

Engagement between healthcare professionals and with people living with obesity, the importance of language: A joint consensus statement

Running Title: *Language Matters: Obesity*

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Abstract

Obesity is a chronic condition that requires long-term management and is associated with unprecedented stigma in different settings, including during interactions with the health care system. This stigma has a negative impact on the mental and physical health of people with obesity and can lead to avoidance of health care and disruption of the doctors-patient relationship. There is significant evidence that simply having a conversation about obesity can lead to weight loss which translates into health benefits, however, both health-care practitioners and people living with obesity alike report apprehension in initiating this conversation.

We have gathered stakeholders from Obesity UK, physicians, dieticians, clinical psychologists, obesity researchers, conversation analysts, nurses, and representatives from NHS England Diabetes and Obesity. This group has contributed to production of this report on how people living with obesity wish to have their condition referred to, and provides practical guidance for health care professionals to facilitate collaborative and supportive discussions about obesity. The expert stakeholders consider that changes to language used at the point of care can act to alleviate the stigma of obesity within the health care system and support better outcomes for both people living with obesity and for the healthcare system.

Introduction

There are currently over 650 million people world-wide living with obesity, and twice as many as who are overweight¹. The prevalence has trebled over the last 40 years, resulting in approximately 4.7 million premature deaths per year in 2017². These rates vary regionally, with the highest prevalence in the Americas where 62% of the population are living with obesity or are overweight³. The UK has similar rates, with 28.7% of the adult population living with obesity, and a further 35.6% being overweight, but not obese⁴. The debate regarding the status of obesity as a disease is one of the most polarising in modern medicine⁵. There are those that cite genetic, epigenetic, physiological and neurohormonal differences as evidence that it should be regarded as a disease⁶, whereas those who would suggest the rise in obesity is a result of environmental shift towards convenience, socio-economic deprivation and the ready availability of processed high-calorie food⁷. This consensus statement does not attempt to address this, rather tackle a far more immediate problem. Regardless of an individual's perception of obesity, whether disease or risk factor, there is general agreement that living with obesity is associated with a stigma, whether cultural, through the media, or in engagement with the healthcare system^{8,9}. Indeed, this stigma is a global issue, having been described in North America, Australasia, and Western Europe¹⁰. Understanding the role of the genetic, biological and environmental interactions in developing obesity^{11,12} and the biological mechanisms that maintain the body weight at a higher "set point"^{13,14} is important to address and avoid the obesity stigma and the misconceptions that obesity is due to "laziness" and "lack of will power"¹⁵. There is a gap between scientific evidence and a "conventional narrative" of obesity which is underpinned by these common misconceptions¹⁶. In a recent survey of 5623 respondents, across four countries 79% of people reported believing obesity could be prevented and 80% stated that it could be cured by following a healthy lifestyle¹⁷. Assumptions such as these which focus on the personal responsibility of a person living with obesity are a key method through which weight stigma is expressed.

Stigma may be defined as a strong feeling of disapproval that most people in a society have about something, especially when this is unfair. The latest data suggests that this weight stigma can trigger physiological and behavioural changes that themselves will contribute to poor metabolic health and further weight gain (figure 1)^{18,19}. This includes increased eating, reduced self-control, a 2.5 fold increase in mood or anxiety disorders²⁰, stimulation of

cortisol, itself an obesogenic hormone, and avoidance of exercise^{21,22}. It has even been suggested that, amongst people with obesity, those who experienced stigma had a 60% increased mortality compared to their counterparts, irrespective of their body habitus²³. As health-care professionals, we have the opportunity to address this stigma, in leading by example with our words and actions.

Intersectionality in weight stigma

The presence of obesity is marginally more common in men than women and differs by ethnic origin¹. There have been several studies that have demonstrated no difference in the attitudes displayed towards people of different race and gender^{24,25}, however the response differs by personal characteristics, such that women report higher weight bias internalization than men. Women of African American origin were more resilient to the stigma than their white counterparts and were less likely to develop eating disorders²³. Women of Hispanic origin, however, were more likely to respond to weight discrimination using disordered eating²³. Paradoxically, although African American men were more resilient of stigma, those that internalised were more likely to cope by excess eating, thus exaggerating the underlying condition²³.

The purpose of the Consensus statement

In 2018, the NHS England Language Matters: Diabetes document brought together health care professionals and people living with diabetes in order outline the terminology that was appropriate for people living with a large term condition²⁶. This is one of many similar publications that have stressed the importance of a collaborative approach with the people with multiple different chronic conditions, and the priority to person-first language²⁷⁻²⁹. This has been well received by healthcare workers and people living with diabetes alike. Based on the success of this document, we have gathered stakeholders from Obesity UK, physicians, dieticians, clinical psychologists, obesity researchers, conversation analysts, nurses, and representatives from NHS England Diabetes and Obesity, in order to produce this report on how people living with obesity wish to have their condition referred to. The aim is to improve engagement with health services and ensure we do not contribute to the problem, rather lead on alleviating the stigma of obesity within the health care system.

