



ORIGINAL RESEARCH ARTICLE

Perceptions of barriers to effective obesity management in Canada: Results from the ACTION study

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Summary

Obesity is a chronic disease with a significant and growing impact on Canadians. The “Awareness, Care and Treatment In Obesity MaNagement” (ACTION) Study investigated perceptions, attitudes and perceived barriers to obesity management among Canadian people with obesity (PwO), healthcare providers (HCPs) and employers. In this study adult PwO (body mass index ≥ 30 kg/m², based on self-reported height/weight), HCPs (physicians and allied HCPs managing PwO) and employers (≥ 20 employees; offering health insurance), completed online surveys between 3 August and 11 October 2017 in a cross-sectional design. Survey respondents (N = 2545) included 2000 PwO, 395 HCPs and 150 employers. Obesity was viewed as a “chronic medical condition” by most PwO (60%), HCPs (94%) and employers (71%) and deemed to have a large impact on overall health (74%, 78%, 81%, respectively). Many PwO (74%) believed weight management was their own responsibility. While PwO (55%) reportedly knew how to manage their weight, only 10% reported maintaining $\geq 10\%$ weight reduction for >1 year. Despite low success rates, the most commonly reported effective long-term weight loss methods tried and/or recommended were “improvements in eating habits” (PwO 38%; HCP 63%) and “being more active” (PwO 39%; HCP 54%). PwO and HCPs reported very different perceptions of the quality and content of their interaction during obesity management discussions. These findings highlight the communication gaps and misunderstanding between PwO, HCPs and employers. This underscores the importance of, and need for, evidence-based management of obesity and a collaborative approach and understanding of the complex nature of this chronic disease.

KEYWORDS

ACTION study, Canada, obesity management, perception

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1 | INTRODUCTION

Over past decades, the scientific understanding of obesity and its associated complications¹ has led to obesity being increasingly recognized as a chronic disease requiring long-term management.²⁻⁶ However, barriers exist to the optimal management of obesity in healthcare systems, including deep-rooted weight bias, common misperceptions about the complexity and chronic, relapsing nature of obesity, lack of training among healthcare providers (HCPs) and the use of non-evidence-based recommendations.^{3,7-9} Given the significant and growing impact of obesity on Canadians,¹⁰⁻¹² it is important to understand perceptions and behaviours, both of people with obesity (PwO) and HCPs, in order to optimize management of this disease.

While previous studies have investigated perceptions, attitudes and barriers towards obesity management in various world regions¹³⁻¹⁹—including a study highlighting the perspectives of PwO, HCPs and employers in the U.S. population¹³—to our knowledge, no such nationwide study has been conducted in Canada. The Awareness, Care and Treatment In Obesity MaNagement (ACTION) Study Canada aimed to address this gap by investigating the perceptions, attitudes and perceived barriers towards obesity management among Canadian PwO, HCPs and employers—three groups that, individually and collectively, are critical to the optimal management of obesity.

2 | MATERIALS AND METHODS

This survey-based study involved adult participants (Canadian PwO, HCPs and employers) recruited by email invitation via an online panel company (opt-in members). The survey included a statement of informed consent and screening questions to determine eligibility (Supporting information, Appendix S1). Ethics approval for the study, including the protocol and informed consent form, was provided by Schulman IRB and the study is registered with ClinicalTrials.gov (NCT03235102).

The PwO data were random iterative method (RIM)-weighted, a method commonly applied in panel studies to adjust the proportionality of demographic characteristics in a sample to more closely represent that of the target population.²⁰ Data were weighted for a distribution that reflected national demographics (Appendix S1).^{13,21-25}

2.1 | Development of the survey

The survey was scripted using an online platform system and based on moderator-observed pre-test interviews ($n = 16$: PwO, $n = 6$; HCPs [general physicians (GPs), $n = 2$; bariatric surgeon, $n = 1$; endocrinologist, $n = 1$, nurse, $n = 1$; dietitian, $n = 1$]; and employers, $n = 4$) conducted during 12–30 June 2017.

