion

● Obesity is a major disparity in African Americans compared to the general population
● We need to implement programs that educate our youth at a young age to promote a healthy mentality
Works Cited


Questions