Treating Obesity in the 21st Century:

Please check your weight bias at the door

Brooke Marsico, PA-C

May 23, 2022

Disclosures

I have no relevant relationships with ineligible companies to disclose within the past 24 months. (Note: Ineligible companies are defined as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.)

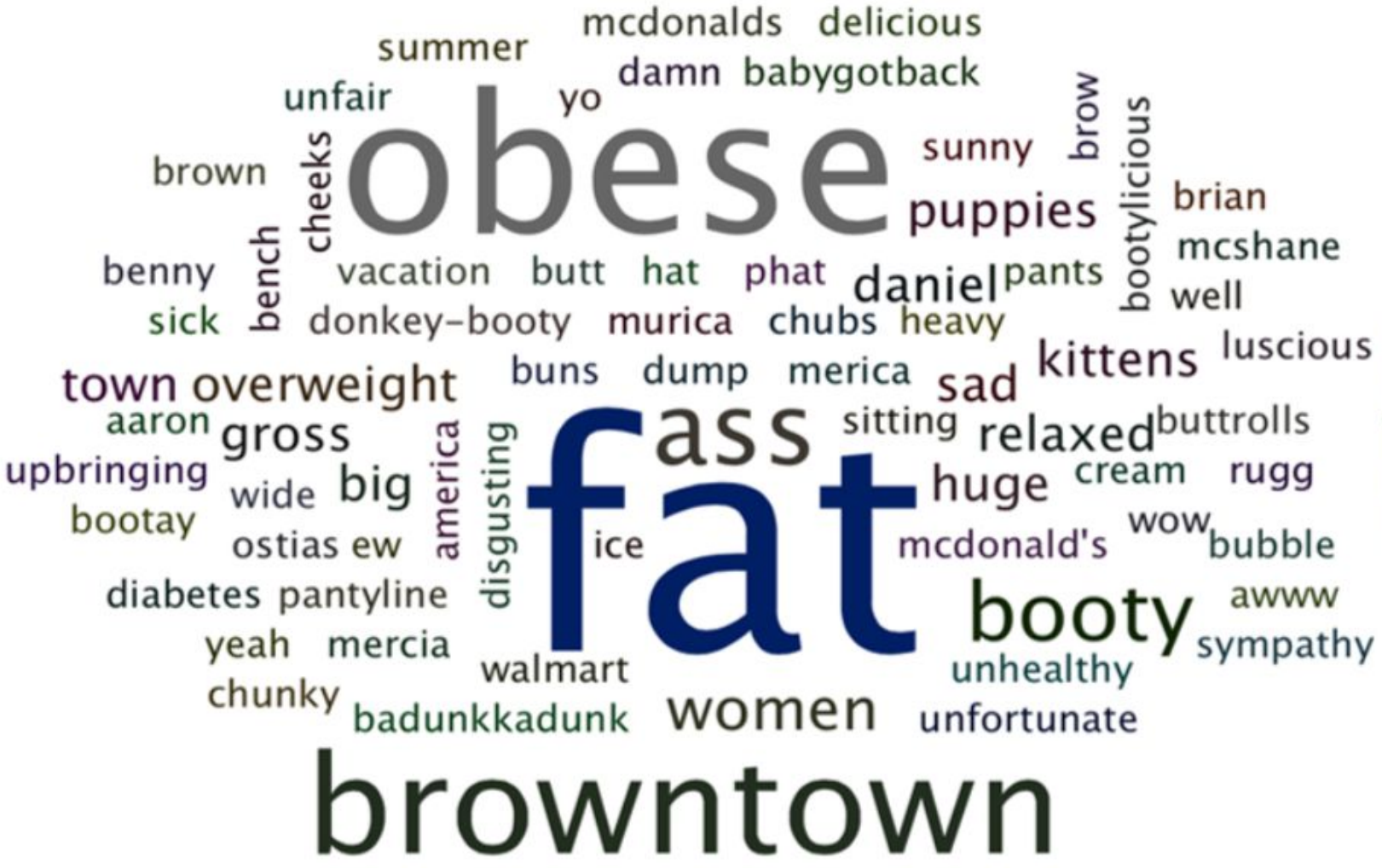
Educational Objectives

At the conclusion of this session, participants should be able to:

1. Understand that obesity is a chronic disease with complex pathophysiology
2. Identify sources of weight stigma and bias
3. Understand the consequences of weight bias
4. Describe strategies to reduce weight bias

What is the first word that comes to your mind?

Medical Students
N=144

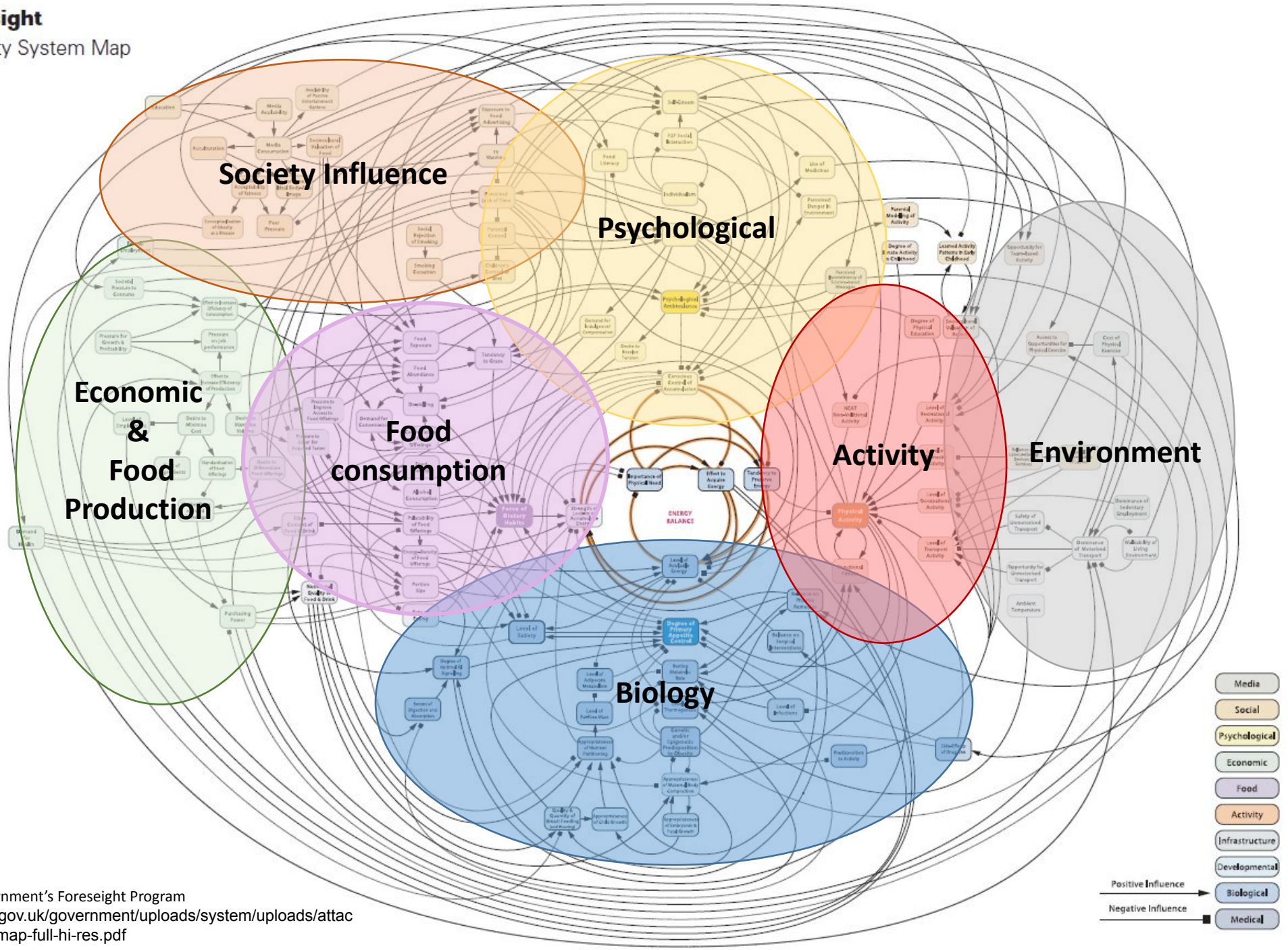


Lifestyle choice
Laziness
Lack of willpower

Food Consumption > **Physical Activity**

Foresight

Obesity System Map



Graphic adapted from the UK Government's Foreseight Program
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/296290/obesity-map-full-hi-res.pdf

