Clinical Practice

# Reducing weight bias in obesity management, practice and policy

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#### KEY MESSAGES FOR HEALTHCARE POLICYMAKERS AND PROVIDERS

- · Policymakers developing obesity policies should assess and reflect on their own attitudes and beliefs related to people living with obesity
- · Public health policymakers should avoid using stigmatising language and images. It is well established that shaming does not change behaviours. In fact, shaming can increase the likelihood of PLWO pursuing unhealthy behaviours, and has no place in an evidence-based approach to management of PLWO.[2,3]
- · Avoid making assumptions in population health policies that healthy behaviours will or should result in weight change. Weight is not a behaviour, and should not be a target for behaviour change. Avoid evaluating healthy eating and physical activity policies, programmes and campaigns in terms of population-level weight or body mass index outcomes. Instead, emphasise health and quality of life for people of all sizes. Because weight bias contributes to health and social inequalities, advocate for and support PLWO. This includes supporting policy action to prevent weight bias and weight-based discrimination. [2-8]
- · Policymakers should know that most PLWO have experienced weight bias or some form of weight-based discrimination. Public health policymakers should consider weight bias and obesity stigma as added burdens on population health outcomes and develop interventions to address them. To avoid compounding the problem, we encourage policymakers to do no harm, to develop people-centred policies that move beyond personal responsibility, to recognise the complexity of obesity, and to promote health, dignity and respect, regardless of body weight or shape.
- · Healthcare providers (HCPs) should ensure that their clinical environment is accessible, safe and respectful for all people, regardless of their weight or size. Make efforts to improve health and quality of life rather than solely focusing on obesity management. Ask permission before weighing someone, and never weigh people in front of others; instead, place weighing scales in private areas. HCPs should consider how their office's physical space accommodates people of all sizes and ensure that they have properly sized equipment (e.g. blood pressure cuffs, gowns, chairs, beds) ready in clinical rooms prior to patients arriving. Because weight bias impacts on morbidity and mortality, advocate for and support PLWO. This includes action to create supportive healthcare environments and policies for people of all sizes. [8]

#### KEY MESSAGES FOR PEOPLE LIVING WITH OBESITY

- · Weight bias may affect the quality of healthcare for individuals living with obesity. For example, weight bias may negatively affect health professionals' attitudes and behaviours towards them.<sup>[8,9]</sup>
- · Experiences of weight bias can harm your health and wellbeing. Experiencing unequal treatment because of your size or weight, for example, is not acceptable. Talk to your healthcare provider about your experiences with weight bias. Speak up and support action to stop weight-based discrimination.[10-12]
- Talk to your healthcare provider about addressing internalised weight bias. Bias can impact your behaviours and your health. Self-stigma and self-blame can be addressed through behavioural interventions, consistent with the principles of cognitive therapy and acceptance and commitment therapy. [13-18] (See the chapter 'Effective psychological and behavioural interventions in obesity management' for more information.)
- · Try to focus on improving healthy habits and quality of life rather than weight loss. Weight is not a behaviour, and should not be a target for behaviour change.[19,20

#### RECOMMENDATIONS

- 1. HCPs should assess their own attitudes and beliefs regarding obesity and consider how their attitudes and beliefs may influence care delivery (Level 1a, Grade A).[1]
- 2. HCPs should recognise that internalised weight bias (bias towards oneself) in PLWO can affect behavioural and health outcomes (Level 2a, Grade B).[13,21-23]
- 3. HCPs should avoid using judgemental words (Level 1a, Grade A), images (Level 2b, Grade B)<sup>[2]</sup> and practices (Level 2a, Grade B)<sup>[13]</sup> when working with PLWO.
- 4. We recommend that HCPs avoid making assumptions that an ailment or complaint a patient presents is related to their body weight (Level 3, Grade C).[9,24]

#### Introduction

People living with obesity (PLWO) frequently experience weight bias, stigma and discrimination. The role that these play in the management of PLWO has until recently been poorly understood. This chapter provides an overview of these constructs, using the best available evidence to illustrate how they influence obesity development, diagnosis, management and prevention. For questions related to lived experience of obesity and of clinical care, qualitative methods are the appropriate research approach. While we recognise that there is a relative paucity of high-quality evidence on weight bias, stigma and discrimination in this area, the PLWO and healthcare providers (HCPs) working on these guidelines feel it is important to highlight it. It is our hope that work in this area will continue, and more robust information will be available for future guidelines.