WHAT IS ALREADY KNOWN ABOUT THIS SUBJECT

- Obesity is a chronic disease with a significant and growing impact on Canadians.
- Barriers to the optimal management of obesity exist in healthcare systems.
- Perceptions, attitudes and barriers towards obesity management have been reported in various world regions, including a study highlighting the perspectives of PwO, HCPs and employers in the United States.

WHAT THIS STUDY ADDS

- To our knowledge, this is the first nationwide study highlighting the perspectives of PwO, HCPs and employers conducted in Canada.
- Diet and exercise (“eat-less-move-more”) are perceived by many PwO and HCPs as the most effective management approach for obesity they have tried or recommended, and many PwO feel that they know how to lose weight; however, most do not report long-term weight-management success.
- There are multiple gaps in the relationship between PwO and HCPs or employers that need to be addressed to provide more effective care for Canadians living with obesity.

Survey questions were mainly closed-ended, with a Likert scale used for attitudinal measurement for some questions (Table S1, Box 1).

2.2 | Data collection

The online survey, designed to take 30 minutes, was conducted from 3 August to 11 October 2017. Data were collected for all respondents who completed the survey and processed using research software. The criteria used for stratification of PwO, HCPs and employers are shown in Table S1, Box 2.

2.3 | Descriptive analysis

Only the completed questionnaires were analysed. Descriptive analyses were reported since results are based on non-probability sampling. Findings were reported as frequencies and percentages for categorical outcomes and means or medians for continuous outcomes. Data for overcapacity demographic quotas were not subject to analysis. Sample

size targets were based on the ACTION U.S. study design,¹³ but adapted to the Canadian population size.

3 | RESULTS

3.1 | Participants

In total, 2545 respondents participated (Figure S1), with PwO, HCPs and employers completing the survey in a median time ranging from 25 to 40 minutes. Response rates for PwO, HCP and employer surveys were, respectively, 11%, 34% and 26%. Sociodemographics of survey respondents are shown in Table 1. Disease characteristics (Table 1a) were reported by PwO, as was the number of comorbidities (mean 2.3). The cross-sectional sample of PwO in our study showed similar demographics to the national distribution according to epidemiological data (Appendix S1): only minor proportional adjustments were applied in the RIM weighting of the sample.

3.2 | Impact of obesity on health

Most PwO (60%), HCPs (94%) and employers (71%) agreed with the statement that obesity is a “chronic medical condition” (ie, using a rating of 4 or 5, where 1 signified “does not agree at all” and 5 “completely agree”). Most PwO (74%), HCPs (78%) and employers (81%) reported that they believe obesity has a large impact on overall health (Table S2). The percentage of PwO that considered obesity to have a high impact on overall health was greater than the percentage that considered cancer to have a high impact (67%) and was similar to the percentage that considered diabetes to have a high impact (75%) (ie, using a rating of 4 or 5, where 1 signified “very little impact” and 5 “an extreme impact”).

3.3 | Reported success in weight-loss maintenance

At the time of the survey, 36% of PwO indicated no weight difference, whereas the remainder reported at least some weight loss compared with their highest weight in the previous 3 years (Figure S2). Of the PwO who reported $\geq 10\%$ weight loss (21%), only 46% had been able to maintain their weight loss for >1 year, corresponding to 10% of the overall study population.

3.4 | Goals and responsibility for weight management

Most PwO agreed (ie, using a rating of 4 or 5, where 1 signified “does not agree at all” and 5 “completely agree”) that it would be extremely beneficial to their health to lose 5–10% of their body weight (81%) and that weight loss was completely their responsibility (74%). Many PwO also agreed that they knew how to lose weight (55%) and could do so “if they really set their mind to it” (60%). Only 21% of PwO agreed that it was the responsibility of their HCP to actively contribute to their weight management efforts and only 19% indicated that their employer was an important partner in these endeavours. In

contrast, most HCPs (78%) agreed they have a responsibility and almost half of employers (44%) at least a partial responsibility to help PwO to manage weight.