Obesity Pathophysiology Essential Points

1. Sustained positive energy balance leading to an increased body weight set point

2. Defense of the higher body weight set point[2]

Sustained Positive Energy Balance

Drivers of Eating

- Hunger
- Lack of satiety
- Cravings
- Emotion
- Stress
- Poor sleep
- Socialization
- Advertisements

Food Environment

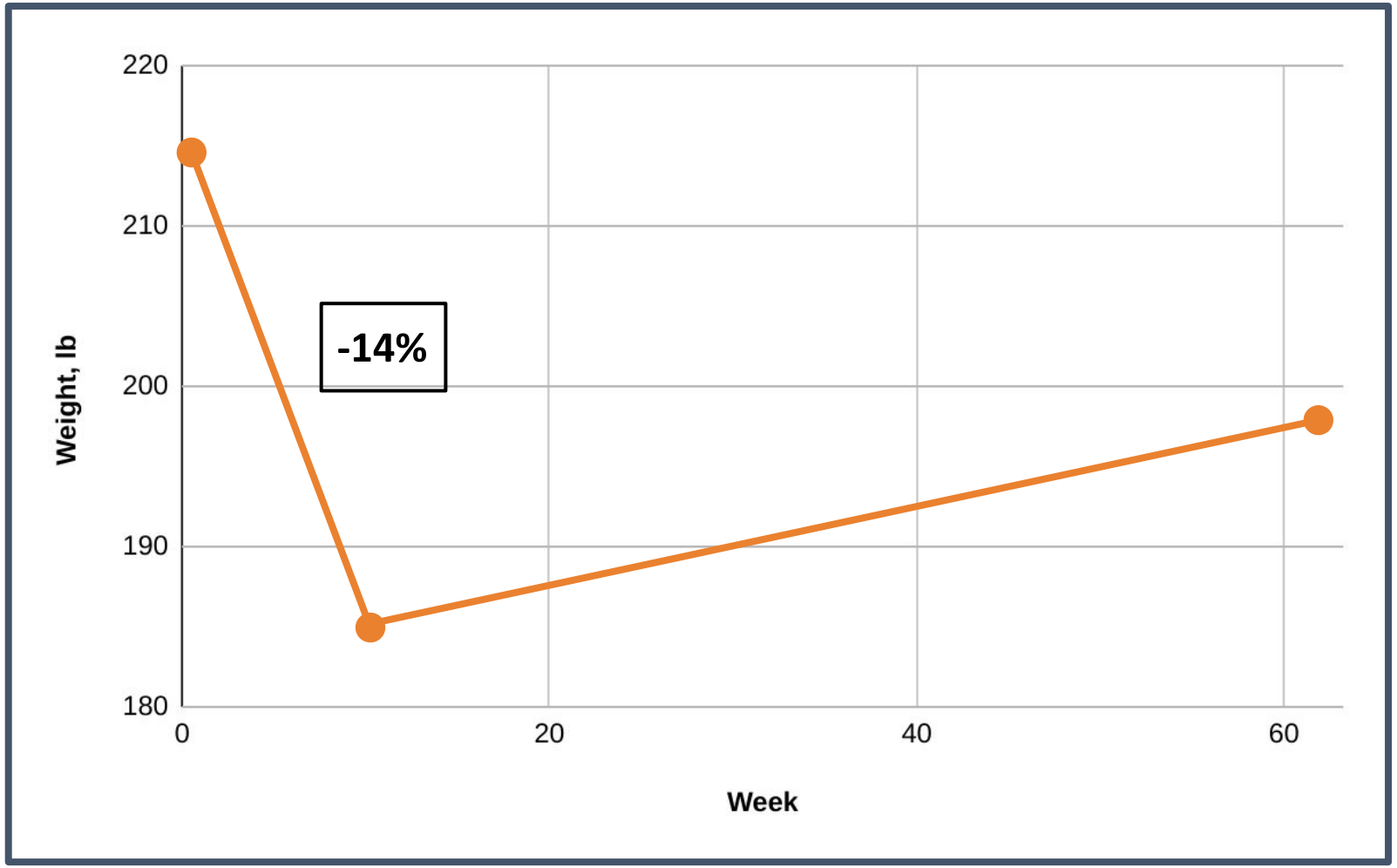
- Availability
- Cost
- Convenience

Reduced Energy Expenditure

- Sedentary job
- Transportation
- Safety for outdoor recreation
- Medication side effects
- Smoking cessation

Genetic Predisposition

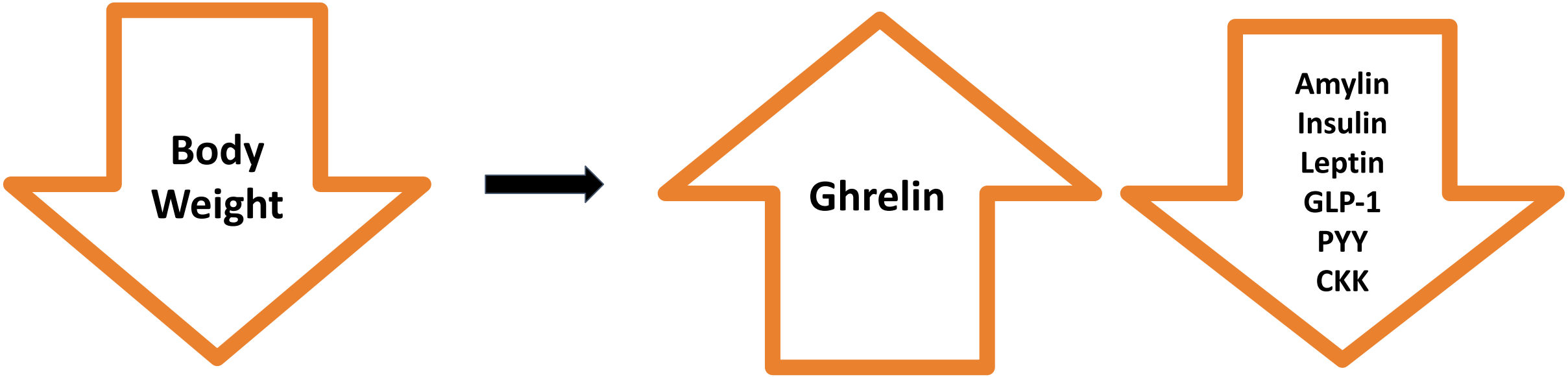
Defending the Body Weight Set Point



Adapted from Sumithran et al. N Engl J Med 2011

Defending the Body Weight Set Point

- Metabolic adaptation defends the fat mass set point
- Changes in drivers of appetite including gut hormones, persistently oppose diet-induced weight loss[3]



Defending the Body Weight Set Point

- Resting energy expenditure and non resting energy expenditure are reduced with just a 10% weight loss.