The physiology of obesity

It is universally accepted that obesity is a risk factor for multiple conditions: hypertension, dyslipidaemia, cardiovascular disease, type 2 diabetes, arthritis, certain cancers and depression³⁰⁻³³, and is associated with reduced life-expectancy and quality of life³⁴. However, the underlying causes remain poorly understood, even among health care professionals. Indeed, a recent survey found that primary care professionals thought that the three most important causes were physical inactivity, over-eating and high-fat diet³⁵. They accepted that other factors such as the obesogenic environment play a part, however there is still a substantial lack of understanding as to the nature of the disease.

The mechanisms of obesity, however, are very complex^{11,12,14} such that there are fundamental differences in the response to food in people with and without obesity^{36,37}. Although multiple alterations in the brain hormones have been identified, not every person living with obesity has one of these causes. The Foresight report of 2007 highlighted over 100 different biological, psychological, environmental, and social potential factors contributing to obesity³⁸. These range from genetic pre-disposition or neurochemical imbalances, through the emotional aspects such as boredom or comfort eating, through to complex social pressures that may start in childhood with “finish what’s on your plate”, and continue throughout the life course with environments which can make healthy choices difficult³⁸. Indeed the public health message of “move more, eat less”, has re-enforced, if not trivialised, the complexity of the condition.

However, irrespective of the underlying cause, once weight gain occurs, the body resists any attempts at weight loss. Usual physiology responds by lowering the metabolic rate and stimulating increased hunger in order to maintain the new status quo. Thus, even when the person successfully loses weight, weight regain occurs in most and lifelong treatment is required to maintain the new “normal”^{13,14}. As such, obesity requires similar on-going management as many other long-term conditions³⁹, and yet is accompanied by a degree of stigma that is unprecedented^{40,41}.

The first step to combatting this, is to get the conversation right, whether that be between health care professionals, when engaging with the general public or in clinical encounters between a health care professional and a person living with obesity.

The need for guidance: Views of the people living with obesity

It is well established that cultures that value inclusion and equality are the most successful. However, the language used to describe people who are overweight or living with obesity can have a profound impact on those individuals, leading to a type of discrimination which, in many instances, excludes people from leading what would be considered by most to be a ‘normal’ life. People with obesity are stereotyped as lazy, uneducated, lacking will power, binge eaters or eat too much and lack self-discipline, to name just a few⁴². The simplistic viewpoint of obesity as the result of energy intake versus energy expenditure has led to a coining of the phrase ‘eat less, move more’ which fails to incorporate the evidenced complexity of obesity⁴³.

The pervasiveness and ingrained nature of weight stigma and discrimination that is evident across education, workplaces, healthcare and the media, means that people living with obesity internalise these messages⁴⁴, which can lead to physical and mental health problems as well as maladaptive behaviours such as the avoidance of healthcare⁴⁵. In particular, specific words such as ‘obese’⁴⁶ and ‘morbidly obese’⁴⁷ have been reported to be perceived negatively by people with obesity but are commonly used by clinicians. Many other terms were highlighted by our expert group, whether that be directed at the individual using words such as “chunky”, or generalisations referring to people with obesity as a “drain on the NHS”. Quantification of the frequency of these expressions is difficult, given consultations with people with obesity are rarely audio or video recorded. The overall ‘tone’ of the conversation is also important to patients, who emphasise importance of tone of voice⁴⁶ and a ‘caring manner’⁴⁸. Changing the narrative to understand and include the views of people living with obesity is paramount.

The need for guidance: Views of clinicians

Many studies have been conducted exploring clinicians’ views and experiences of consulting with people with obesity⁴⁹⁻⁶³. In these studies, clinicians state that they are aware of guidelines on obesity but they can be reluctant to follow them⁶⁰. One reason for this is because they find them to be general and unspecific⁶⁰. Clinicians report a lack of knowledge on how to discuss weight^{60,64}, and a need for further training to increase their skills and knowledge in addressing the issue of obesity^{58,65,66}. This lack of knowledge translates to other key concerns talking about obesity. These include lack of confidence about the appropriate language to use⁶⁴, concern they will cause offence⁶⁵, worries that patients will react

negatively⁶⁵. And stated beliefs that they would damage their ongoing relationship^{65,66}, and alienate patients from future care seeking⁶⁶. Providing clinicians with the clear and specific support they have requested, and which addresses the lack of detail in current guidelines is one way to start to change the existing narrative, by targeting day-to-day clinical discussions.

Challenging the stigma

Addressing the stigma created by inappropriate use of language requires education^{67,68}, reminding health care practitioners that obesity is a chronic relapsing condition that requires support and realistic target setting. Language is generally seen to be the composite of both the words and accompanying non-verbal communication. The stigma of obesity, however, expands beyond the language, and into the environment (Text box 1). When attempting to improve our thought processes towards tackling this stigma, consideration should also be given to improving the setting of the consultation. For example, appropriate large-size cuffs to measure blood pressure should be available and part of the work environment rather than in the back of a cupboard only to be pulled out in “special circumstances”. Facilities should be available to measure weight, with permission, in a private room, however this should be the same procedure for all individuals irrespective of their body habitus. Appropriately sized chairs should be the standard, with corridor width planned to facilitate free passage for those with the larger waist circumference. However, accepting and accommodating the environment for the challenges that arise is only a first step in challenging the issue.

