Impact of a team-based group medical visit program on anxiety, depression and lifestyle for overweight and obese patients

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Introduction

Obesity is a risk factor for many other diseases such as diabetes, hypertension, coronary artery disease, and mental illness among others.

In response to the levels of obesity among their patients, a team of clinicians at the Anthony Jordan Health Corporation (AJHC) developed The Healthy Weight and Wellness (HWW) program.

HWW is a new group medical visit program designed to help patients eat healthier, improve their physical activity, lose weight, and improve their energy and overall well-being.
Background

• Studies have shown that achieving a healthy weight promotes a healthier lifestyle and also decreases risk for other comorbidities and can increase general health status overall.

• For individuals who are both obese and have a mental illness it is hard to decide whether the mental illness is impacting the obesity or whether the obesity is impacting the mental illness.

• Current methods used to treat individuals who are overweight and obese, particularly in underserved populations, have not shown to be very successful:
  • Studies are conducted in middle and upper class patient populations
  • Significant portion of patients have HMO’s
  • GMV’s are facilitated by a single provider
  • Do not include psychosocial health

• Objective: To evaluate the impact of a team-based group medical visit on healthy eating, physical activity, anxiety and depression for overweight and obese patients.
Methodology

• Bimonthly group medical visit
  • 6 weeks (3 visits total)

• Patient enrollment criteria:
  • Overweight or obese (BMI ≥25)
  • Aged 18 years or older
  • Have at least 1-2 weight-related chronic condition(s) or symptom(s) (examples: diabetes, hypertension, dyspnea, sleep apnea, etc.)
  • English-speaking (not necessarily English as a native language)
  • Ambulatory
  • Current patients of the Anthony L. Jordan Health Corporation with some form of health insurance (either public or private)

• Enrollment goal
  • 20 individuals accounting for 30% attrition to maintain financial feasibility.
Methodology

- Intervention
  - Group centered education session
    - Multidisciplinary Team
  - Brief weight related visit with physician/nurse practitioner
- Surveys
  - Surveyed pre intervention and at the third visit of the GMV program to assess eating and physical activity habits, depression (Patient Health Questionnaire-9 [PHQ-9]) anxiety (Generalized Anxiety Disorder 7 [GAD-7])
- Weight
- Waist circumference
Results

<table>
<thead>
<tr>
<th>Baseline Characteristics</th>
<th>N=14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>86%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>79%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>14%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>7%</td>
</tr>
<tr>
<td>Age (yrs)</td>
<td>54.14</td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>246.08</td>
</tr>
<tr>
<td>BMI</td>
<td>40.32</td>
</tr>
<tr>
<td>Waist Circumference</td>
<td></td>
</tr>
<tr>
<td>Men (≤40)</td>
<td>44.12</td>
</tr>
<tr>
<td>Women (≤35)</td>
<td>45.69</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>128/80</td>
</tr>
<tr>
<td>A1C</td>
<td>6.66</td>
</tr>
<tr>
<td># of Comorbidities</td>
<td>3.08</td>
</tr>
</tbody>
</table>

- 5lbs weight loss (n=14).
  - 7 people lost weight
  - 4 people gained weight
  - 3 people had no change in weight
- Waist circumference also decreased
  - Men: ~1in decrease
  - Women: ~0.5in decrease
Results

Exercise

<table>
<thead>
<tr>
<th></th>
<th>Pre GMV</th>
<th>Post GMV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minutes</td>
<td>1.64</td>
<td>26.45</td>
</tr>
<tr>
<td>Exercise</td>
<td>13.70</td>
<td>3.83</td>
</tr>
</tbody>
</table>

Eating habits

<table>
<thead>
<tr>
<th></th>
<th>Pre GMV</th>
<th>Mid GMV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits</td>
<td>1.69</td>
<td>2.00</td>
</tr>
<tr>
<td>Veggies</td>
<td>1.54</td>
<td>2.08</td>
</tr>
<tr>
<td>Fast food</td>
<td>0.58</td>
<td>4.00</td>
</tr>
<tr>
<td>Butter</td>
<td>1.73</td>
<td>1.91</td>
</tr>
<tr>
<td>Soda</td>
<td>6.08</td>
<td></td>
</tr>
</tbody>
</table>

*Fruits and veggies are per day
**Fast Food, soda, butter are per week
Results

Depression (PHQ – 9)

• Average score (N=14)
  • Pre GMV = 9.50
  • Mid GMV = 8.23

• PHQ-9 score > 10* (N=7)
  • Pre GMV = 15.14
  • Mid GMV = 11

Anxiety (GAD – 7)

• Average score (N=14)
  • Pre GMV = 7.86
  • Mid GMV = 6.00

• GAD-7 Score >10** (N=6)
  • Pre GMV = 12.67
  • Mid GMV = 7.6

*Scores of 5, 10, 15, and 20 represent cut points for mild, moderate, moderately severe and severe depression, respectively

**Scores of 5, 10, 15, represent cut points for mild, moderate and severe anxiety, respectively
Discussion

• The goal of this project was to assess the use of a team-based group medical visit model to treat obesity which specifically addresses mental health issues in a community health care setting.

• Overall improvements in dietary habits and physical activity, and mental health indicators.

• Although many patients did not lose weight or decrease their waist circumference, the clinical significance of many of the findings from this project are particularly valuable.
Recommendations

• Administrative support 10-15hrs/wk
  • Recruitment
  • Retention
  • Data input

• Health Education Materials
  • Culturally and Literacy appropriate

• Development of database
  • eCW template with limited free text and more drop down menus
Conclusion

• A team based group medical visit built upon psychosocial, environmental, and/or socioeconomic issues may be affective at improving mental health, diet and lifestyle for socioeconomically disadvantaged populations.

• Even though the data did not reveal statistically significant differences, the clinical significance is evident and more programs are needed to provide more knowledge about how to best serve the difficult to reach populations.
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References