- Energy expenditure is 300-400 kcal/day less than predicted due to:
  - Decreased physical activity energy expenditure
  - Increased skeletal muscle work efficiency[5]

- Changes in energy expenditure persist for years after a weight loss effort even despite weight regain[6]

Obesity is a Disease – AMA 2013

Recognition of Obesity as a Disease H-440.842

Topic: Public Health

Meeting Type: Annual

Action: NA

Council & Committees:

Policy Subtopic: NA

Year Last Modified: 2013

Type: Health Policies

Our AMA recognizes **obesity** as a **disease** state with multiple pathophysiological aspects requiring a range of interventions to advance **obesity** treatment and prevention.

Courtesy of https://policysearch.ama-assn.org/policyfinder/detail/obesity?uri=%2FAMADoc%2FHOD.xml-0-3858.xml

What are weight stigma and bias?

Bias - prejudice in favor of or against one thing, person, or group compared with another, usually in a way considered to be unfair.

- *Implicit bias* occurs at the subconscious level; an automatic unconscious response

- *Explicit bias* are outward thoughts or actions that are intentional and occur at a conscious level[8]

What are weight stigma and bias?

Stigma – a mark of disgrace associated with a particular circumstance, quality, or person

"Weight stigma refers to the discriminatory acts and ideologies targeted towards individuals because of their weight and size. Weight stigma is a result of weight bias." The World Obesity Federation

How early do attitudes on weight develop?

A. Under 5 years of age

B. Between 5 and 10 years of age

C. Between 10 and 15 years of age

D. Older than 15 years of age

Attitudes on Weight Develop Early

- Weight bias is present in children as young as 3 years old
- Weight bias increases with age
- Girls demonstrated higher weight bias than boys[9]
- Contributors to the learning of weight bias in children include:
  - Parental modeling of weight bias
  - Parental dieting and body dissatisfaction
  - Negative portrayal of people with obesity in the media[10]
- Weight bias has negative consequences in young children[11]

In the Media

"...fat shaming needs to make a comeback"

- Bill Maher, American Comedian

- Social media, tabloids, reality television, sitcoms, movies, cartoons, ads… **over two thirds** of images of obesity in US media contain weight stigma.[7]

- Negative attitudes towards people with obesity increases after just **40 minutes** of exposure to weight loss reality television[12]

Weight stigma is a socially acceptable form of discrimination

Medical Students

PREVALENCE OF BIAS

Implicit bias: 74%, Explicit bias 64%

	% slightly agreeing with the item	% moderately or strongly agreeing with the item
I really don't like fat people much	11.4%	4.7%
I have a hard time taking fat people seriously	10.2%	3.2%
Fat people make me feel somewhat uncomfortable	14.8%	3.5%
Fat people tend to be fat pretty much through their own fault	21.8%	14.8%
Some people are fat because they have no will power	34.2%	25.8%
I feel disgusted with myself when I gain weight	28.8%	32.5%
I worry about becoming fat	28.4%	39.6%

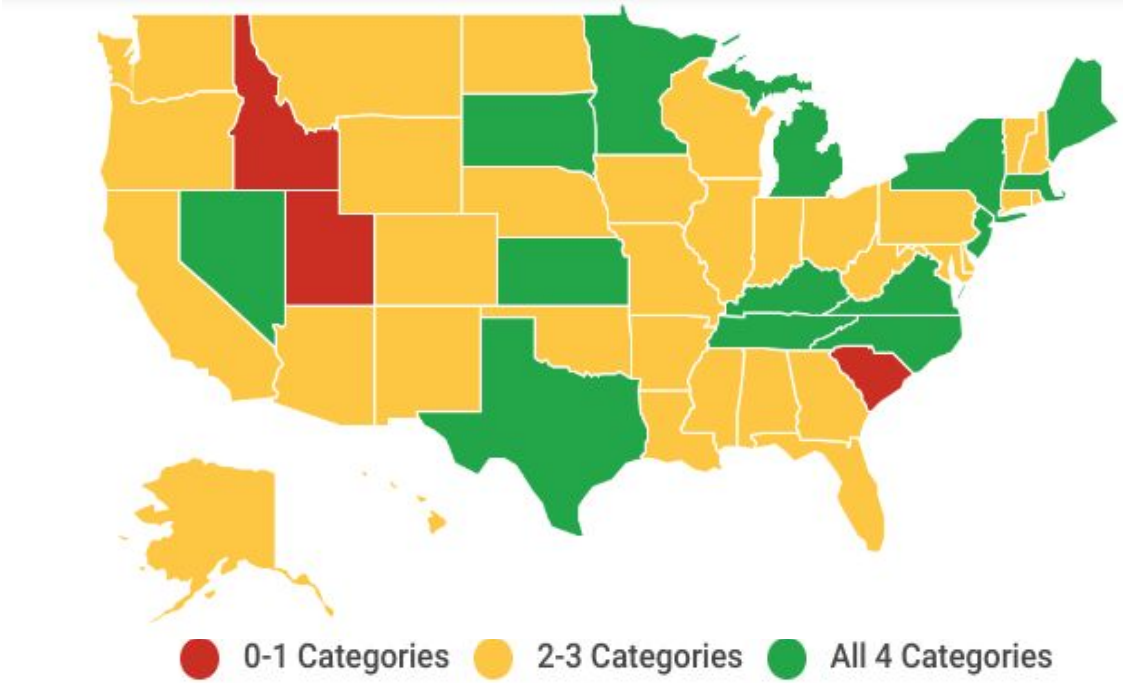
Adapted from Phelan, et al. Obesity 2014[13]

Healthcare Providers

- Weight bias has been reported in the literature for more than three decades including providers from multiple health professions [14]
- Persons with obesity ranked physicians as the second most frequent source of weight bias
- Students witness preceptors using disrespectful language when referring to patients with obesity, thus perpetuating bias[8]
- Equipment and resources are not adequate to provide appropriate care for patients with obesity.[15]

Coverage and Policy

- Lack of insurance coverage for obesity treatment
  - Data from state employee health plans:
    - 3 states provide no coverage of obesity treatment
    - Only 16 states cover anti-obesity pharmacotherapy
    - Nutritional counseling is the most likely to be covered service[16]
- State laws regulating the use of anti-obesity medication
- It is legal in all but one state (Michigan) to discriminate against people with obesity[17]



Unpublished data and graphic courtesy of the STOP Obesity Alliance
https://stop.publichealth.gwu.edu/coverage/

Persons with Obesity

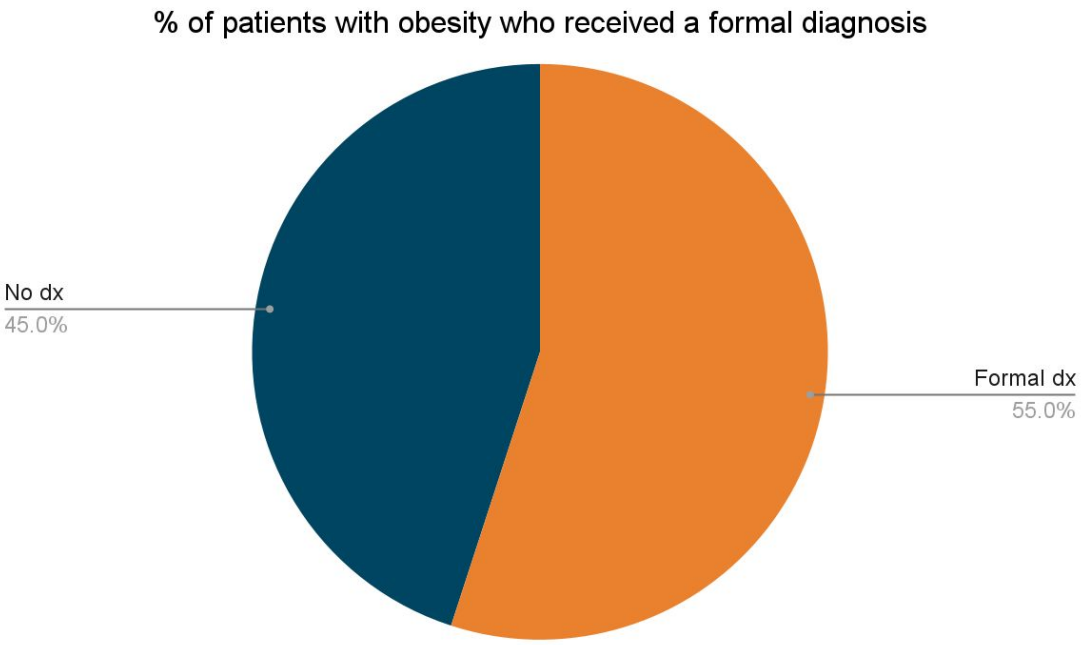
- 52% of persons with obesity were found to have high levels of internalized weight bias[18]
- 65% of persons with obesity believe obesity is a disease
- 95% of persons with obesity surveyed at least somewhat agree that weight loss is their personal responsibility[19]