Data sources for compiling this guideline

Consensus statements, almost by definition, reflect opinion on how to manage a condition when there is a limited evidence base, by extrapolation from evidence in similar populations. Although there is extensive literature regarding the methods of communication about weight management and behaviour change in clinical practice⁶⁹⁻⁷¹, a key source of our statement comes from the inclusion of expert groups living with obesity, represented by Obesity UK. After an initial stakeholders meeting, we used the knowledge from the academic literature to draft a working document. This was then sent to a working group, and expert comments and input were invited on all aspects. The document was then changed to reflect expert feedback. Following this the iterated document was sent again to the working group and comments and feedback on the structure, content, and key messages led to another refined version, capturing what the group prioritised as important to say, and avoid saying when consulting with a

person with obesity. Discrepancies in opinion were resolved through discussion, and priority was given to the views of people living with obesity in all cases. Below, we present the aspects of conversation highlighted through this process:

Starting a conversation about obesity

There is significant literature on the nature of good communication and engagement in general⁷²⁻⁷⁴. The key features relevant for discussion with a person living with obesity were identified by experts and affected individuals to be, our group of experts identified the following key features that should be considered that have been highlighted by people living with obesity (Text box 2).

Seek permission

Unless introduced by the person living with obesity, prior to initiating the conversation, seek the person's permission to discuss their weight. Using an open-ended question to find out what the person thinks about their weight. This gives people the opportunity to raise concerns or ask for advice, but also to say that they do not wish to talk about their weight at this time. Before engaging in any opportunistic discussion about obesity, it is important to first address a patient's presenting concern.

Use language that is person-centred.

An individual should not be defined by their condition. Rather than saying 'an obese person', talk about 'the person living with obesity.' This avoids labelling individuals by their condition, and instead puts the individual first.

Where possible start conversations by referring back to topics people have already mentioned. If someone has already mentioned that they are concerned about an issue, highlight this, and then mention how losing weight could help. This shows you have been listening, and sets up a collaborative conversation.

Use language that is free from judgment or negative connotation

There is significant evidence that individuals (with any condition) do not respond to the threat of long-term consequences or scolding. Instead a collaborative approach, using the principles of co-production exploring personally meaningful targets (e.g. walking the daughter down the aisle without experiencing shortness

of breath) rather than more construed targets of percentage body weight loss⁷⁵. Remember the person living with obesity has a dual role as the “patient” but also as the person who must deliver structured changes to their lifestyle. This understanding of personal targets (e.g. playing football with the children, dancing at the weekend etc) enables better engagement whilst minimising authoritarian and controlling perceptions. A focus on the potential negative aspects of not losing weight are less likely to show gains than aspiring to achieve positive outcomes.

Some words are unacceptable

Recognise that some words, phrases and descriptions are potentially problematic, whatever the intention of the user. This is not solely during a consultation, but in the way we communicate professionally to others regarding the person with obesity. The position of the healthcare worker in society gives the opportunity to lead by example, but also to generate acceptability for expressions that generate psychological distress for the target. Recognise that, although medically accurate, the term obese itself can be problematic. Indeed, only a minority of people find the word obese unproblematic. Colloquially, the word obese carries negative connotations and can be hugely stigmatising. Although an accepted medical definition, that does not make it an acceptable term to use in a conversation, in the same way one would not describe an individual as “cancerous” during a consultation. Our expert group suggested that conversations about being ‘overweight’, or possibly ‘carrying too much weight’, are broadly acceptable, but only once permission has been sought.

Avoid combat and humour

Avoid using combative language when referring to people’s efforts to reduce overweight or obesity, and never use humour or ridicule. The use of “fat humour” is pervasive in popular media with demeaning portrayals of people living with obesity^{76,77}, identifying them as “different” from the rest of society and resulting in their social isolation. Having experienced many years of this demeaning humour even “well-intentioned” attempts can be regarded as a presentation of subconscious bias and serves to draw distinctions between the healthcare professional and the person with obesity. These demarcations undermines

attempts to work in a collaboration. Whatever the intention, the use of this type of humour in a consultation awakens conscious or subconscious memories of isolation and is likely to damage relationships. It is particularly important that this continues outside of the consultation. The position of the healthcare professional in society can serve to normalise this behaviour if they are seen to participate, but can also send a very clear message that it is unacceptable if objections are clearly voiced.

