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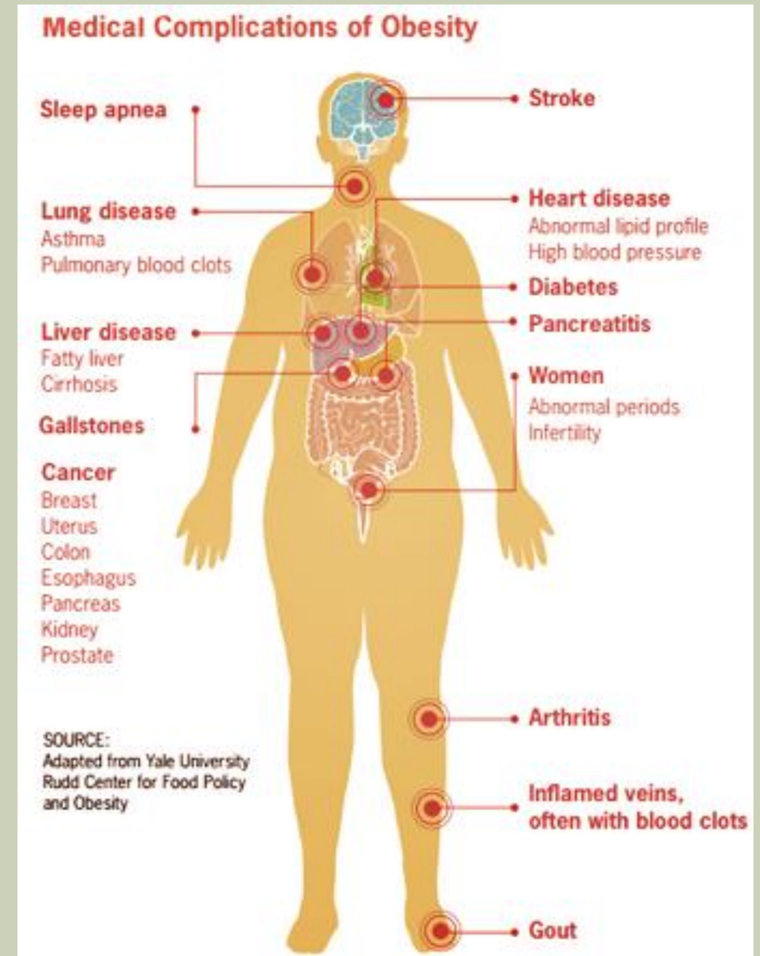
LOW-INCOME AFRICAN AMERICAN WOMEN'S PERCEPTIONS OF PRIMARY CARE PHYSICIAN WEIGHT LOSS COUNSELING: A POSITIVE DEVIANCE STUDY

CAPSTONE PRESENTATION 6/25/2015

Elaine Seaton Banerjee, MD

BACKGROUND: OBESITY

"They both have like hypertension, diabetes, and strokes and stuff, and it comes from them being heavy."

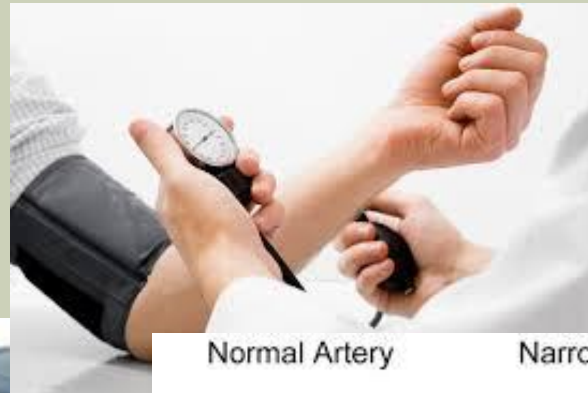


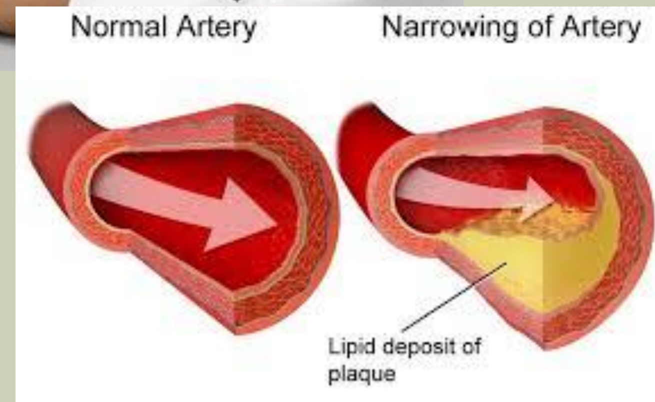
BACKGROUND: WEIGHT-LOSS

"I cut my medications almost nothing. I was on three different types of medications, now I'm down to one pill."