3.5 | Perceptions about effective approaches to weight loss

Of the methods tried by PwO and discussed and recommended by HCPs, diet and exercise were most commonly reported to be effective for long-term weight management (Figure 1). A greater proportion of HCPs than PwO were optimistic about other weight-management methods, especially visiting a dietitian and bariatric surgery; however, few HCPs and almost no PwO reported they had recommended/tried prescription weight-loss medications and found them to be effective. Employers had a more positive opinion of the contribution of wellness programs to successful weight loss than PwO: 49% (vs 12% of PwO) reported that they contribute “significantly” or “a lot.”

3.6 | People with obesity-healthcare provider relationship

The median age at which PwO reported first struggling with excess weight was 28 years, while they reported first discussing weight with their HCP at a median age of 39 years; indicating a delay of more than a decade before seeking medical advice. Those who reported weight-loss success engaged in these discussions with HCPs earlier than those who had no current weight-loss success (median: 5 vs 12 years).

PwO and HCPs had differing perceptions about the reasons for not discussing weight management (Figure 2): most HCPs cited a lack of PwO motivation to lose weight, or insufficient time available during appointments for these conversations. However, only a minority of PwO reported issues in interest, motivation or appointment duration as significant factors for the lack of discussion; instead, they were more likely to attribute it to their belief that obesity management was their own responsibility or that they already knew how to address it.

Whereas HCPs reported discussing weight with 72% of their patients in need of weight management, only 54% of PwO reported that they had such discussions in the previous 5 years. Of the PwO who reported these discussions, only 48% indicated a diagnosis of obesity from a qualified HCP and only 28% reported that a weight-related follow-up appointment or call with a HCP was scheduled. Discussions/recommendations were most commonly reported by PwO and HCPs to relate to generally increasing activity level (46% and 70%, respectively) or improving eating habits (45% and 71%), although other approaches were noted, including management of sleep quality (20% and 27%) or stress (19% and 30%). A minority of PwO and HCPs reported discussing/recommending prescription (9% and 12%) or non-prescription (9% and 3%) medication, bariatric surgery (8% and 11%), behaviour therapy or psychotherapy (5% and 17%), or referral to an obesity specialist (6% and 15%) (Table S3). PwO and HCPs reported very different perceptions of the quality and content of the interaction during obesity management discussions (Figure 3).

TABLE 1 Sociodemographic characteristics of PwO (a), hcps (b) and employers (c) who participated in the survey (N = 2545)

(a)			
Characteristics of PwO	PwO (n = 2000)	Current weight-loss success (S) (n = 192)	No current weight-loss success (NS) (n = 1808)
Mean age, years	50	47	51
Gender (%) ^a			
Male	53	59	52
Female	47	41	48
Ethnicity (%) ^b			
White (Caucasian)	90	86	90
First Nations or Indigenous to Canada	4	8	3
Black	3	2	3
Chinese	2	2	2
Other	5	6	5
Regional distribution (%)			
West	31	38	30
Ontario	39	34	40
Quebec	21	21	21
Rest of Canada	9	7	9
Obesity class (%) ^c			
Class I	56	61	55
Class II	25	25	25
Class III	19	14	20
Employment status (%)			
Full-time	36	38	36
Retired	25	18	26
Permanent disability	8	9	8
Part-time	8	7	8
Self-employed	7	7	7
Unemployed, looking for work	6	8	5
Unemployed, not looking for work	5	3	5
Student	3	8	3
Other	2	2	2
Education (%)			
Less than high school	1	1	0
Some high school	4	3	5
High school or equivalent (eg, GED)	24	24	24
Some college, but no degree	27	26	27
Associate's degree	17	17	17
Bachelor's degree	18	17	18
Some graduate school, but no degree	3	6	3
Graduate school (eg, MS, MD, PhD)	6	6	6
Actively seeking treatment (%)			
Yes	49	66	47
No	51	34	53

