Low-Income African American Women's Perceptions of Primary Care Physician Weight Loss Counseling: A Positive Deviance Study

Elaine Seaton Banerjee, MD

Jefferson College of Population Health, Thomas Jefferson University, Elaine.Banerjee@jefferson.edu

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LOW-INCOME AFRICAN AMERICAN WOMEN’S PERCEPTIONS OF PRIMARY CARE PHYSICIAN WEIGHT LOSS COUNSELING: A POSITIVE DEVIANCE STUDY

CAPSTONE PRESENTATION

6/25/2015
“They both have like hypertension, diabetes, and strokes and stuff, and it comes from them being heavy.”
“I cut my medications almost nothing. I was on three different types of medications, now I’m down to one pill.”
5-10% weight loss improves:

- Blood sugar and A1c
- Blood pressure
- Lipids
High risk of obesity:
- African Americans
- Women
- Low-Income
Positive deviants deviate from the norm in a good way
Finding behaviors that lead to improved outcomes
Population specific

**BACKGROUND: POSITIVE DEVIANCE**

- Positive deviants deviate from the norm in a good way
- Finding behaviors that lead to improved outcomes
- Population specific
Primary care physicians are expected to counsel patients on obesity.

Appropriate treatment for obesity may depend on patient factors.
Studies with African Americans identified the importance of:

- Physician manner
- Word choice
- Type of advice given
- Recognition

Great job increasing your exercise!
This capstone is a part of a larger study

- Focus on medical interactions
Identify positive deviants in weight loss in a population of low-income, African-American women

Aim 1

Ever Obese, Low-Income, African American Women

- Lost ≥10% Body Weight
  - Positive Deviant Cases in EMR Analysis
    - Positive Deviant Cases Surveyed
      - Positive Deviant Cases Interviewed
    - Controls Surveyed
  - Controls in EMR Analysis
- Did not Lose ≥5% Body Weight
Aim 2

Ever Obese, Low-Income, African American Women

Lost ≥10% Body Weight

Did not Lose ≥5% Body Weight

Positive Deviant Cases in EMR Analysis

Controls in EMR Analysis

Positive Deviant Cases Surveyed

Controls Surveyed

Positive Deviant Cases Interviewed
AIM 2: EMR DATA

- Predict positive-deviant group membership based on EMR documentation of:
  - Physician counseling regarding weight
  - Having at least one weight-related medical problem
  - Having obesity listed on their problem list
AIM 3

Ever Obese, Low-Income, African American Women

- Lost ≥10% Body Weight
  - Positive Deviant Cases in EMR Analysis
    - Positive Deviant Cases Surveyed
      - Positive Deviant Cases Interviewed
  - Controls in EMR Analysis
    - Controls Surveyed

- Did not Lose ≥5% Body Weight
AIM 3: SURVEY DATA

- Predict positive-deviant group membership based on participant self-report of:
  - Having a weight-related medical problem
  - Receiving physician counseling
AIM 4: QUALITATIVE RESEARCH

How do positive deviants characterize their interactions with the healthcare system?

- Ever Obese, Low-Income, African American Women
  - Lost ≥10% Body Weight
    - Positive Deviant Cases in EMR Analysis
      - Positive Deviant Cases Surveyed
        - Positive Deviant Cases Interviewed
  - Did not Lose ≥5% Body Weight
    - Controls in EMR Analysis
      - Controls Surveyed
Inclusion Criteria:

- 18-64 years old
- Female
- African-American
- Patients from the Jefferson Family Medicine Associates (JFMA) practice
- Receive Medicaid Insurance
- Live within Philadelphia
- Were ever obese (BMI ≥ 30 kg/m²)
METHODS: PARTICIPANTS

Ever Obese, Low-Income, African American Women

744
Lost ≥10% Body Weight between 2007 and 2012

762
Did not Lose ≥5% Body Weight between 2007 and 2012

698 Excluded:
Errors in Weight
Amputations or wheel chair bound
Bariatric Surgery
Deceased
Psychotic Disorder or Taking Antipsychotic Medication
Intellectual Disability or Cerebral Palsy
Cancer or Other Illness at Time of Weight Loss

Loss During Pregnancy or Post-Partum
Unintentional Weight Loss
Did not Maintain Loss for ≥6 Months

161
Positive Deviant Cases in EMR Analysis

602
Controls in EMR Analysis
Demographics
Documentation of “dietary counseling”
Documentation of “obesity,” “overweight,” or “morbid obesity” on the problem list
Documentation of a weight related medical problem