BACKGROUND: WEIGHT-LOSS

- 5-10% weight loss improves:
  - Blood sugar and A1c
  - Blood pressure
  - Lipids



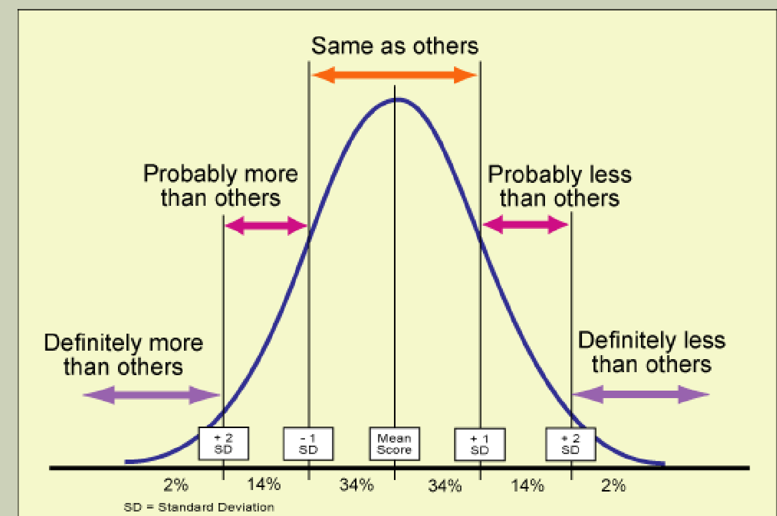


BACKGROUND: POPULATION

- High risk of obesity:
  - African Americans
  - Women
  - Low-Income

BACKGROUND: POSITIVE DEVIANCE

- Positive deviants deviate from the norm in a good way
- Finding behaviors that lead to improved outcomes
- Population specific

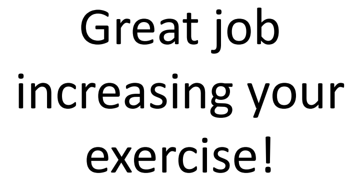


BACKGROUND: OBESITY IN PRIMARY CARE

- Primary care physicians are expected to counsel patients on obesity
- Appropriate treatment for obesity may depend on patient factors

BACKGROUND: POPULATION

- Studies with African Americans identified the importance of:
  - Physician manner
  - Word choice
  - Type of advice given
  - Recognition