To support standard practice in chronic disease management, we use people-first language throughout this guideline.

Given the limited evidence in the published literature, this chapter includes recommendations where sufficient evidence is available, alongside key messages for health professionals, policymakers and patients where evidence is limited.

# What do we mean by the terms weight bias, stigma and discrimination?

The terms weight bias, stigma and discrimination are often used interchangeably, but more accurately reflect a continuum, with weight bias describing the negative weight-related attitudes, beliefs, assumptions and judgements in society that are held about people living in large bodies. Weight bias can be expressed in explicit, implicit and internalised forms. Explicit weight bias is defined as having overtly negative attitudes toward PLWO. Examples of explicit weight bias include assumptions that PLWO are lazy, unmotivated, lacking self-discipline or willpower, and non-compliant with medical treatment. Implicit weight bias is having unconscious negative attitudes towards people in large bodies. That is, implicit weightbiased attitudes are not acknowledged by those holding them, but can nevertheless shape the way that people view and treat PLWO.[8]

Internalised weight bias, or self-directed bias, is the extent to which PLWO endorse negative weight-biased beliefs about themselves. Internalised weight bias is already prevalent in the general population (44%); however, PLWO are more likely to endorse such beliefs (52%). [25] PLWO who have high weight bias internalisation tend to believe that they deserve the negative attitudes or negative treatment they receive. This is exemplified by strongly supporting statements such as 'I am less attractive than most other people because of my weight' or 'I feel anxious about being overweight because of what people might think of me.' Few studies have explored the relationship between the management of PLWO and weight bias. In recent years, research has shown strong associations between internalised weight bias and mental health outcomes. [26-29] Internalised weight bias has been shown to have a negative impact on outcomes that have conventionally been

associated with the management of PLWO. For example, weight bias internalisation has been associated with exercise avoidance and binge eating.[16,22,30-40]

Weight or obesity stigma (we use the term weight stigma here, but the term obesity stigma is also often used in the literature) represents the manifestation of weight bias through harmful social stereotypes that are associated with PLWO. An example of weight or obesity stigma in the healthcare system is if health professionals believe that PLWO are non-compliant with medical advice or treatment and hence assume that obesity management strategies will not work. The existence of weight bias and stigma can, in turn, lead to weight discrimination, which is the unjust treatment of PLWO because of their weight.[41] Examples of unjust and inequitable treatment include but are not limited to health professionals spending less time, having more insensitive or rushed communications or establishing less emotional rapport with PLWO. In extreme cases, weight-based discrimination can lead to PLWO being denied treatment or avoiding seeking help from the healthcare system.  $^{\rm [42-46]}$ 

#### How prevalent are weight bias, stigma and discrimination?

Weight bias and stigma are pervasive in our society. Approximately 40% of adults report a history of experiencing some form of weight bias or stigma. [4] Weight bias has been documented among parents and families, [47] pre-adolescents and adolescent peers, [48] teachers, [49] employers and human resource professionals<sup>[50]</sup> and healthcare professionals,<sup>[48]</sup> and even among PLWO themselves.<sup>[51]</sup> Specifically, weight bias is prevalent in the general population, and has been found to be even greater than other targets of bias.  $^{[52]}$  There is extensive literature documenting weight bias and stigma across a range of health professionals, including physicians, nurses, dietitians, psychologists and healthcare trainees.<sup>[37]</sup> Weight bias has also been investigated among pre-service health promotion students.[53]

Weight discrimination manifests across multiple settings, as noted above. Its consequences are far reaching, as explained in the following

Weight/height discrimination has been found to have significantly increased between 1995 - 1996 and 2004 - 2006, from 7% to 12%. [4] The prevalence of weight discrimination has increased by 66% over the past decade, and is comparable to rates of racial discrimination, especially among women. [4,7] The prevalence of perceived weight discrimination across life domains, such as employment, schools, healthcare and interpersonal relationships, ranges from 19.2% among individuals with Class I obesity (body mass index [BMI] 30 - 34.9 kg/m²) to 41.8% among individuals with severe obesity (BMI ≥35 kg/m²). [54]

## What are the consequences of weight bias, stigma and discrimination?

Weight bias, stigma and discrimination can have several physical, psychological and psychosocial consequences. A systematic review of 23 studies showed that there are many biopsychosocial consequences of weight or obesity stigma in treatment-seeking PLWO.[55] The following sections will describe how weight bias, stigma and discrimination can affect a person's physical and mental health, lead to avoidance of preventive healthcare, hinder obesity management efforts, and increase overall morbidity and mortality.