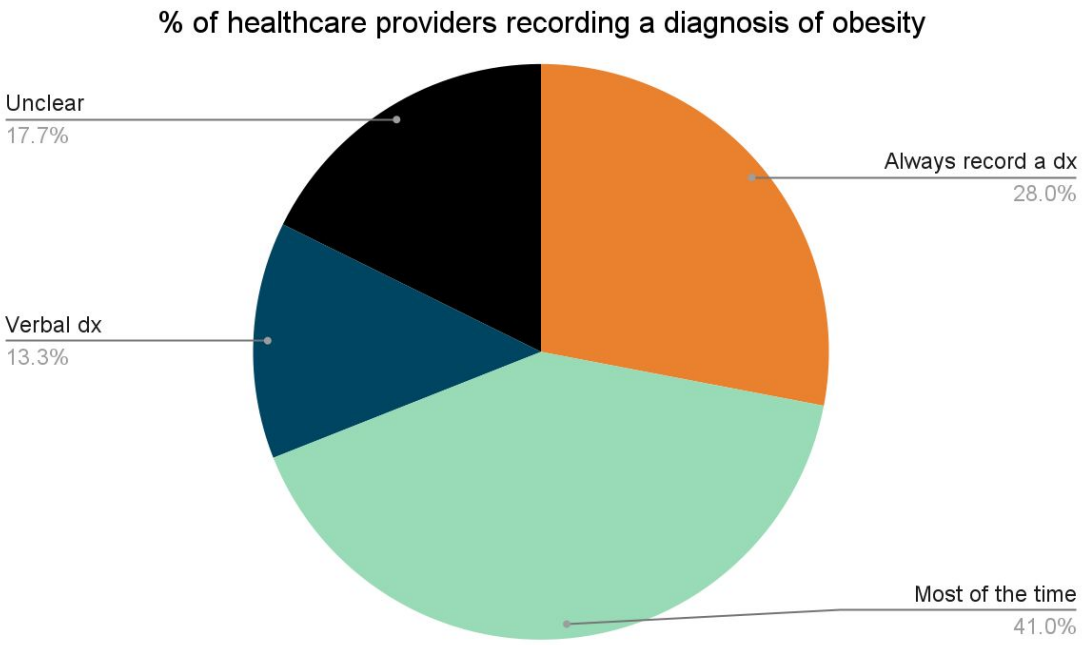
Reasons provided for persons with obesity not seeking healthcare provider help in weight loss, top 5 responses from the ACTION study

Persons with obesity-provided responses	
I believe it is my responsibility to manage my weight	44%
I already know what I need to do to manage my weight	37%
I do not have the financial means to support a weight loss effort	23%
I do not feel motivated to lose weight	21%
I am embarrassed to bring it up	15%
Healthcare provider - provided reasons	
They are embarrassed to bring it up	65%
They do not feel motivated to lose weight	56%
They do not believe they can lose weight	55%
They do not see their weight as a medical issue	55%
They are not interested in losing weight	47%

Adapted from Kaplan et al. Obesity 2018

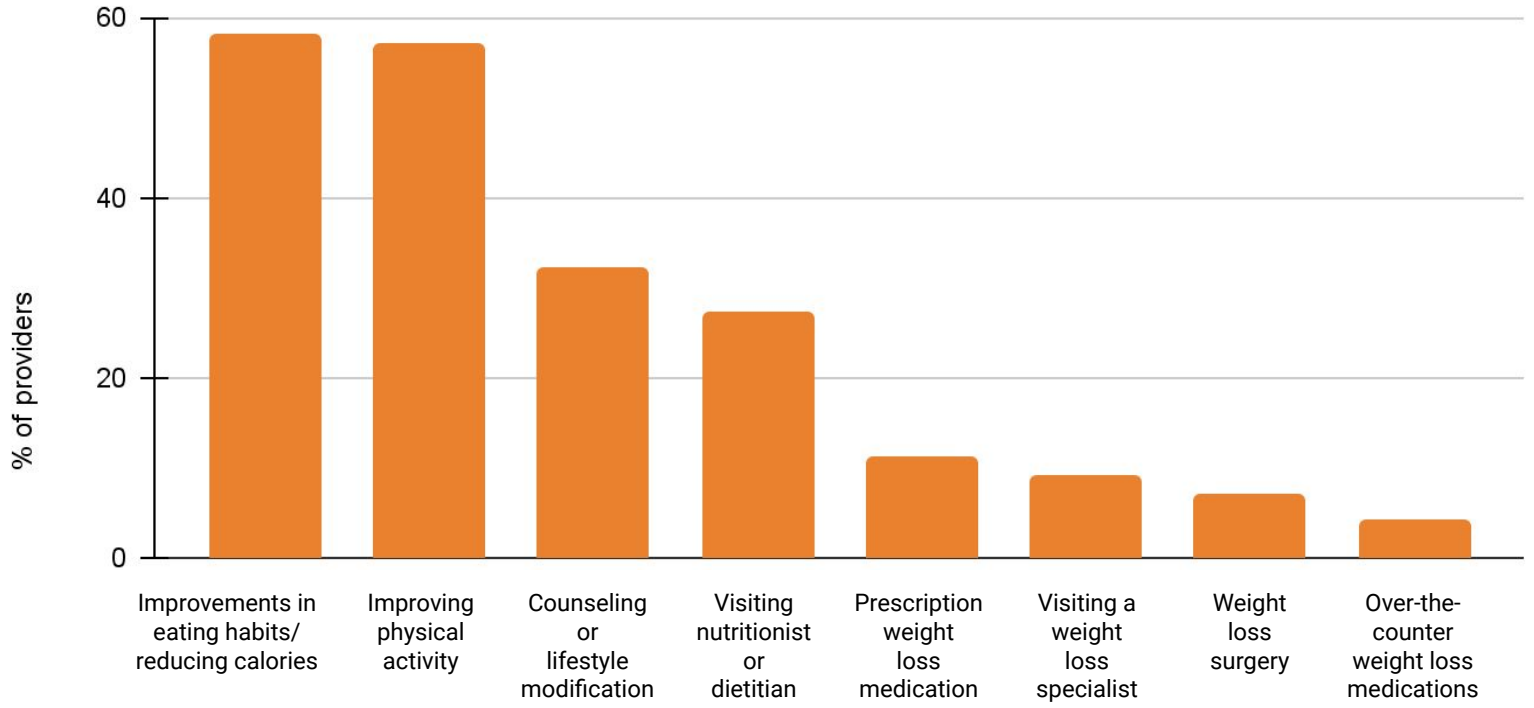
Underdiagnosed





Results from the ACTION study, Kaplan et al. Obesity 2018

Undertreated



Results from the ACTION study, Kaplan et al. Obesity 2018

- Lack of training and perceived lack of time among most common barriers to addressing weight management
- 94% of IM residents felt they should discuss nutrition with their patients; 14% felt adequately trained to do so
- 59% of HCPs wait for the patient to initiate the conversation
- Only 38% of patients with obesity discussed a weight loss plan with their PCP in the past 6 months[21]

What percentage of patients with obesity receive anti-obesity medication?