Stick to the evidence

Communicate, accurate, evidence-based information when discussing weight. Healthcare professionals often avoid talking about weight because they find these conversations difficult, and/or worry about damaging the relationship between them and the person with obesity. There is a significant amount of data that demonstrates people do want to speak about it; speaking about it and doing something are related. Evidence shows that after a brief conversation about weight 14% of people with obesity lost at least 5% of their body weight, another 6% lost at least 10%⁷⁸. This 5% weight loss alone can reduce risk of cardiovascular disease and delays the age-related decline in microvascular disease that is exaggerated in people living with obesity

Avoid blame, but don't generalise

Avoid language which attributes responsibility (or blame) to a person for the development of their obesity or its consequences. This may be achieved by talking about 'some people', rather than 'you' specifically, giving space for people to think about how your statement could apply to them. However, we should also avoid language that infers generalisations, stereotypes or prejudice.

Don't assume anything.

We should avoid making assumptions about diet and physical activity. Remember that a person's weight may not reflect their diet and physical activity levels. Do not assume a person is inactive until you have asked about what they currently do. Changes in lifestyle should be applauded, no matter how slight, as this is likely to stimulate further gains. Trivialising these efforts can demoralise an individual who had made significant lifestyle modifications in order to achieve relatively minor results. This is particularly relevant during follow-up appointments when

individuals report a change to diet and lifestyle, but there have been minimal anthropomorphic improvements. The natural history of a person living with obesity is that weight will progressively climb. Weight neutrality is an achievement for many.

Talking about obesity and over-weight with children and young people

The rates of children and adolescents aged 5-19 who are overweight or living with obesity has risen from around 4% in 1975 to around 18% in 2016¹. Weight-based teasing is associated with significant psychological disturbances for children and young adults. Like their older peers, girls are more susceptible to depression than boys⁷⁹.

In general, the recommendations in this document are relevant for all individuals, however, conversations about growth and weight with young people, and the adults with them, can be particularly sensitive. Young people, and the adults with them, may be concerned to hear they have obesity or are over-weight. Parents who seek weight loss treatment for their children find themselves pulled between double moral burdens. Blamed and shamed for the weight itself while culpable for the psychological effects of encouraging weight loss, parental stigma comes from multiple directions. Listen to these concerns first, before giving any advice. If you do provide advice, collaborate with young people and/or the adults with them.

Remember, parents of children with obesity will often themselves have personal weight problems⁸⁰. This further adds to parental stigma, as they are not solely responsible for the impact they are having on their children, but also themselves. Do not make assumptions about their behaviours and invite their input and thoughts. Statements like “other young people have said x” or “some young people say y” can help you show the person that they are not alone. All of the considerations above, particularly regarding blame and generalisability are pertinent to younger individuals with obesity. These conversations can shape the physical and mental well-being of that individual for decades to come. Think carefully about focussing on small positive changes, rather than negatively commenting on current behaviours.

Guiding and signposting

Once the topic has been raised, it is important that guidance and signposting is available. Whereas this conversation can, indeed should occur in any environment that the individual feels comfortable enough to give consent for discourse, this may not be in a setting that has

trained experts immediately to hand. It is important that you are familiar with local sources of information and support. When signposting, remind people that they may need to try different things to find out what works for them. Remind them that there are multiple different dietary interventions that have been demonstrated to be beneficial to some individuals, but reported figures are all for the “average” weight loss. As with all interventions, that means some do not respond and therefore not to become disheartened if unsuccessful. Acknowledge positive actions, even if these have not resulted in a change in weight or waist circumference. Remember, weight loss often comes sometime after changes in lifestyle, indeed, obesity is a chronic progressive disease, for many, weight neutrality may be regarded a success in arresting this progression.

Obesity is a chronic relapsing condition and there is no ‘quick fix’. Mention that you are there to help. Let people know that if they try something, and it doesn’t work for them, they can come back and you can make a new plan together. It is acknowledged that the “threat” of future complications is not helpful, however working towards preventing the risk associated with obesity may positively help to avert future problems.

Conclusions

Obesity is a long-term chronic condition which is associated with multiple co-morbidities. Tackling it remains a priority for the health care system. However, in order to do this successfully, an approach that engages people living with obesity is essential. Currently, people living with obesity commonly experience stigma during interactions with health care professionals, who often talk about obesity in ways which are unhelpful, or can cause offence. This stigma can negatively impact the mental and physical health of people living with obesity, and result in lack of engagement with the healthcare system.

The language used to discuss the condition and counsel these individuals is of paramount importance in order for long term benefits to be achieved. Healthcare professionals can have a major role in reducing the obesity stigma within the health care system by getting the conversation right with people with obesity. However, healthcare professionals have said that they can avoid the topic, and have stated a need for more specific support in discussing obesity⁶⁵. Here we have drawn on expert opinion, including the experiences of people living with obesity, to address this need. We have identified clear examples of what language may be best used and what may be best avoided, and the manner in which conversations should be

conducted. Education for clinicians on the underlying causes of obesity and the use of appropriate and helpful language have been demonstrated to improve the experience of people living with obesity. By increasing awareness and use of appropriate and helpful language that comprises collaborate discussions healthcare professionals can play a role in reducing the obesity stigma within the wider health care system.