# Physical health consequences

Like other forms of discrimination, including racism, weight discrimination is associated with an increased risk for morbidity. There are physiological mechanisms that may contribute to this increased risk to physical health, such as increased chronic stress, which can increase cortisol levels, and oxidative stress independent of adiposity level.<sup>[11,56]</sup> A systematic review of 33 studies found that weight or obesity stigma was positively associated with obesity, diabetes risk, cortisol level, oxidative stress level, C-reactive protein level, eating disturbances, depression, anxiety and body image dissatisfaction.<sup>[57]</sup> One longitudinal study has also shown that perceiving weight discrimination is associated with a 60% increase in mortality risk.<sup>[58]</sup> Indeed, the effect of weight-based discrimination was comparable to other established risk factors, such as smoking history and disease burden. It is not clear how weight discrimination contributes to mortality. Some theories link experiences of weight discrimination to behavioural risk factors, such as sedentary lifestyles and increased food consumption as coping mechanisms. [58] Distress over obesity is heightened when people perceive themselves to have poorer health because of obesity-related conditions such as chronic pain, osteoarthritis and cardiovascular disease. [59]

There is some evidence that internalised weight bias mediates the relationship between weight or obesity stigma experiences and negative psychological outcomes.<sup>[55]</sup> Weight bias internalisation may be associated with even poorer mental health outcomes than the perceived experience of weight bias.[13] In other words, believing oneself to be deserving of weight or obesity stigma may lead to worse psychological outcomes than the actual stigmatising encounter itself.[13] Furthermore, adults who internalise weight bias are more likely to binge eat. Coping mechanisms for individuals who experience weight discrimination include engaging in unhealthy behaviours. Weight discrimination also increases the risk for obesity. [10]

#### Mental health consequences

It is well established that being a target for weight bias, stigma and discrimination is associated with negative mental health outcomes. PLWO may face negative mental health impacts because of their weight status across multiple levels of their environment. [60] Global measures of mental health indicate that experiences of weight bias are associated with psychological distress in both treatment-seeking and community samples. Psychosocial correlates of weight bias include medication non-adherence, anxiety, perceived stress, antisocial behaviour, substance use, coping strategies and social support. [55] Weight bias is also associated with greater body image disturbance. [61] In PLWO seeking treatment, a higher level of internalised weight bias was associated with a more negative impact on body image. [61]

Experiencing weight or obesity stigma was associated with poorer psychological function in a sample of individuals seeking treatment for obesity.[38] Experiences of stigma also significantly and independently predict psychological concerns in obesity treatment-seeking individuals after controlling for BMI. Stigmatising experiences, not only body weight, contribute to adverse mental health consequences in PLWO. In one study, the harmful effects of stigma experiences extended beyond psychological distress and morbidity of obesity to

include an increased risk in all-cause mortality.<sup>[58]</sup> In another study, individuals who perceived that they had experienced weight stigma were almost 2.5 times more likely to experience mood or anxiety disorders than those who did not, even when accounting for standard risk factors for mental illness and measured BMI. [62]

Depression is associated with weight gain, and PLWO are at increased risk of depression, particularly those categorised with Class II and III obesity. [63] Emerging evidence suggests that perceived weight discrimination may be an explanation for this relationship, with particular evidence for middle-aged and older adults. [54,63,64] In a treatment-seeking sample of 255 individuals with binge-eating disorder, weight bias internalisation was associated with poorer overall mental health scores, and depressive symptoms mediated this relationship.[20]

Stigma and discrimination are also seen as chronic stress conditions attributed to the additional stress that individuals from stigmatised groups are exposed to daily as a result of their position in society.<sup>[6]</sup> Chronic stress has a significant impact on mental health, and discrimination-specific stressors should be considered in intervention approaches.<sup>[65]</sup> One study showed that overvaluation of shape and weight mediated the relationship between self-esteem and weight bias internalisation in a sample of PLWO and diagnosed binge-eating disorder.[66]