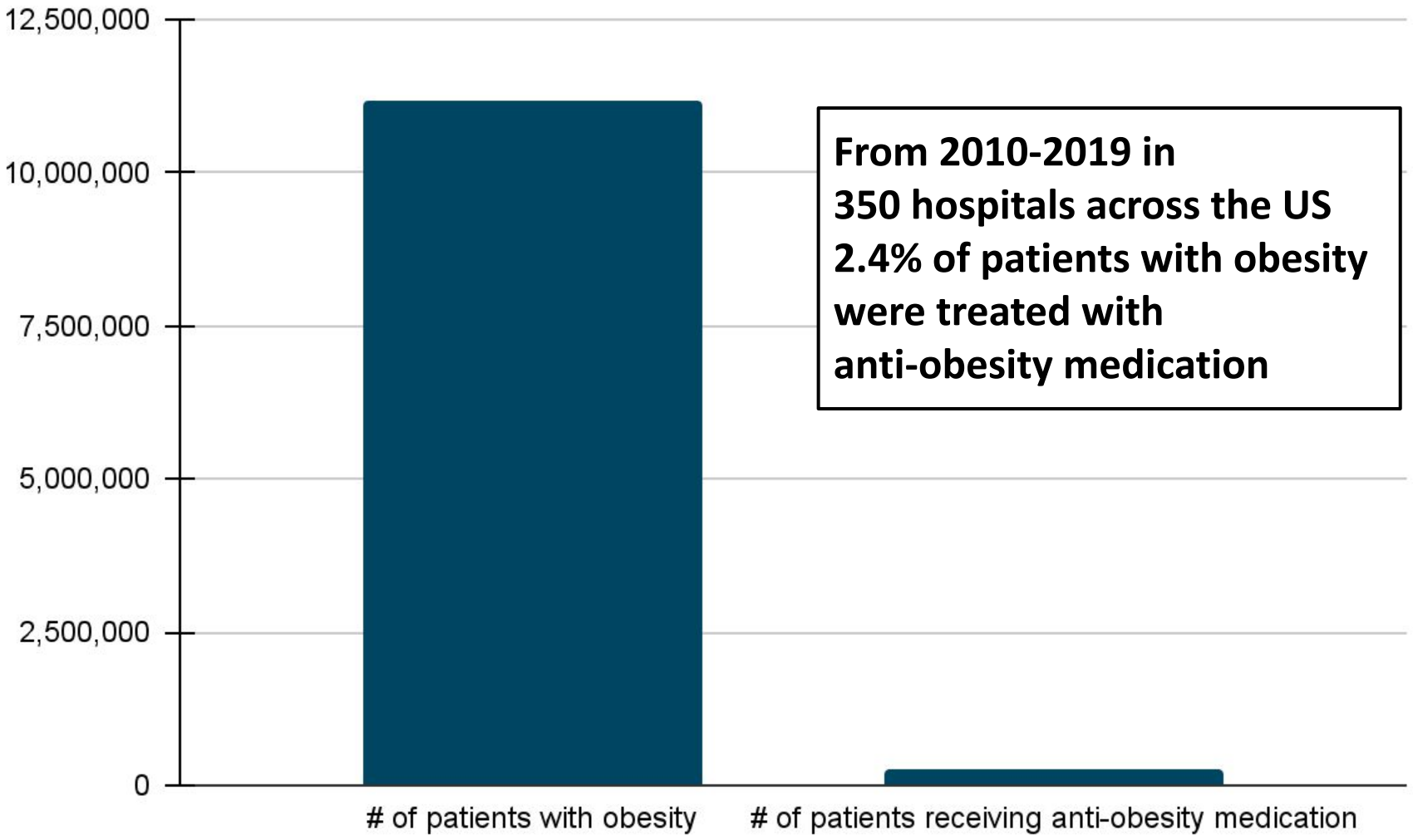
A. 2-3%

B. 5-10%

C. 15-20%

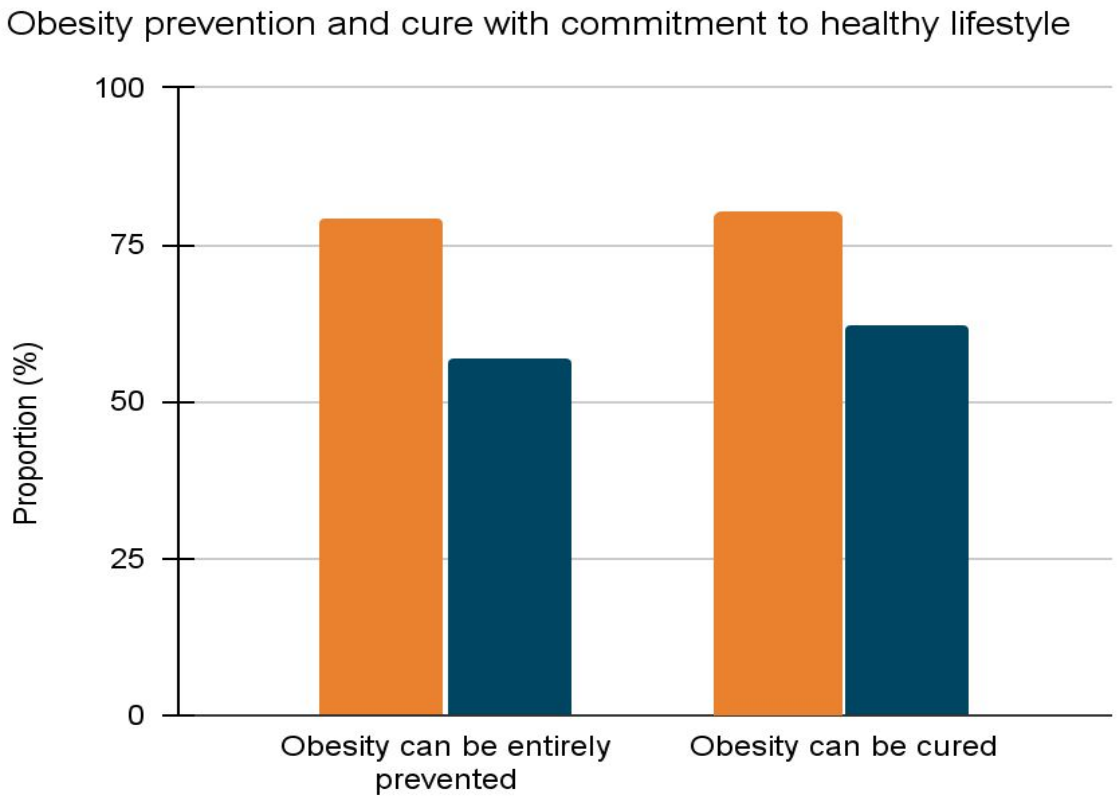
D. 50-60%

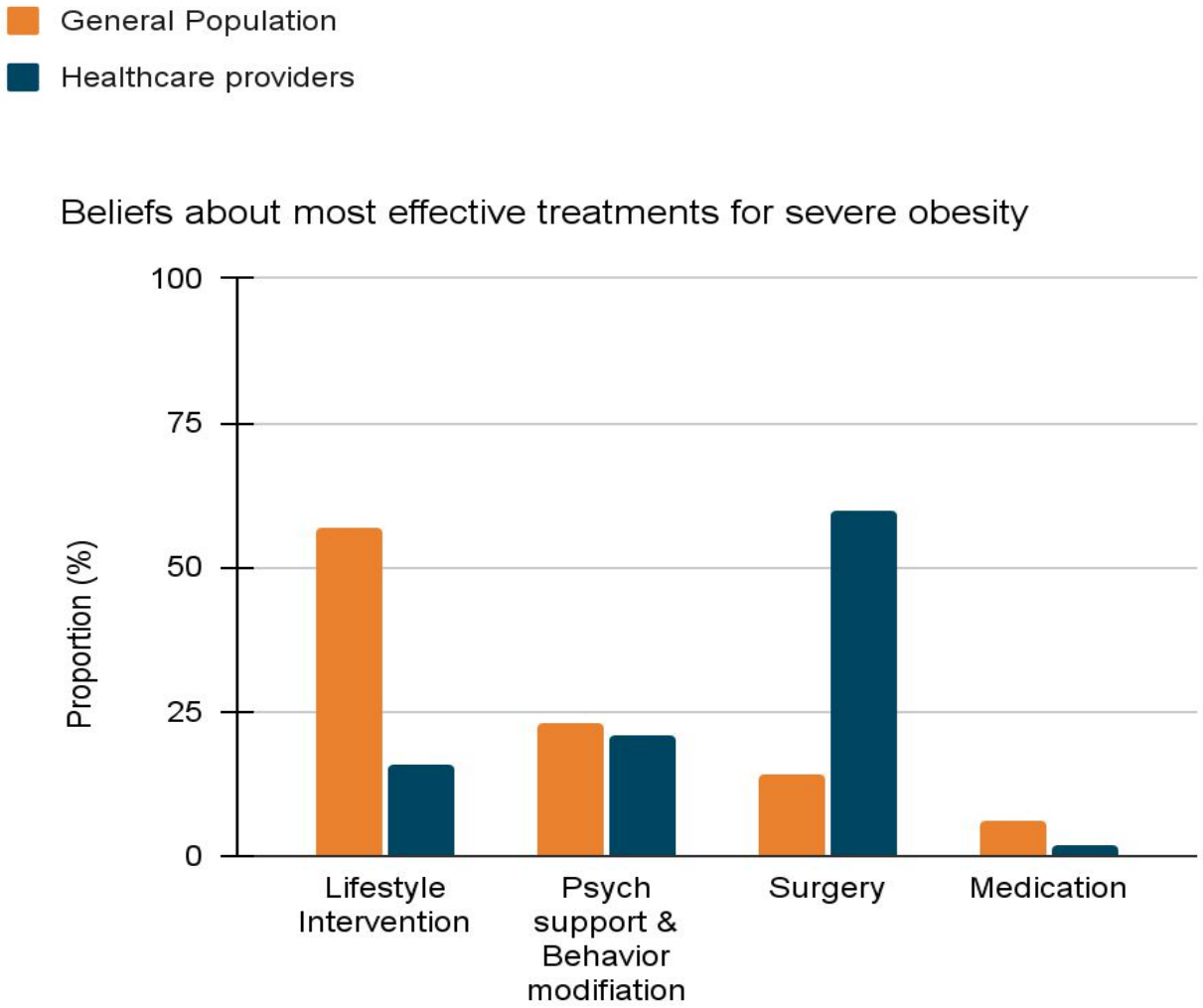
Poor Utilization of Anti-Obesity Pharmacotherapy



Elangovan et al. Obes Surg 2021

Attitudes, Stigma, and Knowledge Study





Adapted from O'Keeffe et al. Lancet Diabetes Endocrinol 2020

Bias Impacts Quality of Care

- Providers spend less time in appointments and provide less education about general health
- Impaired patient-centered communication leads to less provider-patient trust
- Belief that patients with obesity are less likely to be adherent to treatment, especially with regard to weight loss recommendations
- Over-attribute symptoms, conditions to obesity[23,24]

Delays Care

- Reluctance to seek treatment
  - Actual or perceived disapproval from healthcare providers
  - Patronizing and disrespectful language
  - Embarrassment about being weighed
  - Likelihood of receiving unsolicited weight loss advice

- Avoidance of routine cancer screenings
  - Women present less often for routine colonoscopies, mammograms, and pap smears[23,25]

Affects Mental Health

- Children and adolescents are more likely to experience bullying and social isolation
- Weight stigma increases risk for depression, anxiety, lower self-esteem, and stress.