TABLE 1 (Continued)

(b)			
Characteristics of HCPs	Total HCPs (n = 395)	Obesity specialists (n = 41)	Non-obesity specialists (n = 354)
Age group (years, %)			
18-24	0	0	0
25-34	7	2	8
35-44	26	34	25
45-54	34	44	32
55-64	31	20	32
≥65	2	0	3
Gender (%)			
Male	59	61	58
Female	41	39	42
Regional distribution (%)			
West	29	46	27
Ontario	52	42	53
Quebec	13	7	14
Rest of Canada	6	5	6
Occupation (%)			
Physician (MD)	87	90	87
Dietitian (RD, PDt)	7	0	7
Registered nurse (RN)	5	10	5
Nurse practitioner (NP)	1	0	1
Specialty (n, %)			
Family practice	54	32	57
General practice	17	10	18
Endocrinology	10	10	10
Internal medicine	6	7	6
Bariatrics/obesity medicine	5	29	2
Cardiology	4	5	3
Gastroenterology	2	0	3
Bariatric surgery	1	7	0
Obstetrics and gynaecology	1	0	1
Consider themselves as obesity specialists (%)			
Yes	30	73	26
Mean number of patients seen in previous month for weight management	104	232	89
(c)			
Characteristics of employers	Total employers (n = 150)	Company size	
		Small-medium (n = 65)	Large (n = 85)
Mean age (years)	39	38	40
Gender (%)			
Male	45	49	41
Female	55	51	59
Regional distribution (%)			
West	33	34	32
Ontario	40	42	39

(Continues)

TABLE 1 (Continued)

Characteristics of employers	Company size		
	Total employers (n = 150)	Small-medium (n = 65)	Large (n = 85)
Quebec	22	18	25
Rest of Canada	5	6	4
Organization's annual revenue, millions (\$CAD, %)			
Mean	2.140	1.185	3.297
1–25	21	34	12
26–99	14	20	9
≥100	21	17	24
Unsure/do not know	44	29	55
Sector (%)			
Private	61	69	55
Public	36	26	44
Non-profit	3	5	1
Full-time employees with health services benefits (%)	85	86	85
Average cost (CAD) per employee to provide health benefits in the most recent fiscal year (%) ^d			
<\$1000	12	17	8
\$1001–\$1500	10	8	11
\$1501–\$2000	24	33	18
\$2001–\$2500	23	19	26
\$2501–\$3000	15	14	15
>\$3000	10	5	15
Do not know	6	4	7

Note: Weight-loss success was defined as having a current weight at least 10% less than their maximum weight in the previous 3 years and being able to maintain it for 1 year or more. HCPs were classified as obesity specialists (OS) if at least 50% of their adult patient visits are primarily for weight management, based on their own assessment. Dietitians were excluded from the OS classification. Companies were classified as small- to medium-sized if they had between 20 and 499 employees and large if they had at least 500 employees.

Abbreviations: CAD, Canadian; GED, General Education Diploma; HCP, healthcare provider; PwO, people with obesity.

^a“Other” was a third option and was selected by n = 4 respondents.

^bPercentages do not add to 100% due to option to select “all that apply.”

^cObesity classes were defined as having a self-reported body mass index of, respectively, 30–34.9, 35–39.9 and ≥ 40 kg/m² for class I, II and III.

^dResponses are collected from employers with knowledge of their healthcare structure (total employers, n = 144; small-to-medium, n = 64; large, n = 80).

PwO who did not experience weight-loss success (ie, <10% weight loss in the previous 3 years, or no more than a 1-year success) were more likely to report the absence of these discussions than those who did.