Search strategy and selection criteria

References for this Review were identified through searches of PubMed for articles published from Jan 1, 2000 to December, 2019, using search terms “obesity”, “obese”, “Weight” or “overweight” in combination with the terms “stigma” “perception”, “language” and “conversation“. Relevant articles were also identified through searches of the reference lists of the identified literature. Articles resulting from these searches and relevant references cited in those articles were reviewed. Only articles published in English were included

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References

1. World Health Organisation. Obesity and overweight. 2017. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight> (accessed 26th February 2020).
2. GBD Collaborators. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet* 2018; **392**(10159): 1736-88.
3. World Health Organisation. Obesity Prevention. 2017. https://www.paho.org/hq/index.php?option=com_content&view=article&id=11506:obesity-prevention-home&Itemid=41655&lang=en (accessed 26th February 2020).
4. NHS England. Health Survey for England 2017. <https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/2017> (accessed 26th February 2020).
5. Speakman JR, O'Rahilly S. Fat: an evolving issue. *Dis Model Mech* 2012; **5**(5): 569-73.
6. Frayling TM. Are the causes of obesity primarily environmental? No. *BMJ* 2012; **345**: e5844.
7. Wilding J. Are the causes of obesity primarily environmental? Yes. *BMJ* 2012; **345**: e5843.
8. Puhl R, Brownell KD. Bias, Discrimination, and Obesity. *Obesity Research* 2001; **9**(12): 788-805.
9. Puhl R, Suh Y. Health Consequences of Weight Stigma: Implications for Obesity Prevention and Treatment. *Current Obesity Reports* 2015; **4**(2): 182-90.
10. Puhl RM, Heuer CA. The stigma of obesity: a review and update. *Obesity (Silver Spring)* 2009; **17**(5): 941-64.
11. Nakamura S, Narimatsu H, Sato H, et al. Gene–environment interactions in obesity: implication for future applications in preventive medicine. *Journal of Human Genetics* 2016; **61**(4): 317-22.
12. Qi Q, Chu AY, Kang JH, et al. Sugar-Sweetened Beverages and Genetic Risk of Obesity. *New England Journal of Medicine* 2012; **367**(15): 1387-96.
13. Fothergill E, Guo J, Howard L, et al. Persistent metabolic adaptation 6 years after “The Biggest Loser” competition. *Obesity* 2016; **24**(8): 1612-9.
14. Schwartz MW, Seeley RJ, Zeltser LM, et al. Obesity Pathogenesis: An Endocrine Society Scientific Statement. *Endocrine Reviews* 2017; **38**(4): 267-96.
15. Puhl RM, Heuer CA. Obesity stigma: important considerations for public health. *Am J Public Health* 2010; **100**(6): 1019-28.
16. Rubino F, Puhl RM, Cummings DE, et al. Joint international consensus statement for ending stigma of obesity. *Nature Medicine* 2020.
17. O'Keeffe M, Flint SW, Watts K, Rubino F. Knowledge gaps and weight stigma shape attitudes toward obesity. *The Lancet Diabetes & Endocrinology*.
18. Puhl R, Suh Y. Health Consequences of Weight Stigma: Implications for Obesity Prevention and Treatment. *Curr Obes Rep* 2015; **4**(2): 182-90.
19. Tomiyama AJ, Carr D, Granberg EM, et al. How and why weight stigma drives the obesity 'epidemic' and harms health. *BMC Med* 2018; **16**(1): 123.
20. Hatzenbuehler ML, Keyes KM, Hasin DS. Associations between perceived weight discrimination and the prevalence of psychiatric disorders in the general population. *Obesity (Silver Spring)* 2009; **17**(11): 2033-9.