- Leads to increased food intake, binge eating, disordered eating, and reduced physical activity[26]

Affects Physical Health

- Longitudinal studies demonstrate a link between weight stigma, weight gain, and obesity
  - Adults were 2.5-3 times more likely to become obese or remain obese
  - Youth girls face a 64-66% increased risk of becoming overweight or obese

- Weight stigma poses challenges for weight loss in persons seeking treatment
  - Less likely to achieve significant weight loss.
  - Selected potentially riskier weight loss interventions

- Physiological stress response - increased BP, cortisol, CRP, A1c[7,26]

The Good News

- Interventions in medical education have demonstrated improvements in stereotyping and empathy for patients with obesity.[27,28]
- Coming together of organizations to address weight bias
  - STOP Obesity Alliance
  - Obesity Care Advocacy Network
  - Joint international consensus statement for ending stigma of obesity published in 2020[7]
- Increased coverage for nutritional counseling services and bariatric surgery.[29]
- Federal Employee Health Benefit plans are not allowed to exclude anti-obesity medications from coverage.

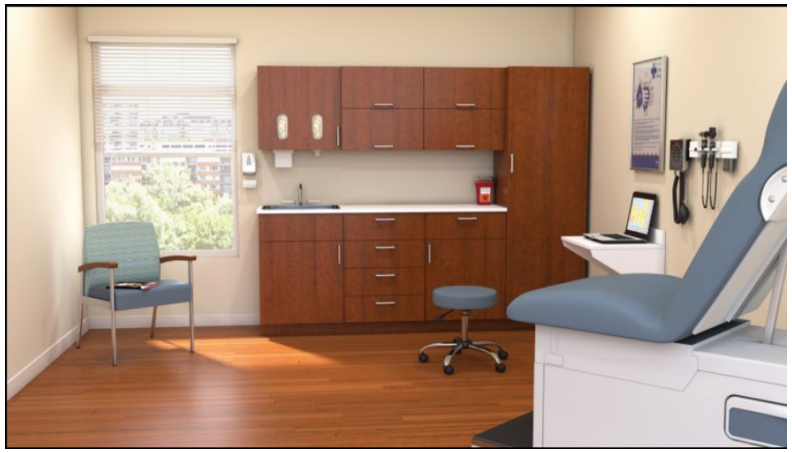
What can you do?