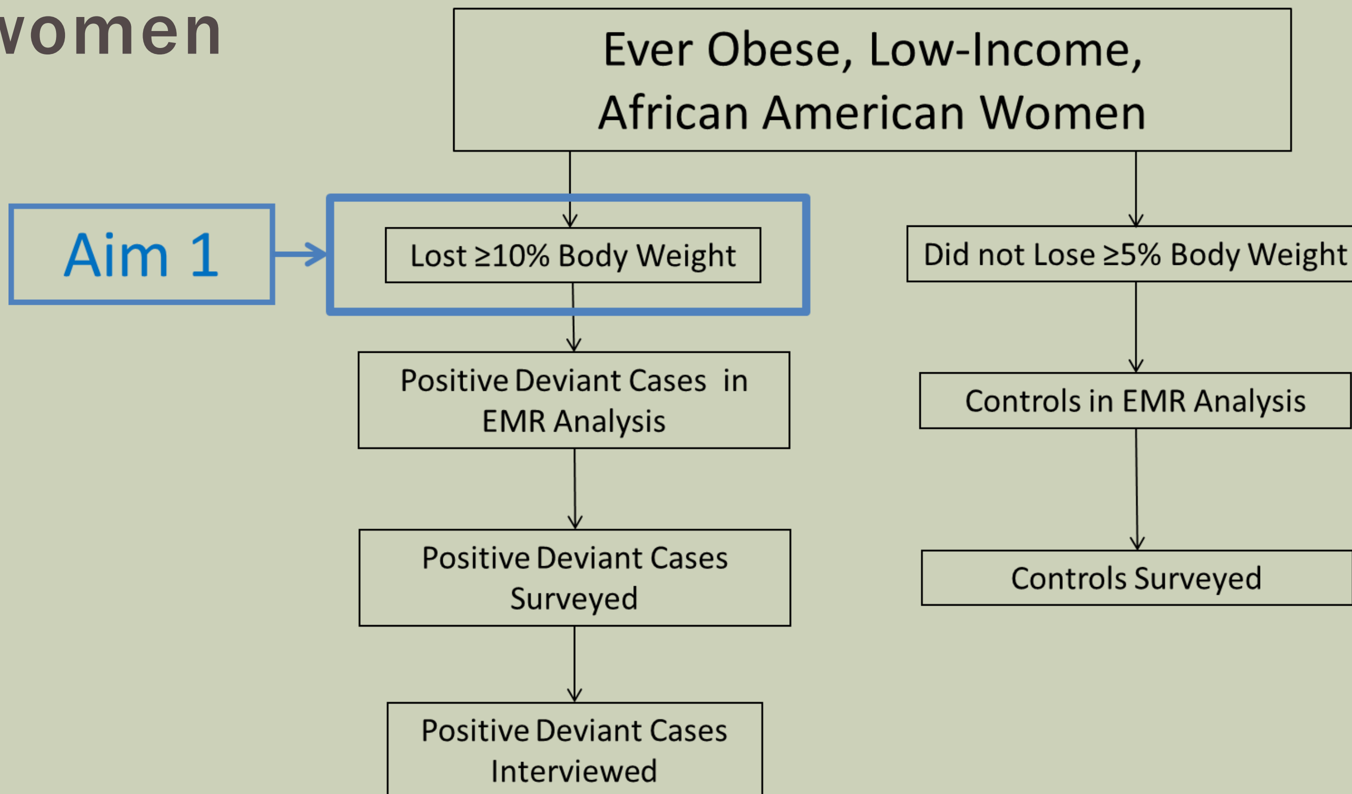


STUDY DESIGN

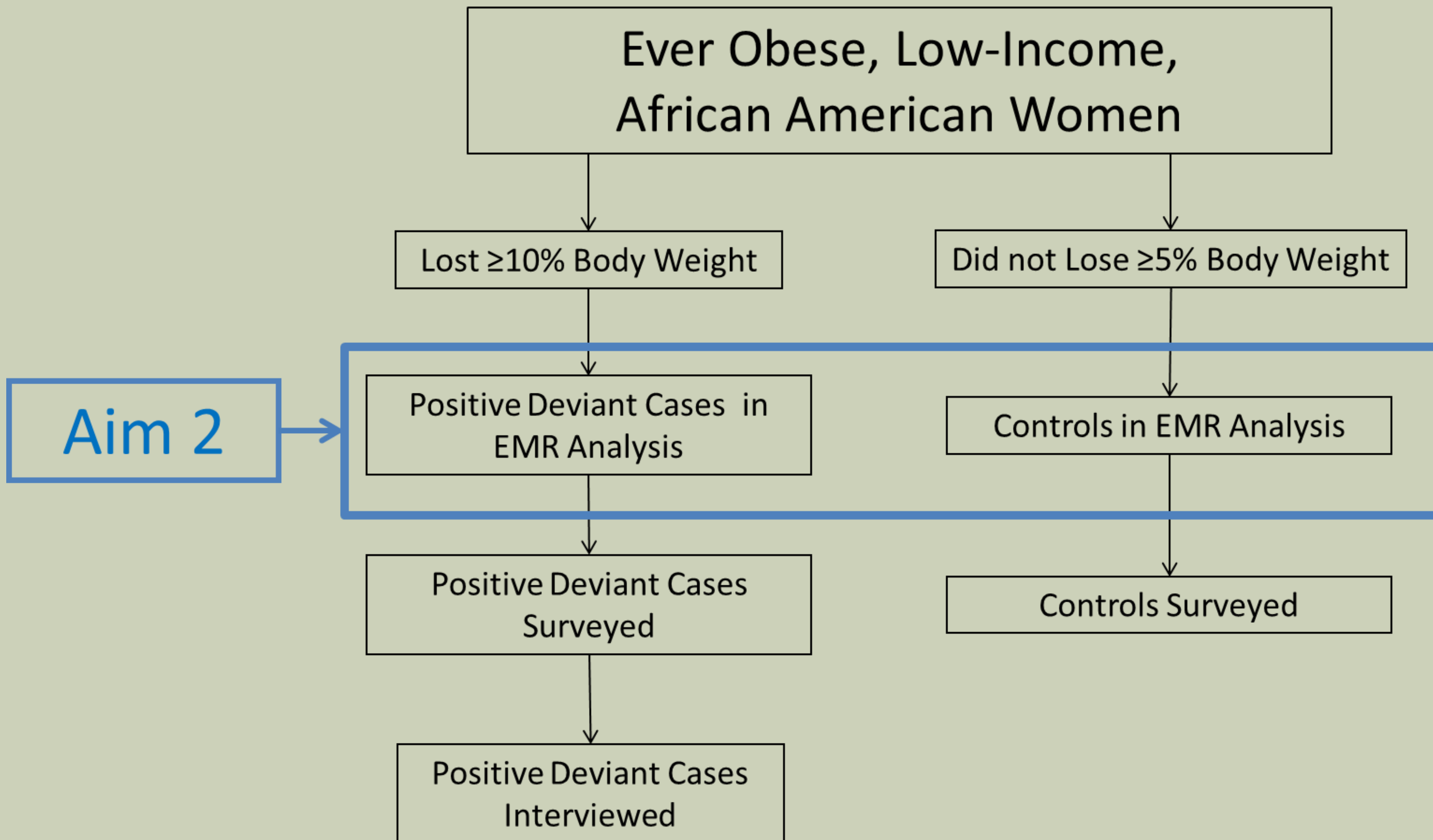
- This capstone is a part of a larger study
  - Focus on medical interactions