21. Schvey NA, Puhl RM, Brownell KD. The impact of weight stigma on caloric consumption. *Obesity (Silver Spring)* 2011; **19**(10): 1957-62.
22. Vartanian LR, Shaprow JG. Effects of weight stigma on exercise motivation and behavior: a preliminary investigation among college-aged females. *J Health Psychol* 2008; **13**(1): 131-8.
23. Sutin AR, Stephan Y, Terracciano A. Weight Discrimination and Risk of Mortality. *Psychol Sci* 2015; **26**(11): 1803-11.
24. Murakami JM, Essayli JH, Latner JD. The relative stigmatization of eating disorders and obesity in males and females. *Appetite* 2016; **102**: 77-82.
25. Himmelstein MS, Puhl RM, Quinn DM. Intersectionality: An Understudied Framework for Addressing Weight Stigma. *Am J Prev Med* 2017; **53**(4): 421-31.
26. Kar P. Language Matters: Language and diabetes. NHS England; 2018.
27. Pollack HA. Person-first language and addiction: A means to an end, not an end in itself. *Prev Med* 2019; **124**: 115-6.
28. Shakes P, Cashin A. Identifying Language for People on the Autism Spectrum: A Scoping Review. *Issues Ment Health Nurs* 2019; **40**(4): 317-25.
29. Noble AJ, Robinson A, Snape D, Marson AG. 'Epileptic', 'epileptic person' or 'person with epilepsy'? Bringing quantitative and qualitative evidence on the views of UK patients and carers to the terminology debate. *Epilepsy Behav* 2017; **67**: 20-7.
30. Pi-Sunyer X. The medical risks of obesity. *Postgrad Med* 2009; **121**(6): 21-33.
31. Kyrgiou M, Kalliala I, Markozannes G, et al. Adiposity and cancer at major anatomical sites: umbrella review of the literature. *BMJ* 2017; **356**: j477.
32. Vekic J, Zeljkovic A, Stefanovic A, Jelic-Ivanovic Z, Spasojevic-Kalimanovska V. Obesity and dyslipidemia. *Metabolism* 2019; **92**: 71-81.
33. Jiang S-Z, Lu W, Zong X-F, Ruan H-Y, Liu Y. Obesity and hypertension. *Exp Ther Med* 2016; **12**(4): 2395-9.
34. Grover SA, Kaouache M, Rempel P, et al. Years of life lost and healthy life-years lost from diabetes and cardiovascular disease in overweight and obese people: a modelling study. *The Lancet Diabetes & Endocrinology* 2015; **3**(2): 114-22.
35. Caterson ID, Alfadda AA, Auerbach P, et al. Gaps to bridge: Misalignment between perception, reality and actions in obesity. *Diabetes, Obesity and Metabolism* 2019; **21**(8): 1914-24.
36. le Roux CW, Batterham RL, Aylwin SJ, et al. Attenuated peptide YY release in obese subjects is associated with reduced satiety. *Endocrinology* 2006; **147**(1): 3-8.
37. Carroll JF, Kaiser KA, Franks SF, Deere C, Caffrey JL. Influence of BMI and Gender on Postprandial Hormone Responses. *Obesity* 2007; **15**(12): 2974-83.
38. Butland B, Jebb SA, Kopelman P, et al. Foresight 'Tackling Obesity: Future Choices' project 2nd edition. *Government Office for Science* 2007.
39. Sumithran P, Prendergast LA, Delbridge E, et al. Long-Term Persistence of Hormonal Adaptations to Weight Loss. *New England Journal of Medicine* 2011; **365**(17): 1597-604.
40. World Health Organisation Regional Office for Europe. Weight bias and obesity stigma: considerations for the WHO European Region. Denmark:
41. Selous A. The current landscape of obesity services: a report from the All-Party Parliamentary Group on Obesity. Available at <https://static1.squarespace.com/static/5975e650be6594496c79e2fb/t/5af9b5cb03ce64f8a7aa20e5/1526314445852/APPG+on+Obesity+-+Report+2018.pdf> (accessed 26th February 2020)

42. Lupton D. Fat. London: Routledge; 2013.
43. Hubacek JA. Eat less and exercise more - is it really enough to knock down the obesity pandemic? *Physiol Res* 2009; **58 Suppl 1**: S1-6.
44. Latner JD, Barile JP, Durso LE, O'Brien KS. Weight and health-related quality of life: The moderating role of weight discrimination and internalized weight bias. *Eating Behaviors* 2014; **15**(4): 586-90.
45. Alegria Drury CA, Louis M. Exploring the Association Between Body Weight, Stigma of Obesity, and Health Care Avoidance. *Journal of the American Academy of Nurse Practitioners* 2002; **14**(12): 554-61.
46. Ward S, Gray A, Paranjape A. African Americans' Perceptions of Physician Attempts to Address Obesity in the Primary Care Setting. *Journal of General Internal Medicine* 2009; **24**(5): 579-84.
47. Gray CM, Hunt K, Lorimer K, Anderson AS, Benzeval M, Wyke S. Words matter: a qualitative investigation of which weight status terms are acceptable and motivate weight loss when used by health professionals. *BMC Public Health* 2011; **11**(513).
48. Chugh M, Friedman AM, Clemow LP, Ferrante JM. Women weigh in: obese African American and White women's perspectives on physicians' roles in weight management. *Journal of the American Board of Family Medicine : JABFM* 2013; **26**(4): 421-8.
49. Ampt AJ, Amoroso C, Harris MF, McKenzie SH, Rose VK, Taggart JR. Attitudes, norms and controls influencing lifestyle risk factor management in general practice. *BMC Family Practice* 2009; **10**(59): 1471-96.
50. Antognoli EL, Seeholzer EL, Gullett H, Jackson B, Smith S, Flocke SA. Primary Care Resident Training for Obesity, Nutrition, and Physical Activity Counseling: A Mixed-Methods Study. *Health Promot Pract* 2017; **18**(5): 672-80.
51. Claridge R, Gray L, Stubbe M, Macdonald L, Tester R, Dowell AC. General practitioner opinion of weight management interventions in New Zealand. *Journal of primary health care* 2014; **6**(3): 212-20.
52. Epstein L, Ogden J. A qualitative study of GPs' views of treating obesity. *BJGP* 2005; **55**(519): 750-4.
53. Glenister KM, Malatzky CA, Wright J. Barriers to effective conversations regarding overweight and obesity in regional Victoria. *2017*; **46**(10): 769-73.
54. Gunther S, Guo F, Sinfield P, Rogers S, Baker R. Barriers and enablers to managing obesity in general practice: a practical approach for use in implementation activities. *Qual Prim Care* 2012; **20**(2): 93-103.
55. Hansson LM, Rasmussen F, Ahlstrom GI. General practitioners' and district nurses' conceptions of the encounter with obese patients in primary health care. *BMC Fam Pract* 2011; **12**(7).
56. Heintze C, Sonntag U, Brinck A, et al. A qualitative study on patients' and physicians' visions for the future management of overweight or obesity. *Fam Pract* 2012; **29**(1): 103-9.
57. Leverence RR, Williams RI, Sussman A, Crabtree BF. Obesity counseling and guidelines in primary care: a qualitative study. *Am J Prev Med* 2007; **32**(4): 334-9.
58. Ashman F, Sturgiss E, Haesler E. Exploring Self-Efficacy in Australian General Practitioners Managing Patient Obesity: A Qualitative Survey Study. *International Journal of Family Medicine* 2016; **2016**.
59. Derksen RE, Brink-Melis WJ, Westerman MJ, Dam JJM, Seidell JC, Visscher TLS. A local consensus process making use of focus groups to enhance the implementation of a