## Weight stigma in healthcare settings and its impact on health

Counterintuitively, given that healthcare settings are designed to be health supportive and promoting, empirical studies over a 40-year period show that PLWO experience weight stigma and discrimination from HCPs. [67,68] It has been reported that 69% of doctors, 46% of nurses and 37% of dietitians report biased attitudes to PLWO. [69] These negative attitudes are even reported by HCPs specialising in obesity management, with HCPs describing PLWO as lazy, stupid, non-compliant, lacking willpower, and undisciplined. [70,71] Implicit weight bias among HCPs can impact on the level of support, care and empathy PLWO receive. Evidence indicates that physicians spend less time in appointments, provide less education about health and have less respect for people with a higher body weight, and report that caring for PLWO is a greater waste of time compared with thinner people.<sup>[72]</sup> PLWO who report weight bias in the healthcare setting have less trust in their HCPs,[43] are less likely to access healthcare screening<sup>[73-75]</sup> and services,<sup>[76]</sup> have poorer outcomes,<sup>[77]</sup> and are more likely to avoid future healthcare. [45] Research has reported that as a result of weight stigma experiences, women living with obesity delay routine cancer screening, [78] which is compounded by 83% of physicians being reluctant to perform an examination on women living with obesity.<sup>[74,75]</sup> As Ewing<sup>[79]</sup> reported regarding weight stigma, 'when translated to the consultation room, it becomes a health threat in itself, risking inequality and hindering the intervention and adherence efforts of both HCPs and PLWO'. Empirical evidence demonstrating that HCPs hold stigmatising attitudes, which may lead to discriminatory practices, highlights the urgent need for addressing weight bias interventions among HCPs, particularly given that this environment should represent a safe space for people to access non-judgemental, equitable care. [80] Acknowledgement of the detrimental effects of weight stigma in healthcare access and care provision is therefore key to understanding the impact of weight stigma on public health. In addition, there is a need for research that understands the role and impact of stigma in public health settings outside of healthcare, reasons for the ambiguity identified among HCPs, and whether it can be improved through

improved education and professional guidelines. Several training programmes and hubs have recently emerged aimed at addressing weight stigma among HCPs,[81,82] which will need to be evaluated to understand their impact.

# Common societal misconceptions about obesity

There is a gap between scientific evidence and misconceptions in the public narrative.

The notion that the causes of obesity depend on individuals' faults, such as laziness and gluttony, stems from the assumption that body weight is entirely under volitional control. This assumption and many of its corollaries, listed below, are now at odds with a definitive body of biological and clinical evidence developed over the past few decades.[83]

- Body weight = calories in calories out.
- · Obesity is primarily caused by voluntary overeating and a sedentary lifestyle.
- · Obesity is a lifestyle choice.
- · Obesity is a condition, not a disease.
- · Severe obesity can often be reversible by voluntarily eating less and moving more.

# Obesity and access to surgical care

Metabolic and bariatric surgery (MBS) is an important example of how weight stigma even extends to the treatments for obesity. [83] Patients who undergo MBS, as opposed to those who pursue weight loss with dietary change and exercise, may be perceived as being lazy and 'taking the easy way out'. [84,85] This has resulted in many patients not admitting that they have had this kind of surgery.<sup>[84]</sup> Despite the efficacy and cost-effectiveness of these procedures, [86,87] a staggeringly low 0.1 - 2% of individuals who qualify for MBS will undergo this intervention.

## Population and public health consequences

Weight bias can have social and economic consequences for PLWO, such as inequities in interpersonal relationships and fewer opportunities for education and employment.  $^{[8,58,88-90]}$  A  $\bar{\mbox{fundamental}}$ driver of weight bias is lack of public understanding of the complex and multi-faceted nature of obesity. When the science about the complexity of obesity is not communicated to the public, it can lead to an oversimplification of obesity. For example, public health strategies that focus on obesity as an issue of unhealthy eating and physical inactivity, and ignore biological, genetic, environmental and societal contributors to obesity, can contribute to the oversimplification of the disease and to a lack of public understanding of it.