AIM 1

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



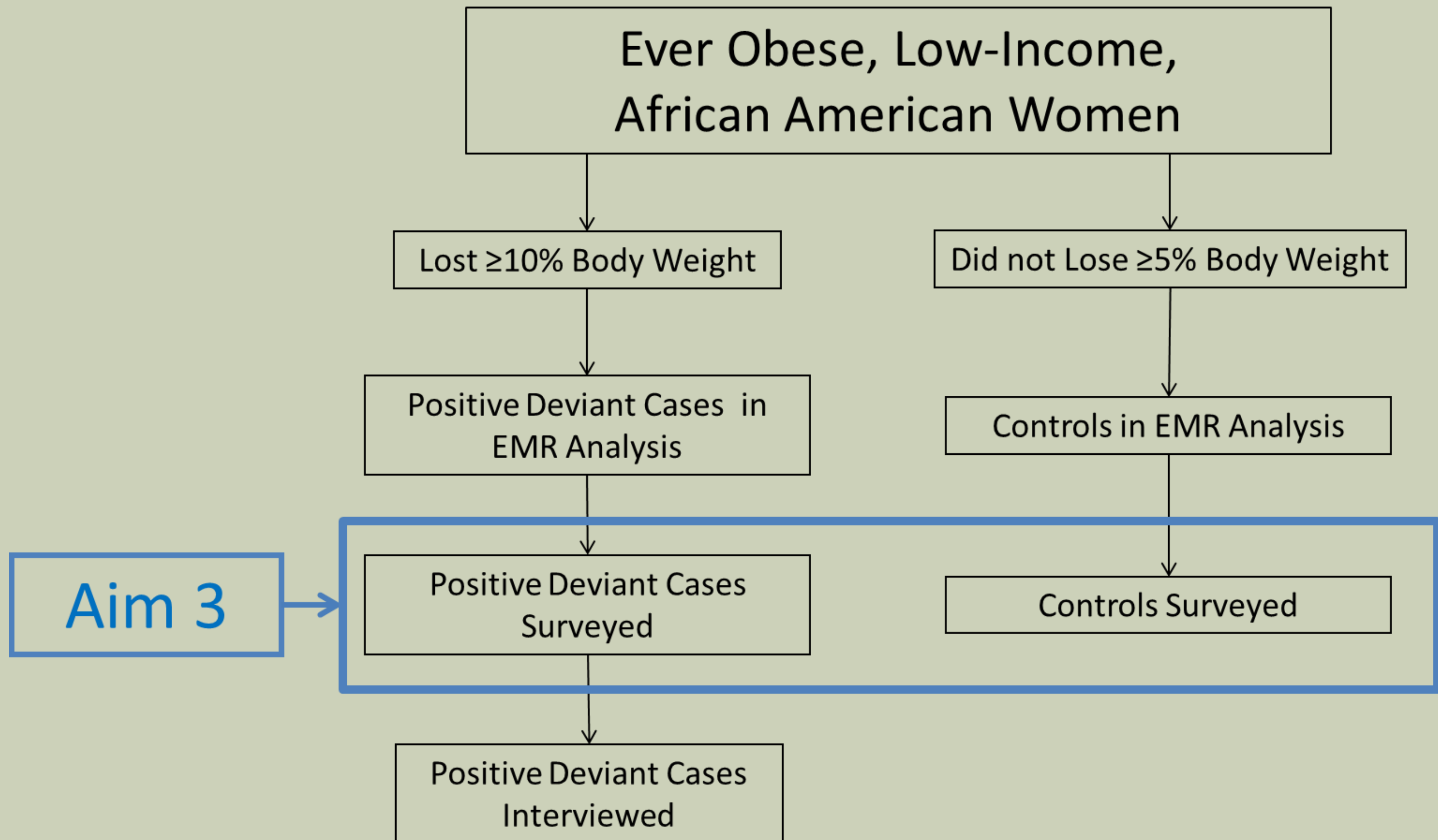
AIM 2



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

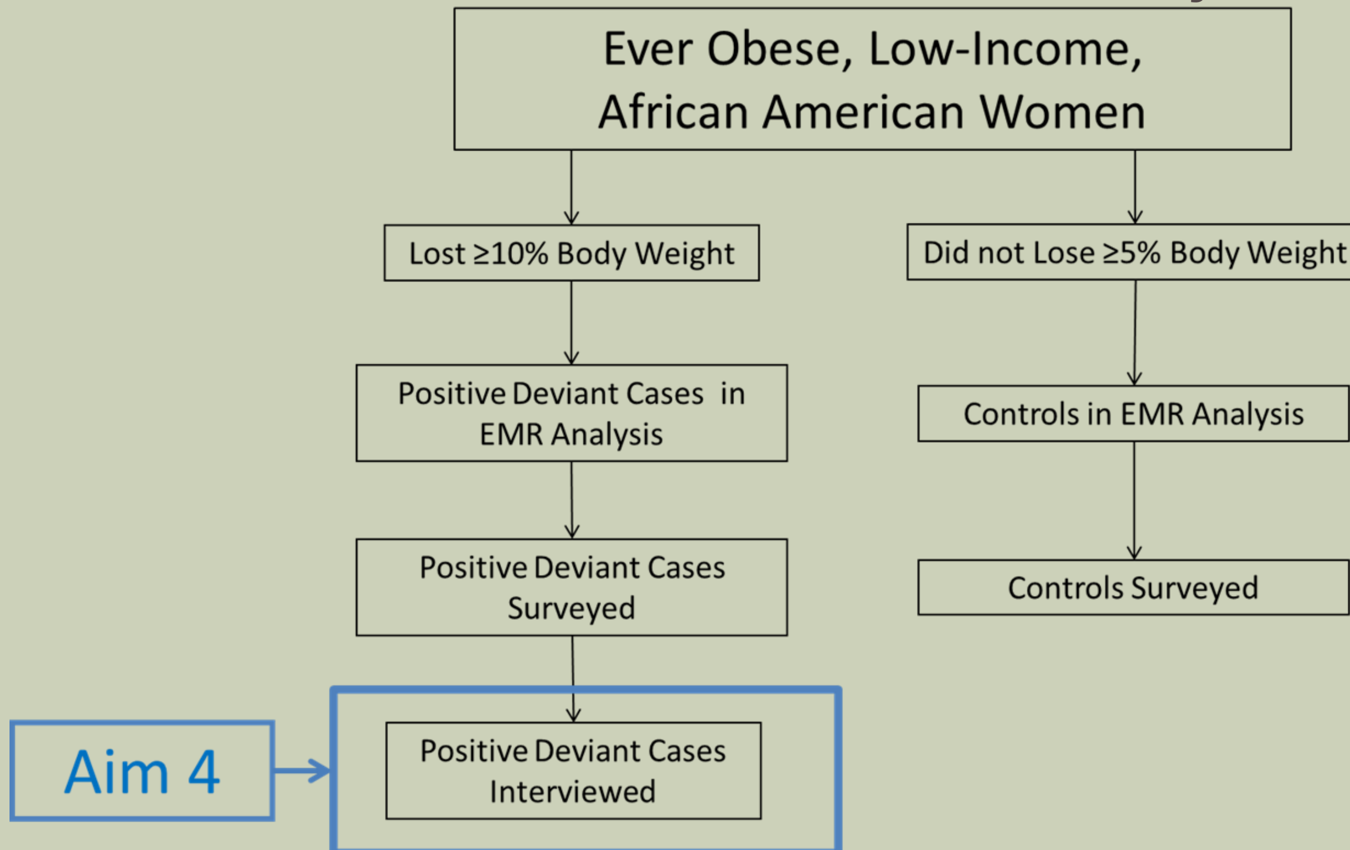


AIM 3:
SURVEY DATA

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