- national integrated health care standard on obesity care. *Family Practice* 2012; **29**(suppl1): i177-i84.
60. Alexander SC, Ostbye T, Pollak KI, Gradison M, Bastian LA, Brouwer RJ. Physicians' beliefs about discussing obesity: results from focus groups. *Am J Health Promot* 2007; **21**(6): 498-500.
 61. Little A, Forman-Hoffman V, Wahls T. Barriers to obesity management: a pilot study of primary care clinicians. *BMC Family Practice* 2006; **7**(1): 35.
 62. Gudzone KA, Clark JM, Appel LJ, Bennett WL. Primary care providers' communication with patients during weight counseling: A focus group study. *Patient Education and Counseling* 2012; **89**(1): 152-7.
 63. Jochemsen-van der Leeuw HG, van Dijk N, Wieringa-de Waard M. Attitudes towards obesity treatment in GP training practices: a focus group study. *Fam Pract* 2011; **28**(4): 422-9.
 64. Nolan C, Deehan A, Wylie A, Jones R. Practice nurses and obesity: professional and practice-based factors affecting role adequacy and role legitimacy. *Prim Health Care Res Dev* 2012; **13**(4): 353-63.
 65. Michie S. Talking to primary care patients about weight: a study of GPs and practice nurses in the UK. *Psychol Health Med* 2007; **12**(5): 521-5.
 66. Blackburn M, Stathi A, Keogh E, Eccleston C. Raising the topic of weight in general practice: perspectives of GPs and primary care nurses. *BMJ Open* 2015; **5**(8).
 67. 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; **14**: 53.
 68. Ay P, Save D, Fidanoglu O. Does stigma concerning mental disorders differ through medical education? A survey among medical students in Istanbul. *Soc Psychiatry Psychiatr Epidemiol* 2006; **41**(1): 63-7.
 69. Ananthakumar T, Jones NR, Hinton L, Aveyard P. Clinical encounters about obesity: Systematic review of patients' perspectives. *Clinical Obesity* 2020; **10**(1): e12347.
 70. Warr W, Albury C, Tudor K, Aveyard P, Ziebland S. What is known about the beliefs, feelings and cultural norms of staff in primary care in discussing weight? A systematic review of qualitative studies. forthcoming.
 71. Albury C, Hall A, Syed A, et al. Communication practices for delivering health behaviour change conversations in primary care: a systematic review and thematic synthesis. *BMC Family Practice* 2019; **20**(1): 111.
 72. Barnes R. Conversation analysis: a practical resource in the health care setting. *Med Educ* 2005; **39**(1): 113-5.
 73. Stokoe E, Sikveland RO, Symonds J. Calling the GP surgery: patient burden, patient satisfaction, and implications for training. *Br J Gen Pract* 2016; **66**(652): e779-e85.
 74. Pino M, Parry R, Land V, Faull C, Feathers L, Seymour J. Engaging Terminally Ill Patients in End of Life Talk: How Experienced Palliative Medicine Doctors Navigate the Dilemma of Promoting Discussions about Dying. *PLoS One* 2016; **11**(5): e0156174.
 75. Soto C, Strain WD. Tackling clinical inertia: Use of coproduction to improve patient engagement. *J Diabetes* 2018; **10**(12): 942-7.
 76. De Brun A, McCarthy M, McKenzie K, McGloin A. "Fat is your fault". Gatekeepers to health, attributions of responsibility and the portrayal of gender in the Irish media representation of obesity. *Appetite* 2013; **62**: 17-26.