This situation can lead to inaccurate social narratives that obesity is a self-inflicted choice and that it is only up to PLWO to address their own obesity. This lack of understanding, in turn, can lead to people experiencing weight bias and stigma. Public health research has identified a need to:

- Change the public health obesity narrative to align with current scientific and medical understanding of obesity as a chronic disease.
- Develop comprehensive obesity strategies that reflect patient experiences, which may prevent further stigmatisation of obesity.[91]

Furthermore, stigma has an independent impact on population health inequalities. [6] As such, weight bias and obesity stigma should be considered as key social determinants of health.[8,92]

Studies have also explored how weight bias may reveal itself through public health campaigns. [5] Public health strategies that emphasise the duty and responsibility of PLWO to make healthy choices can end up blaming or punishing those who make unhealthy or contested choices.<sup>[93]</sup> PLWO perceive obesity public health messages as overly simplistic, disempowering and stigmatising. [2,94] Public health campaigns that promote negative attitudes and stereotypes towards PLWO, stigmatise youth living with obesity, or blame parents of children living with obesity are not only ineffective in motivating behaviour change, but also end up labelling and stigmatising PLWO

Two recent critical analyses of Canadian obesity prevention policies highlight how a focus on individual behaviours, rather than a population approach that addresses social determinants of health, can contribute to weight bias and stigma. The first, by Ramos Salas et al., [91] identified five prevailing narratives that may contribute to weight bias:

- · Childhood obesity threatens the health of future generations and must be prevented.
- · Obesity can be prevented solely through healthy eating and physical activity.
- Obesity is an individual behaviour problem.
- · Achieving a healthy body weight should be a population health
- · Obesity is a risk factor for other chronic diseases and not a disease in itself.

The second analysis, by Alberga et al., [95] also noted that a Canadian federal report on obesity used aggressive framing and disrespectful terminology with a strong focus on individual behaviours. The authors stated that this may be contributing to weight stigma and recommended that future Canadian policies, reports and campaigns address fundamental social determinants of health. [91,95]

#### Weight bias and research

Research into obesity and diabetes is underfunded compared with other diseases, relative to their burden and costs to society. For example, the US National Institutes of Health's projected budgets for cancer, HIV/AIDS and digestive diseases are five to 10 times greater than the budget for obesity, despite the latter affecting substantially more Americans.

There are also several ways in which stigma can hinder support of research and scientific advances. For instance, an oversimplified notion that obesity is caused by eating too much and exercising too little implies that the causes of obesity and its epidemic are well understood, and not complex. In this context, research designed to elucidate aetiological mechanisms of obesity may not be perceived as a priority. Furthermore, funding could be skewed towards projects that are anticipated to be effective (i.e. implementation of behaviour and lifestyle interventions), reducing support for investigation of novel methods of prevention and treatment or implementation of available evidence-based therapies (i.e. pharmaceutical or surgical approaches).[83]

## Consequences for engagement in primary healthcare

Weight bias in healthcare settings can reduce the quality of care for PLWO.[95] It is established through consistent evidence across a number of studies that HCPs endorse weight bias and stigma about PLWO.[37,48,53] There is also strong evidence that PLWO perceive biased treatment in healthcare and that these perceptions may influence patient engagement in primary healthcare services. [96]

PLWO have reported patronising and disrespectful treatment from their HCPs, as well as poor communication and blaming most health issues on excess weight.[95]

Furthermore, there are substantial documented data that weight bias may negatively affect HCPs' obesity management practices.<sup>[8]</sup> This evidence suggests that PLWO are vulnerable to weight bias in healthcare settings, which may impact on morbidity and mortality. For example, existing evidence suggests that HCPs may be spending inadequate time with PLWO.[72,97] PLWO who experience weight bias in healthcare settings may delay or forgo essential preventive care, such as breast, cervical and colorectal cancer screening, for fear of receiving disrespectful treatment and negative attitudes from providers. [5,8,23,42,46,78] They may also engage in 'doctor shopping' to find a more respectful HCP.[18,98,99] PLWO report being embarrassed about being weighed, [78,100] receiving unsolicited advice to lose weight, and lack of equipment (e.g. gowns and examination tables too small to be functional). [78,100-103] Importantly, and contrary to popular belief, weight bias, stigma and discrimination do not encourage positive behaviour change, as noted in the above sections on the physical and mental health consequences of these issues.