3.7 | People with obesity-employer relationship

Although the term “wellness program” was undefined and thus was open to interpretation, 99% of employers and 61% of PwO reported that their company offers such a program. Employers reported that weight-management benefits offered by their company were mainly gym/fitness memberships or discounts (59%) and dietitian/nutritionist counselling (49%); some reported behavioural modification/psychological counselling (38%) and relatively few reported that their health insurance covered prescription weight-loss/anti-obesity medications (27%). More employers than PwO reported that non-participation in such programs

by PwO was due mainly to a lack of interest (35% vs 4%) or motivation (49% vs 14%) to lose weight. Similarly, 50% of employers considered non-participation due to PwO feeling uncomfortable, whereas fewer PwO (22%) cited this as a reason.

3.8 | Continuing medical education, training and clinical practice guidelines

Among HCPs, the majority selected practice resources (83%) as the most effective means of supporting weight management, followed by clinical techniques (70%), educational courses or training in effective weight management and the physiology of obesity (56%), patient education materials and tools (52%) and education on prescription drugs to treat obesity (38%). Only 6% of HCPs (including 17% of obesity specialists and 4% of non-obesity specialists) considered medical guidelines “very” or “extremely” effective for treating

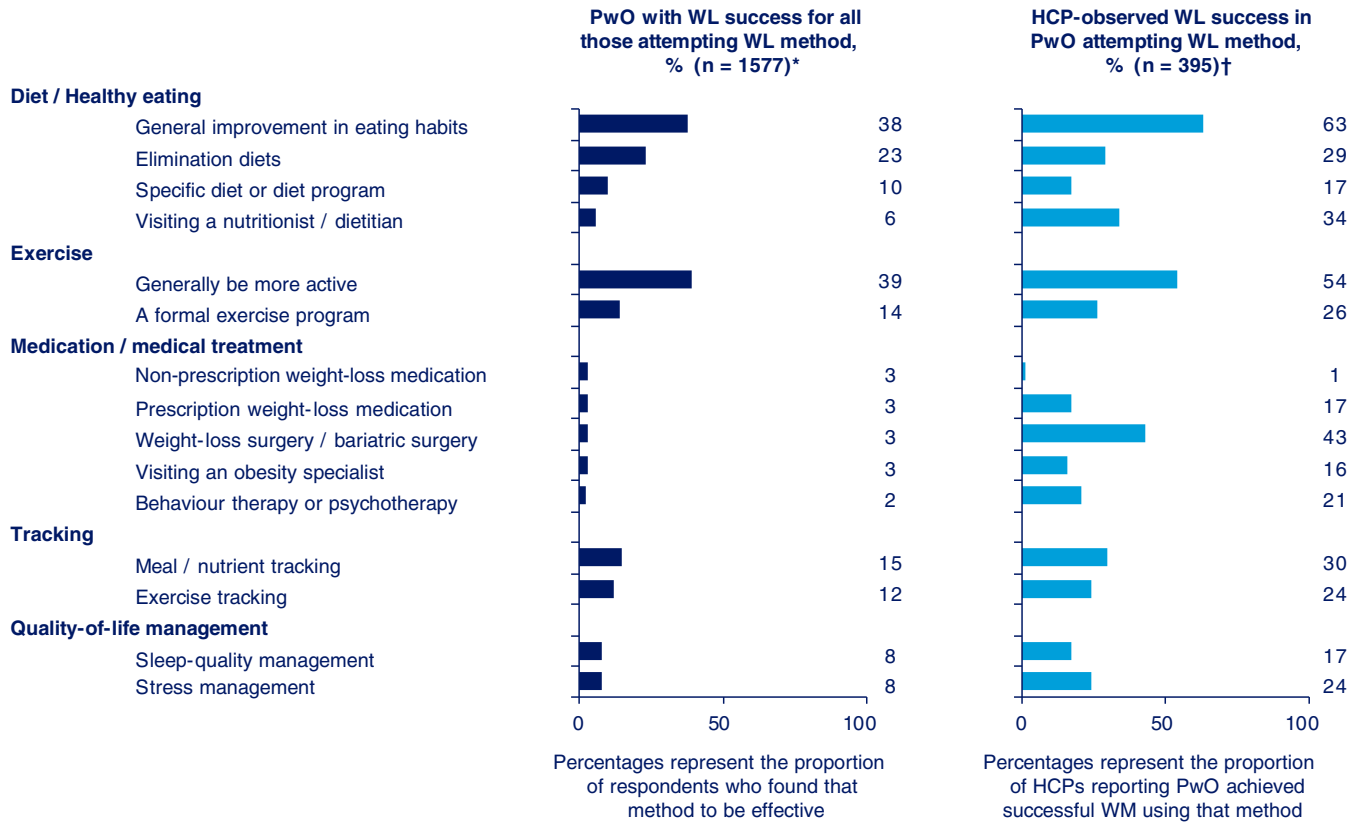


FIGURE 1 Methods reported by PwO and HCPs as effective for long-term weight management. Percentages represent the proportion of respondents who tried (from those PwO who had made at least one serious WL effort) or recommended (HCPs) that WL method and found it to be effective, based on their personal criteria, for long-term weight management. *0.07% of PwO and †6% of HCPs selected “other.” HCP, healthcare provider; PwO, people with obesity; WL, weight loss