AIM4: QUALITATIVE RESEARCH

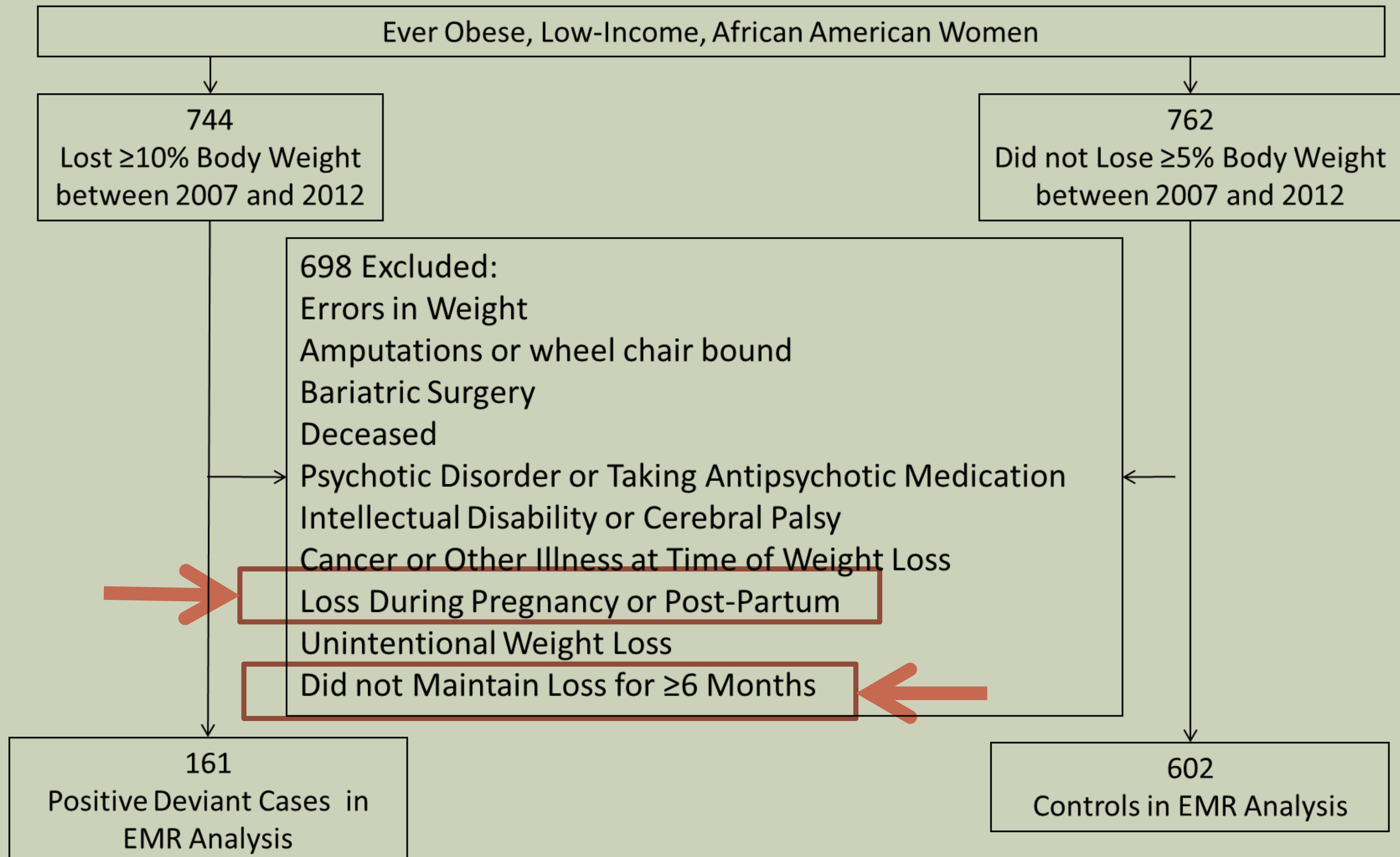
- How do positive deviants characterize their interactions with the healthcare system?



METHODS: PARTICIPANTS

- 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$\geq$30 kg/m^2)

METHODS: PARTICIPANTS