77. Himes SM, Thompson JK. Fat stigmatization in television shows and movies: a content analysis. *Obesity (Silver Spring)* 2007; **15**(3): 712-8.
78. Aveyard P, Lewis A, Tearne S, et al. Screening and brief intervention for obesity in primary care: a parallel, two-arm, randomised trial. *Lancet* 2016; **388**(10059): 2492-500.
79. Szwimer E, Mougharbel F, Goldfield GS, Alberga AS. The Association Between Weight-Based Teasing from Peers and Family in Childhood and Depressive Symptoms in Childhood and Adulthood: A Systematic Review. *Curr Obes Rep* 2020.
80. Davis JL, Goar C, Manago B, Reidinger B. Distribution and disavowal: Managing the parental stigma of Children's weight and weight loss. *Soc Sci Med* 2018; **219**: 61-9.

Figure 1 Potential mechanisms by which weight related stigma may perpetuate obesity and contribute to the adverse health outcomes associated with obesity

Text Box 1

General Principles for communication with a person living with obesity in order to reduce stigma and improve wellbeing of the person living with obesity (Adapted from Obesity UK document Language Matters:Obesity 2020)

<p>Be positive</p> <ul style="list-style-type: none">• Focus on the gains that may be achieved by weight management rather than the potential negative effects of failing to address obesity	<p>Be helpful and supportive</p> <ul style="list-style-type: none">• Offer specific help and advice where appropriate.• Signpost and guide people towards more information and local services.• Acknowledge that there are many routes to achieving weight loss:-what works for one may not work for all.
<p>Be aware of non-verbal communication</p> <ul style="list-style-type: none">• Talking about obesity is difficult. Ensure your body language recognises this, by engaging in exactly the same way you would for any other medical condition	<p>Be collaborative</p> <ul style="list-style-type: none">• Whenever possible, build meaningful and specific goals together• Percentage change in weight or even achieving weight neutrality should not be used as a goal, but rather a step towards achieving a person-centred meaningful outcome
<p>Be understanding</p> <ul style="list-style-type: none">• Up to 80% of obesity is genetically determined.• Ensure not to attribute blame, but to acknowledge the difficulties faced by the person	
<p>Be environmentally aware</p> <ul style="list-style-type: none">• Chairs with arms and weight limits can be restrictive• Tight spaces with chairs back-to-back can be hard to navigate.• Appropriate medical equipment should be available, including scales that weigh up to 150kg in a private space and a range of blood pressure	

Text Box 2

Specific examples highlighted by people living with obesity as to communication strategies that may unintentionally contribute to the stigma of living with obesity and suggested alternatives (Adapted from the Obesity UK document Language Matters:Obesity 2020)

<p>Starting a conversation about obesity</p> <p>Starting a conversation well can pave the way for a helpful and positive discussion. However, the wrong opening statement may disengage the person living with obesity and set a tone that cannot easily be rectified. Here we present examples from real conversations between healthcare professionals and people living with obesity along with their suggested alternatives</p> <p>The following section details examples from people living with obesity of how healthcare professionals can start conversations about weight management with people with obesity. Quotes are adapted from real conversations.</p>	
<p>Avoid</p> <p><i>“I’m sure the problems you’ve had are all related to your weight.”</i></p> <p>This immediately attributes blame for both ill-health.</p>	<p>Try instead</p> <p><i>“Would you mind if we spoke about your weight? Where do you think you’re at?”</i></p> <p>Open ended questions allow the opportunity to raise concerns and ask for advice</p>
<p><i>“You’re a bit sort of on the chunky side, shall we say”</i></p> <p>Non-clinical terms are perceived judgemental and disrespectful</p>	<p><i>‘Some people with your symptoms, find that losing a bit of weight and a little exercise can be helpful’</i></p> <p>The use of some people avoids attributing blame whilst providing similar information</p>
<p><i>“Ideally your BMI, which is your height in relation to your weight, should be somewhere between 18 and 25.... between 30 and 35 you’re considered clinically obese....from the measurements that you’ve had done today, you certainly fall into that category.”</i></p> <p>This implies that the individual is unaware of their weight.</p>	<p><i>“And as you said, your weight's crept up a bit...”</i></p> <p>or</p> <p><i>“You said you’d like to lose some weight because you’re feeling quite breathless...”</i></p> <p>Both of which open up the conversation using the individual’s own words</p>
<p><i>“At your weight, you really need to do more exercise”</i></p> <p><i>“In terms of diet now, you obviously aren’t following the diet sheet?”</i></p> <p>Both of these assumptions demonstrate a lack of understanding of the condition, whilst simultaneously attributing blame for the condition</p>	<p><i>“it’s fantastic that you’ve taken up swimming. Don’t worry that your weight hasn’t come down yet, the benefit to your health goes beyond weight loss”</i></p> <p>Positive feedback, even in the absence of measurable benefit, reassures an individual who may also be disheartened that their weight hasn’t reduced</p>