<table>
<thead>
<tr>
<th>Active</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dietary counseling</td>
<td>V65.3</td>
</tr>
<tr>
<td>Dyslipidemia</td>
<td>272.4</td>
</tr>
<tr>
<td>Essential hypertension</td>
<td>401.9</td>
</tr>
<tr>
<td>Morbid obesity</td>
<td>278.01</td>
</tr>
<tr>
<td>Polycystic ovarian syndrome</td>
<td>256.4</td>
</tr>
<tr>
<td>Type 2 diabetes mellitus</td>
<td>250.00</td>
</tr>
</tbody>
</table>
METHOD: PROCEDURE

161 Positive Deviant Cases in EMR Analysis

35 Positive Deviant Cases Surveyed

Matched 1:1 by age and BMI

602 Controls in EMR Analysis

36 Controls Surveyed
- Demographics
- Have you ever received advice from a doctor or another health professional to lose weight?
- Have you ever had a medical problem that is caused or worsened by your weight?
METHOD: PROCEDURE

35 Positive Deviant Cases Surveyed

20 Positive Deviant Cases Interviewed
METHODS: MATERIALS
QUALITATIVE DATA COLLECTION

- Has a doctor or another health professional ever talked with you about your weight?
- How did they go about it and what did they tell you?
- What effect did this have on you?
- What could have been done better?
Data collected and analyzed using SPSS
- Demographic Differences
- Predictors of positive deviant group membership

Power
- EMR: 99% Power for 20% difference with $\alpha=0.05$
- Survey: 57% Power for 20% difference with $\alpha=0.1$
Convened a coding panel
Used a modified grounded theory
Developed coding framework
Coded all 20 interviews
Organized and analyzed using nVivo software
RESULTS:
EMR DESCRIPTION OF POSITIVE DEVIANTS

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Weight Lost (lbs)</td>
<td>42 (19)</td>
</tr>
<tr>
<td>Percent of Weight Lost</td>
<td>19% (6%)</td>
</tr>
<tr>
<td>Amount of Weight Regained (lbs)</td>
<td>8 (12)</td>
</tr>
<tr>
<td>Percent of Weight Maintained</td>
<td>15% (5%)</td>
</tr>
</tbody>
</table>
## RESULTS: EMR DEMOGRAPHICS

<table>
<thead>
<tr>
<th></th>
<th>Case (N=161) N (%) or Mean (SD)</th>
<th>Control (N=602) N (%) or Mean (SD)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex - Female</td>
<td>161 (100%)</td>
<td>602 (100%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Sex - Male</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Age</td>
<td>40.1 (11.6)</td>
<td>37.3 (11.8)</td>
<td>0.006</td>
</tr>
<tr>
<td>Race – African American</td>
<td>161 (100%)</td>
<td>602 (100%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Race – White</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Maximum Weight (lbs)</td>
<td>219.0 (43.9)</td>
<td>217.1 (48.7)</td>
<td>0.647</td>
</tr>
<tr>
<td>Maximum BMI</td>
<td>36.4</td>
<td>37.2</td>
<td>0.600</td>
</tr>
</tbody>
</table>
# RESULTS: EMR PREDICTIVE ANALYSIS

<table>
<thead>
<tr>
<th>Predictor of weight loss</th>
<th>Odds Ratio</th>
<th>$r^2$</th>
<th>$x^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation of dietary counseling</td>
<td>2.378</td>
<td>0.031</td>
<td>16.916</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Documentation of a weight-related diagnosis</td>
<td>1.874</td>
<td>0.025</td>
<td>12.514</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Documentation of obesity on problem list</td>
<td>0.648</td>
<td>0.012</td>
<td>5.661</td>
<td>0.018</td>
</tr>
</tbody>
</table>
## RESULTS: EMR ANALYSIS

### POST-HOC EMR PREDICTIVE ANALYSIS FOR DIETARY COUNSELING

<table>
<thead>
<tr>
<th>Predictor of Dietary Counseling</th>
<th>Odds Ratio</th>
<th>$r^2$</th>
<th>$x^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation of obesity on problem list</td>
<td>8.876</td>
<td>0.204</td>
<td>97.061</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
RESULTS: SURVEY DEMOGRAPHICS