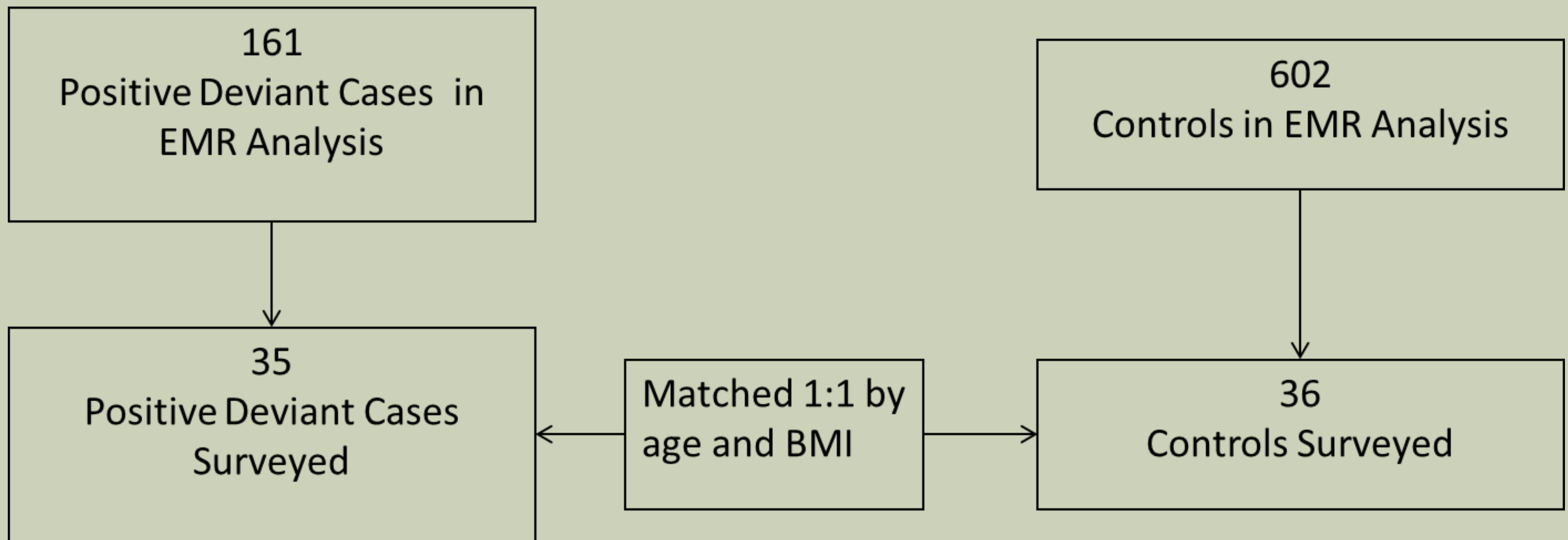


METHODS: MATERIALS
EMR VARIABLES

- Demographics
- Documentation of “dietary counseling”
- Documentation of “obesity,” “overweight,” or “morbid obesity” on the problem list
- Documentation of a weight related medical problem