Understand Your Own Bias

- Harvard Implicit Association Test
- Attitudes Toward Obese Persons Scale (ATOP)
- Beliefs About Obese Persons Scale (BAOP)
- Fat Phobia Scale
- Antifat Attitudes Scale (AFAS)

Make the Patient Comfortable

- Provide sturdy, armless chairs in waiting and exam rooms
- Provide sturdy, wide examination tables
- Provide extra-large examination gowns
- Use large adult or thigh cuffs for measuring blood pressure; have these readily available for use
- Have an appropriate scale that has adequate capacity for weighing patients with obesity; ideally in a private room



VS

Language Matters

Preferred	Not Preferred
Weight	Heaviness
Excess weight	Obesity
Weight problem	Large Size
Unhealthy body weight	Excess Fat
Unhealthy BMI	Fatness

Adapted from Volger et al. Obesity 2012

Use person-first language: “people *WITH* obesity” rather than “obese people”

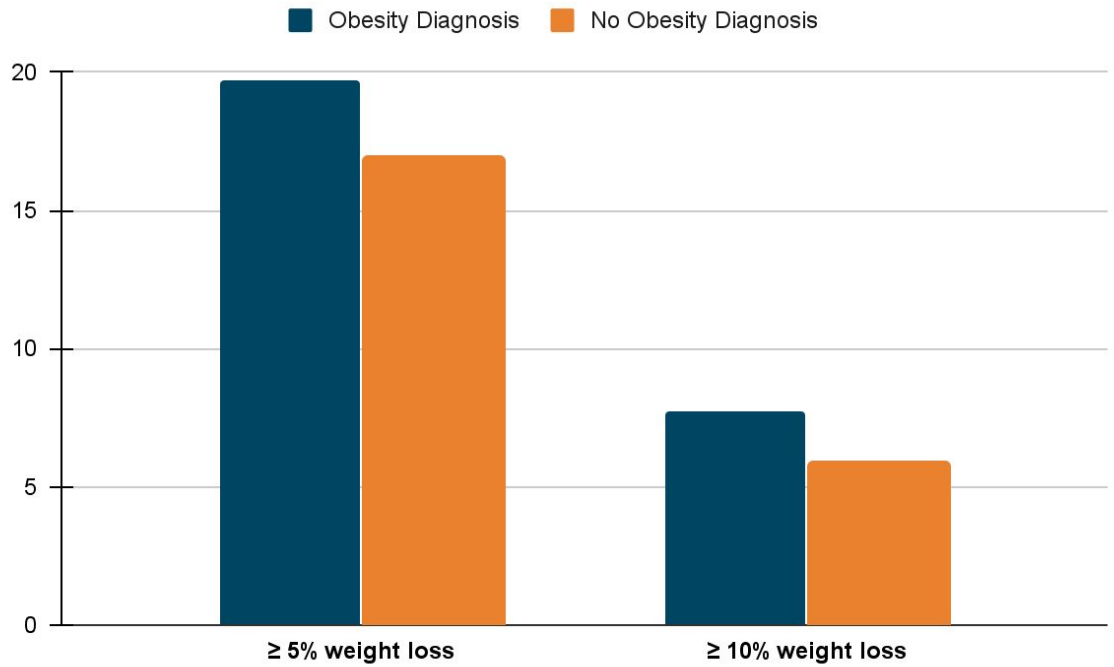
Lead by example!

Starting the Conversation

- Ask permission to discuss their weight
  - “Would you be willing to have a discussion about your weight?” OR “Can we talk about your weight today?”
  - Evidence that even a brief conversation about weight can increase the likelihood of a 5-10% weight loss.
- Take a weight history
- Don’t make assumptions about their diet and physical activity level - ASK!
- Use motivational interviewing and open-ended questions
- Provide accurate and evidence-based information
- Follow up! And praise even the smallest changes in lifestyle[31]

Diagnose Obesity

A documented obesity diagnosis is independently predictive of at least 5% weight loss.



Adapted from Ciemins et al. Obesity 2020

Advance your Knowledge

and that of those around you

- Understand that obesity physiology is more complex than calories in vs calories out
- Educate yourself on available treatment options and dispel myths.
- Know the resources available within your institution and community
- Teach your colleagues, staff, and medical trainees

Recommended Resources

The Obesity Society

www.obesity.org

Obesity Action Coalition

www.obesityaction.org

STOP Obesity Alliance

www.stop.publichealth.gwu.edu

Obesity Medicine Association

www.obesitymedicine.org

American Board of Obesity Medicine

www.abom.org

Be sure to check out the AAPA's Obesity Toolkit as well!

www.aapa.org/cme-central/national-health-priorities/obesity-toolkit

Take Home Points

- Obesity is a chronic disease with complex underlying pathophysiology
- Weight bias and stigma are pervasive in our society and that includes among healthcare providers and organizations.
- There are significant ramifications of weight bias and stigma including delivery of suboptimal care, delayed care, and worsening of physical and mental health
- Understand your own bias, take steps to improve the patient experience, consider the words you use, and educate yourself and others in order to be part of the solution.

Thank you!

Questions?

brooke.marsico@formhealth.co

References

1. Vandenbroeck P, Goossens J, Clemens M. Foresight, tackling obesities: future choices building the obesity system map. London Gov Off Sci 2007
2. Schwartz MW, Seeley RJ, Zeltser LM, Drewnowski A, Ravussin E, Redman LM, Leibel RL. Obesity Pathogenesis: An Endocrine Society Scientific Statement. Endocr Rev. 2017 Aug 1;38(4):267-296. doi: 10.1210/er.2017-00111. PMID: 28898979; PMCID: PMC5546881.
3. Sumithran P, Prendergast LA, Delbridge E, Purcell K, Shulkes A, Kriketos A, Proietto J. Long-term persistence of hormonal adaptations to weight loss. N Engl J Med. 2011 Oct 27;365(17):1597-604. doi: 10.1056/NEJMoa1105816. PMID: 22029981.
4. Mann T, Tomiyama AJ, Westling E, Lew AM, Samuels B, Chatman J. Medicare's search for effective obesity treatments: diets are not the answer. Am Psychol. 2007 Apr;62(3):220-33. doi: 10.1037/0003-066X.62.3.220. PMID: 17469900.
5. Aronne LJ, Hall KD, M Jakicic J, Leibel RL, Lowe MR, Rosenbaum M, Klein S. Describing the Weight-Reduced State: Physiology, Behavior, and Interventions. Obesity (Silver Spring). 2021 Apr;29 Suppl 1:S9-S24. doi: 10.1002/oby.23086. PMID: 33759395.
6. Fothergill E, Guo J, Howard L, Kerns JC, Knuth ND, Brychta R, Chen KY, Skarulis MC, Walter M, Walter PJ, Hall KD. Persistent metabolic adaptation 6 years after "The Biggest Loser" competition. Obesity (Silver Spring). 2016 Aug;24(8):1612-9. doi: 10.1002/oby.21538. Epub 2016 May 2. PMID: 27136388; PMCID: PMC4989512.
7. Rubino F, Puhl RM, Cummings DE, Eckel RH, Ryan DH, Mechanick JI, Nadglowski J, Ramos Salas X, Schauer PR, Twenefour D, Apovian CM, Aronne LJ, Batterham RL, Berthoud HR, Boza C, Busetto L, Dicker D, De Groot M, Eisenberg D, Flint SW, Huang TT, Kaplan LM, Kirwan JP, Korner J, Kyle TK, Laferrère B, le Roux CW, McIver L, Mingrone G, Nece P, Reid TJ, Rogers AM, Rosenbaum M, Seeley RJ, Torres AJ, Dixon JB. Joint international consensus statement for ending stigma of obesity. Nat Med. 2020 Apr;26(4):485-497. doi: 10.1038/s41591-020-0803-x. Epub 2020 Mar 4. PMID: 32127716; PMCID: PMC7154011.
8. Fruh SM, Graves RJ, Hauff C, Williams SG, Hall HR. Weight Bias and Stigma: Impact on Health. Nurs Clin North Am. 2021 Dec;56(4):479-493. doi: 10.1016/j.cnur.2021.07.001. PMID: 34749889; PMCID: PMC8641858.
9. Harriger J, Trammell J, Wick M, Luedke M. Gender and age differences in pre-schoolers' weight bias beliefs and behavioural intentions. Br J Dev Psychol. 2019 Nov;37(4):461-465. doi: 10.1111/bjdp.12286. Epub 2019 Apr 11. PMID: 30973974.
10. Paxton, S. J., & Damiano, S. R. (2016). The development of body image and weight bias in childhood. In J. B. Benson (Vol. Ed.), *Advances in Child Development and Behavior, SCDB: 52*, (pp. 269–298). UK: Academic Press (SCDB).
11. Harriger JA, Trammell JP. First do no harm: Measuring weight bias beliefs in preschool-age children. Body Image. 2021 Dec 28;40:176-181. doi: 10.1016/j.bodyim.2021.12.005. Epub ahead of print. PMID: 34972019.
12. Domoff SE, Hinman NG, Koball AM, Storfer-Isser A, Carhart VL, Baik KD, Carels RA. The effects of reality television on weight bias: an examination of The Biggest Loser. Obesity (Silver Spring). 2012 May;20(5):993-8. doi: 10.1038/oby.2011.378. Epub 2012 Jan 12. PMID: 22240725
13. Phelan SM, Dovidio JF, Puhl RM, Burgess DJ, Nelson DB, Yeazel MW, Hardeman R, Perry S, van Ryn M. Implicit and explicit weight bias in a national sample of 4,732 medical students: the medical student CHANGES study. Obesity (Silver Spring). 2014 Apr;22(4):1201-8. doi: 10.1002/oby.20687. Epub 2014 Jan 9. PMID: 24375989; PMCID: PMC3968216.
14. Lawrence BJ, Kerr D, Pollard CM, Theophilus M, Alexander E, Haywood D, O'Connor M. Weight bias among health care professionals: A systematic review and meta-analysis. Obesity (Silver Spring). 2021 Nov;29(11):1802-1812. doi: 10.1002/oby.23266. Epub 2021 Sep 6. PMID: 34490738.
15. Shea JM, Gagnon M. Working With Patients Living With Obesity in the Intensive Care Unit: A Study of Nurses' Experiences. ANS Adv Nurs Sci. 2015 Jul-Sep;38(3):E17-37. doi: 10.1097/ANS.0000000000000074. PMID: 26061972; PMCID: PMC4533977.
16. STOP Obesity Alliance. (2021, June 23). *Obesity Treatment Coverage*. GWSPH Centers and Institutes. Retrieved March 11, 2022, from https://stop.publichealth.gwu.edu/coverage/