## How do we reduce weight bias, stigma and discrimination in healthcare settings?

International organisations such as the American Academy of Pediatrics and the British Psychological Society have published policy statements with recommendations for HCPs to reduce weight stigma in clinical practice. [104] Obesity Canada is also working with many national health professional associations to recognise that weight bias, stigma and discrimination should be addressed seriously by all

Key to reducing weight bias, stigma and discrimination in healthcare settings is for HCPs to be aware of their own attitudes and behaviours towards PLWO. As noted above, HCPs providing support for management of PLWO should acknowledge that weight bias is prevalent among HCPs, and that they are not immune to it themselves. They should be willing to reflect on whether/how weight bias affects their own attitudes and behaviours towards PLWO. This can be achieved by completing a self-assessment tool such as the Implicit Association Test for weight bias. [105]

Given that weight bias is established early, usually before HCPs start their professional training, there is a need for systematic education on weight bias and stigma in all HCP training programmes. All professional health disciplines should therefore include weight bias sensitivity training in their curricula.

Because internalised weight bias can have negative impacts on health-related outcomes, it is also important that HCPs assess their patients for internalised weight bias. This can be accomplished through sensitive questioning/dialogue/motivational interviewing (e.g. 'Can you share with me if or how your weight affects your perception of yourself?').[104] Coping strategies to address internalised weight bias should be incorporated into behavioural interventions, consistent with the principles of cognitive behavioural therapy and acceptance and commitment therapy. (See the chapter 'Effective psychological and behavioural interventions in obesity management'.)

Reviews of weight bias reduction interventions have shown that no single approach is sufficient to reduce weight bias among HCPs. [1,88,106] These reviews highlight the importance of moving beyond awareness and information provision to raising skills and competencies in HCPs and advocating changes in social norms and ideologies about body weight. A systematic review of weight bias reduction interventions among health student trainees and practising HCPs  $^{[106]}$  identified four key components to help decrease weight bias among HCPs:

- Present facts about uncontrollable and non-modifiable causes of obesity (i.e. genetics, biology, environment, sociocultural influences and social determinants of health).
- Provide positive contact with PLWO to evoke empathy (i.e. include the patient voice).
- Include empathic obesity experts as peer-modelling HCPs.
- Repeat exposure to PLWO over the long term. [106]

Promising strategies to reduce stigma in the healthcare setting

- · Improving HCP attitudes about PLWO and/or reducing the likelihood that negative attitudes influence provider behaviour.
- · Altering the clinic environment or procedures to create a setting where PLWO feel accepted and less threatened.
- Empowering patients to cope with stigmatising situations and attain high-quality healthcare. [68]

#### Gaps in our knowledge: Questions for future research

Because of the evidence about the negative physical, psychological and social consequences of weight bias noted in this chapter, internalised weight bias is an important consideration for weight bias reduction strategies in healthcare. For example, PLWO with higher internalised weight bias report less weight loss, lower physical activity levels, higher caloric intake, greater disordered eating behaviours, [35] and even greater cardiometabolic risk.[107] There is therefore a need for more research to better understand, and more effectively assess and reduce, internalised weight bias.

This is perhaps because behaviour change interventions may not be maximising their potential benefits by ignoring internalised weight bias. Health professionals are advised to address internalised weight bias within any obesity management strategy (i.e. selfcompassion as a resource,[15] inducing empathy and influencing controllability attributions,[1] and careful and considered use of language and terminology).  $^{[14]}$ 

Finally, more research is needed to understand the prevalence and impact of weight bias, stigma and discrimination on care for PLWO in South Africa. There is a need for more research, beyond convenience or treatment-seeking groups, towards replication with more generalisable populations. The development and testing of novel interventions are also needed to reduce weight bias, or its impact on behaviour, in medical trainees, practising physicians, other health professionals, and other staff members of health organisations.

#### Conclusion

Weight stigma and weight bias remain highly prevalent among the general population and HCPs alike. This causes clear harm to PLWO, extending from health-seeking behaviour to accessing care and receiving appropriate screening and treatment from HCPs. This is a global phenomenon that needs urgent and aggressive intervention to improve the care and quality of life for PLWO.

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SAMMSS acknowledges that Obesity Canada and the authors of the Guideline have not formally reviewed 'Reducing weight bias in obesity management, practice and policy' and bear no responsibility for changes made to such chapter, or how the adapted Guideline is presented or disseminated. Therefore, such parties, according to their policy, disclaim any association with such adapted materials. The original Guideline may be viewed in English at: www.obesitycanada.ca/guidelines

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