Active	
Dietary counseling	V65.3
Dyslipidemia	272.4
Essential hypertension	401.9
Morbid obesity	278.01
Polycystic ovarian syndrome	256.4
Type 2 diabetes mellitus	250.00

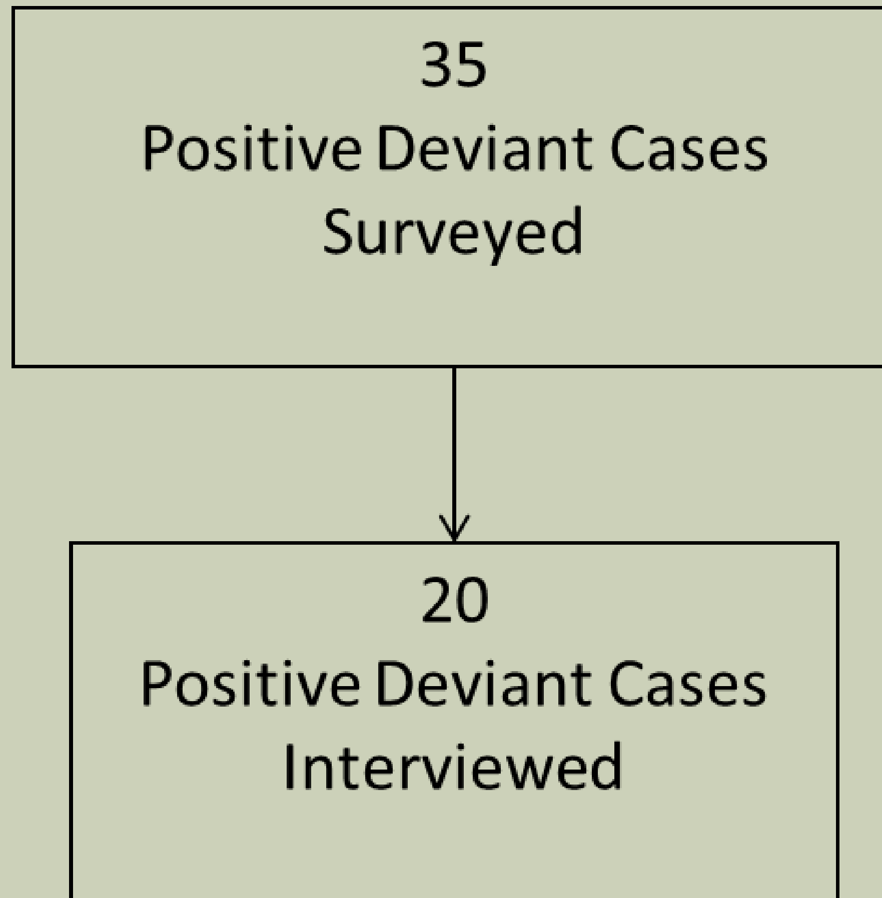
METHOD: PROCEDURE



METHODS: MATERIALS SURVEY VARIABLES

- 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



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?

METHODS: PROCEDURE QUANTITATIVE ANALYSIS

- 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 $\alpha=0.1$

METHODS: PROCEDURE QUALITATIVE ANALYSIS

- 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

	Mean (SD)
Amount of Weight Lost (lbs)	42 (19)
Percent of Weight Lost	19% (6%)
Amount of Weight Regained (lbs)	8 (12)
Percent of Weight Maintained	15% (5%)

RESULTS:
EMR DEMOGRAPHICS

	Case (N=161) N (%) or Mean (SD)	Control (N=602) N (%) or Mean (SD)	*p*
Sex - Female	161 (100%)	602 (100%)	N/A
Age	40.1 (11.6)	37.3 (11.8)	0.006
Race – African American	161 (100%)	602 (100%)	N/A
Maximum Weight (lbs)	219.0 (43.9)	217.1 (48.7)	0.647
Maximum BMI	36.4	37.2	0.600

RESULTS: EMR PREDICTIVE ANALYSIS

Predictor of weight loss	Odds Ratio	r^2	x^2	p
Documentation of dietary counseling	2.378	0.031	16.916	<0.001
Documentation of a weight-related diagnosis	1.874	0.025	12.514	<0.001
Documentation of obesity on problem list	0.648	0.012	5.661	0.018

RESULTS: EMR ANALYSIS

POST-HOC EMR PREDICTIVE ANALYSIS FOR DIETARY COUNSELING

Predictor of Dietary Counseling	Odds Ratio	r^2	x^2	p
Documentation of obesity on problem list	8.876	0.204	97.061	<0.001