<table>
<thead>
<tr>
<th></th>
<th>Case (N=35)</th>
<th>Contol (N=36)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%) or Mean (SD)</td>
<td>N (%) or Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Sex - Female</td>
<td>35 (100%)</td>
<td>36 (100%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Age</td>
<td>44.9 (10.4)</td>
<td>43.0 (11.6)</td>
<td>0.475</td>
</tr>
<tr>
<td>Race – African American</td>
<td>35 (100%)</td>
<td>34 (94%)</td>
<td>0.314</td>
</tr>
<tr>
<td>Ethnicity – Non-Hispanic</td>
<td>35 (100%)</td>
<td>36 (100%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Maximum Weight</td>
<td>219.0 (43.9)</td>
<td>217.1 (48.7)</td>
<td>0.647</td>
</tr>
<tr>
<td>Marital Status – Married or Living with Partner</td>
<td>11 (31%)</td>
<td>5 (15%)</td>
<td>0.100</td>
</tr>
<tr>
<td>Education – Did not complete High School</td>
<td>12 (34%)</td>
<td>3 (8%)</td>
<td>0.007</td>
</tr>
<tr>
<td>Employment – Currently Employed</td>
<td>12 (34%)</td>
<td>24 (67%)</td>
<td>0.006</td>
</tr>
<tr>
<td>Housing Type – Own Home</td>
<td>7 (20%)</td>
<td>7 (19%)</td>
<td>0.953</td>
</tr>
<tr>
<td>Length of Time at Current Residence (y)</td>
<td>8.8 (8.4)</td>
<td>9.2 (11.1)</td>
<td>0.872</td>
</tr>
<tr>
<td>Number of People</td>
<td>3.3 (1.5)</td>
<td>4.2 (2.9)</td>
<td>0.113</td>
</tr>
<tr>
<td>Household Income</td>
<td>$24,848 ($27,406)</td>
<td>$26,613 ($28,394)</td>
<td>0.824</td>
</tr>
<tr>
<td>% Federal Poverty Level</td>
<td>122% (123%)</td>
<td>110% (92%)</td>
<td>0.706</td>
</tr>
</tbody>
</table>
RESULTS: SURVEY PREDICTIVE ANALYSIS FOR POSITIVE DEVIAN'T CASE GROUP MEMBERSHIP

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Odds Ratio</th>
<th>$r^2$</th>
<th>$x^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant-reported weight-related diagnosis</td>
<td>1.500</td>
<td>0.013</td>
<td>0.718</td>
<td>0.398</td>
</tr>
<tr>
<td>Participant-reported discussion of weight</td>
<td>1.100</td>
<td>0.001</td>
<td>0.034</td>
<td>0.855</td>
</tr>
</tbody>
</table>
THEME 1
Framing the problem of obesity in the context of other health problems provided motivation.
“...when I walked out of his office, I said, ‘You know what? I’m just gonna do this because he sayin’ my blood pressure was really out of control, and the medication that they had me on was really too much.’”
“If they already knowed that I was overweight at the time, instead of hitting me with the diabetes then they should have been working on my weight loss with me...then I would have made a life change earlier, and then, and then, and then, avoid the diabetes, try to.”
RESULTS: QUALITATIVE

THEME 2

Having a discussion around weight management was important.
“I’m glad that she showed me a calendar, how to eat portions of food, and what to eat, and stuff. I started eating more vegetables and more fruits, and took all of the cakes and sugars out.”
“They could have geared me to the information, instead of just telling me the problem, and sending me on my way. ‘Cause they told me, ‘You got an atomic bomb here. Now you go figure it out.’”
RESULTS: QUALITATIVE

THEME 3
An ongoing conversation and relationship was helpful.
RESULTS: QUALITATIVE

SUBTHEME 3A

Celebrating small successes was helpful in ongoing motivation.
“It’s more encouraging when you have a doctor tellin’ you you’re doing good, keep up the good work.”
Results: Qualitative

Theme 4
Advice is helpful but only up to a point.

Participants reported that they must be ready to make a change in order for advice and information to be helpful.
“You know, I had to really want to do it for myself... And, and, in order to stick to it as well.”
Our results are similar to those of previous studies:
- Wanted their physician to raise the topic of obesity.
- Discussed the importance of specific advice for how to lose weight and referrals to programs.
- Discussed the importance of a caring and ongoing relationship with their PCP.
- Discussed the importance of recognition of small successes.
DISCUSSION: STRENGTHS

- Positive deviance approach
  - High risk population
  - Traditional methods are not working
  - Solutions are accessible to population
  - Mixed methods study
DISCUSSION: LIMITATIONS

- Limited Population
  - Small N
  - Generalizability

- Use of the EMR
- Qualitative evaluation with controls
- Testing the hypotheses generated by the qualitative evaluation
Positive Deviants exist and are beating the odds
Physician counseling is predictive of successful weight loss

- Patients want:
  - More physician counseling
  - More specific guidance or referrals
DISCUSSION: CONCLUSION

- Having a weight related diagnosis was predictive of weight loss
- Framing obesity in the context of diagnoses was motivating
  - Physicians must draw connections between weight and health problems
“Once I started reading about it and it was like...this wake-up call, you know. You have to do what you gotta do, before you don’t be here.”
REFERENCES