References

17. Puhl, R. (2022, January 31). *Policy initiatives to address weight discrimination in adults and children*. GWSPH Centers and Institutes. Retrieved March 11, 2022, from https://stop.publichealth.gwu.edu/LFD-jan22
18. Puhl RM, Himmelstein MS, Quinn DM. Internalizing Weight Stigma: Prevalence and Sociodemographic Considerations in US Adults. Obesity (Silver Spring). 2018 Jan;26(1):167-175. doi: 10.1002/oby.22029. Epub 2017 Oct 30. PMID: 29082666.
19. Kaplan LM, Golden A, Jinnett K, Kolotkin RL, Kyle TK, Look M, Nadglowski J, O'Neil PM, Parry T, Tomaszewski KJ, Stevenin B, Lilleøre SK, Dhurandhar NV. Perceptions of Barriers to Effective Obesity Care: Results from the National ACTION Study. Obesity (Silver Spring). 2018 Jan;26(1):61-69. doi: 10.1002/oby.22054. Epub 2017 Oct 31. PMID: 29086529.
20. O'Keeffe M, Flint SW, Watts K, Rubino F. Knowledge gaps and weight stigma shape attitudes toward obesity. Lancet Diabetes Endocrinol. 2020 May;8(5):363-365. doi: 10.1016/S2213-8587(20)30073-5. Epub 2020 Mar 3. PMID: 32142624.
21. Tucker S, Bramante C, Conroy M, Fitch A, Gilden A, Wittleder S, Jay M. The Most Undertreated Chronic Disease: Addressing Obesity in Primary Care Settings. Curr Obes Rep. 2021 Sep;10(3):396-408. doi: 10.1007/s13679-021-00444-y. Epub 2021 Jul 23. PMID: 34297343; PMCID: PMC8300078.
22. Elangovan, A., Shah, R. & Smith, Z.L. Pharmacotherapy for Obesity—Trends Using a Population Level National Database. *OBES SURG* 31, 1105–1112 (2021). https://doi.org/10.1007/s11695-020-04987-2
23. Phelan SM, Burgess DJ, Yeazel MW, Hellerstedt WL, Griffin JM, van Ryn M. Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. Obes Rev. 2015 Apr;16(4):319-26. doi: 10.1111/obr.12266. Epub 2015 Mar 5. PMID: 25752756; PMCID: PMC4381543.
24. Puhl RM, Phelan SM, Nadglowski J, Kyle TK. Overcoming Weight Bias in the Management of Patients With Diabetes and Obesity. Clin Diabetes. 2016 Jan;34(1):44-50. doi: 10.2337/diaclin.34.1.44. PMID: 26807008; PMCID: PMC4714720.
25. McGuigan RD, Wilkinson JM. Obesity and Healthcare Avoidance: A Systematic Review. AIMS Public Health. 2015 Mar 11;2(1):56-63. doi: 10.3934/publichealth.2015.1.56. PMID: 29546095; PMCID: PMC5690369.
26. Puhl, R., Suh, Y. Health Consequences of Weight Stigma: Implications for Obesity Prevention and Treatment. *Curr Obes Rep* **4,** 182–190 (2015). https://doi.org/10.1007/s13679-015-0153-z
27. Lawrence BJ, Kerr D, Pollard CM, Theophilus M, Alexander E, Haywood D, O'Connor M. Weight bias among health care professionals: A systematic review and meta-analysis. Obesity (Silver Spring). 2021 Nov;29(11):1802-1812. doi: 10.1002/oby.23266. Epub 2021 Sep 6. PMID: 34490738.
28. Kushner RF, Zeiss DM, Feinglass JM, Yelen M. An obesity educational intervention for medical students addressing weight bias and communication skills using standardized patients. BMC Med Educ. 2014 Mar 18;14:53. doi: 10.1186/1472-6920-14-53. PMID: 24636594; PMCID: PMC3995306.
29. Jannah N, Hild J, Gallagher C, Dietz W. Coverage for Obesity Prevention and Treatment Services: Analysis of Medicaid and State Employee Health Insurance Programs. Obesity (Silver Spring). 2018 Dec;26(12):1834-1840. doi: 10.1002/oby.22307. Epub 2018 Nov 14. PMID: 30426721.
30. Volger S, Vetter ML, Dougherty M, Panigrahi E, Egner R, Webb V, Thomas JG, Sarwer DB, Wadden TA. Patients' preferred terms for describing their excess weight: discussing obesity in clinical practice. Obesity (Silver Spring). 2012 Jan;20(1):147-50. doi: 10.1038/oby.2011.217. Epub 2011 Jul 14. PMID: 21760637; PMCID: PMC3310899.
31. Albury C, Strain WD, Brocq SL, Logue J, Lloyd C, Tahrani A; Language Matters working group. The importance of language in engagement between health-care professionals and people living with obesity: a joint consensus statement. Lancet Diabetes Endocrinol. 2020 May;8(5):447-455. doi: 10.1016/S2213-8587(20)30102-9. PMID: 32333880.
32. Ciemins EL, Joshi V, Cuddeback JK, Kushner RF, Horn DB, Garvey WT. Diagnosing Obesity as a First Step to Weight Loss: An Observational Study. Obesity (Silver Spring). 2020 Dec;28(12):2305-2309. doi: 10.1002/oby.22954. Epub 2020 Oct 7. PMID: 33029901; PMCID: PMC7756722.