RESULTS: SURVEY DEMOGRAPHICS

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

RESULTS: SURVEY PREDICTIVE ANALYSIS FOR POSITIVE DEVIANT CASE GROUP MEMBERSHIP

Predictor	Odds Ratio	r^2	x^2	p
Participant-reported weight-related diagnosis	1.500	0.013	0.718	0.398
Participant-reported discussion of weight	1.100	0.001	0.034	0.855

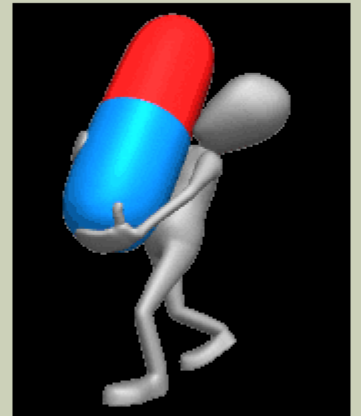
RESULTS: QUALITATIVE

THEME 1

Framing the problem of obesity in the context of other health problems provided motivation.

RESULTS: QUALITATIVE

"…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.'"



RESULTS: QUALITATIVE THEME 1

"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, avoid the diabetes, try to."

RESULTS: QUALITATIVE

THEME 2

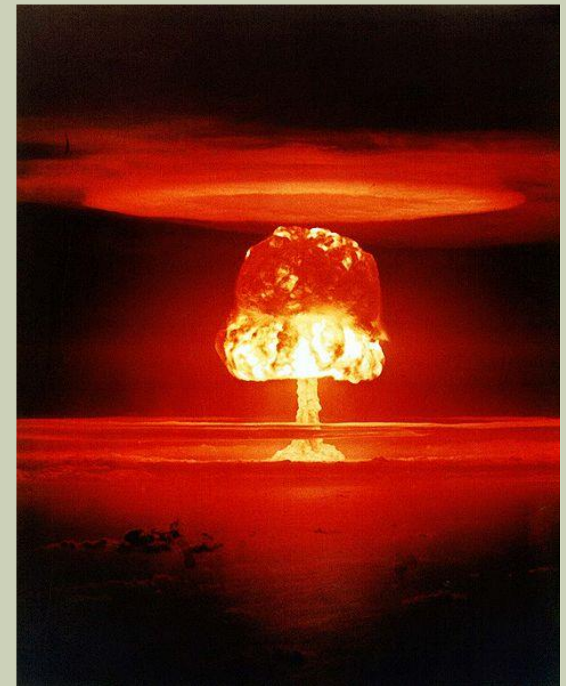
Having a discussion around weight management was important.

RESULTS: QUALITATIVE

"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."

RESULTS: QUALITATIVE THEME 2

"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.

RESULTS: QUALITATIVE

"It's more encouraging when you have a doctor tellin' you you're doing good, keep up the good work."

RESULTS: QUALITATIVE

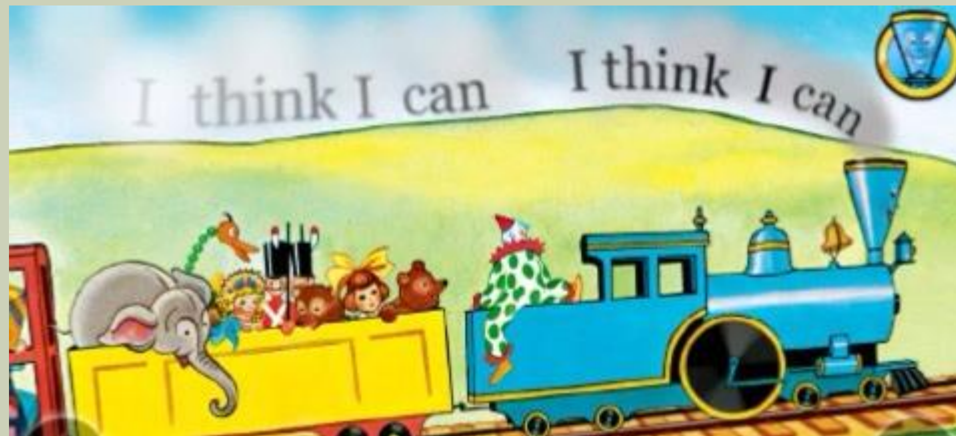
THEME 4

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.

RESULTS: QUALITATIVE

"You know, I had to really want to do it for **myself**… And, and, in order to stick to it as well."



DISCUSSION: COMPARISON

- 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

DISCUSSION: FUTURE DIRECTIONS

- Qualitative evaluation with controls
- Testing the hypotheses generated by the qualitative evaluation

DISCUSSION: CONCLUSION

Positive Deviants exist and are beating the odds

DISCUSSION: CONCLUSION

- 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

CONCLUSION

"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."

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QUESTIONS & COMMENTS