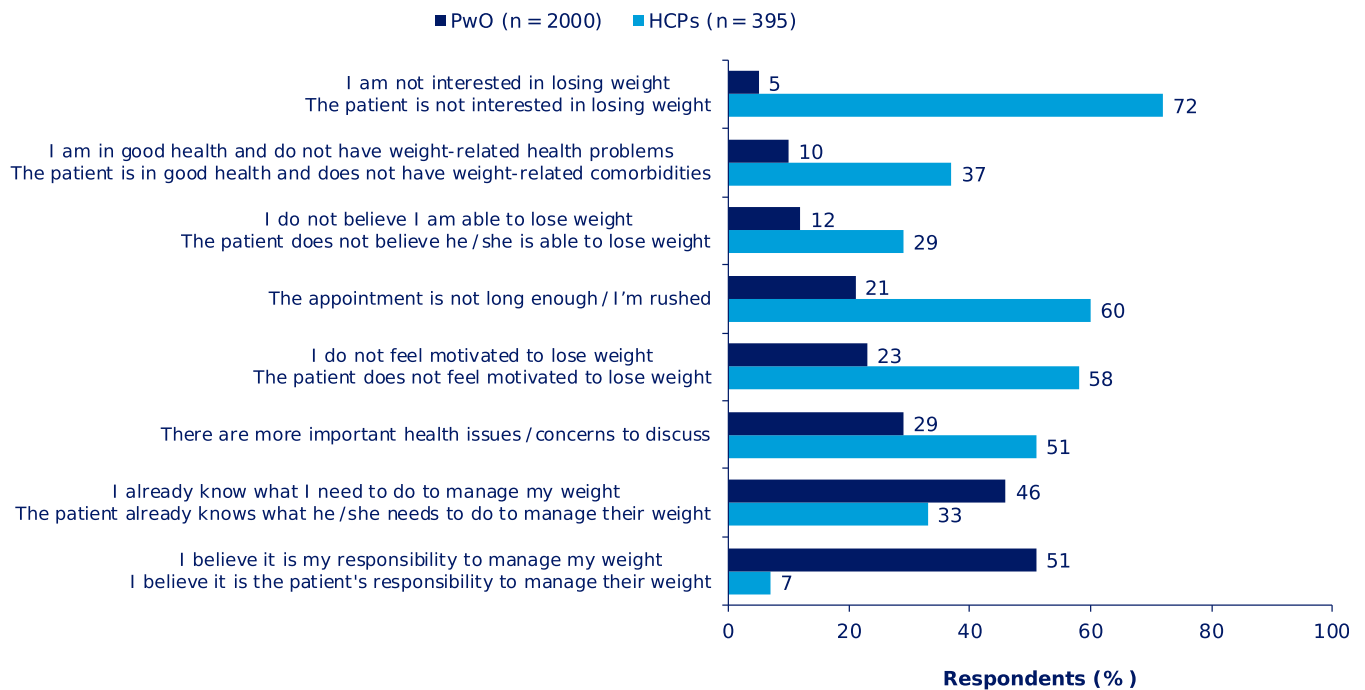


FIGURE 2 Reasons for not discussing weight management, as reported by PwO and HCPs. Respondents were asked to select up to five “top” reasons from a list provided, or enter a text response. Questions for PwO and HCPs were worded slightly differently, as required, and HCPs were asked an additional question: “I do not get financial compensation for treating obesity” (data not shown). HCP, healthcare provider; PwO, people with obesity

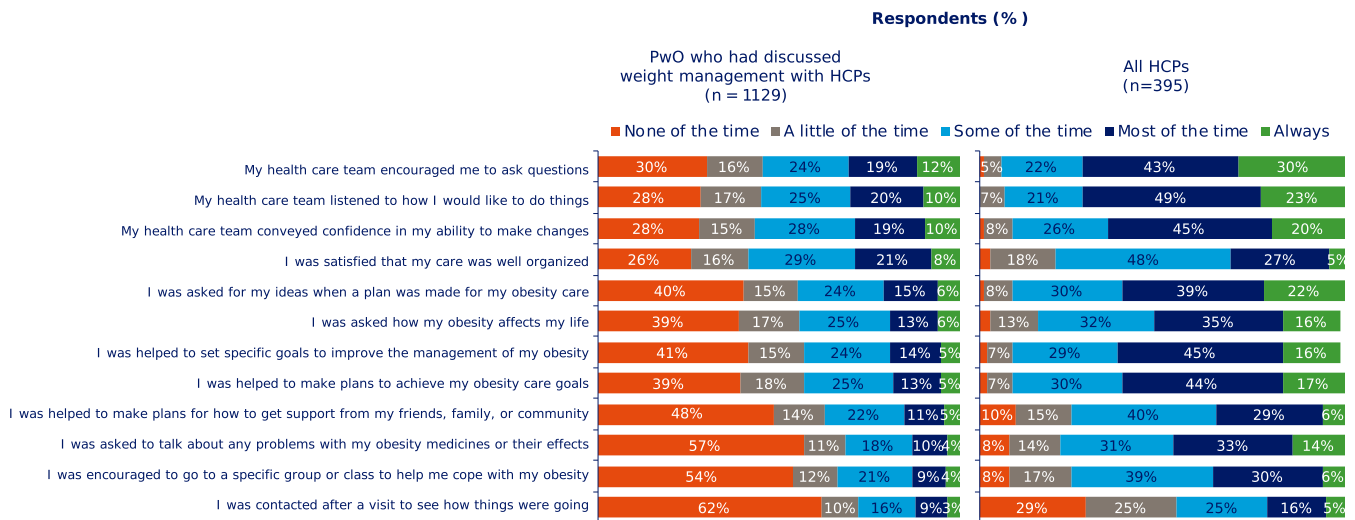


FIGURE 3 Perceptions regarding interactions between PwO and HCPs, as reported by PwO and HCPs. Percentages indicate number of respondents selecting the polling option from the provided list. Questions for PwO and HCPs were worded slightly differently, as required. HCP, healthcare provider; PwO, people with obesity

obesity. Less than half (43%) of HCPs reported that they follow treatment guidelines.

4 | DISCUSSION

Although many PwO, HCPs and employers acknowledge that obesity is a chronic medical condition, they shared the belief that “eat-less-move-more” was the most effective management approach they had tried or recommended—perceptions that are consistent with the public health obesity narrative.^{4,8} Evidence suggests, however, that diet and exercise have limited efficacy for sustained weight management in individuals with established obesity.²⁶ Furthermore, PwO and HCPs reported limited discussion of evidence-based interventions, such as behavioural interventions, pharmacotherapy and bariatric surgery. This is despite PwO reporting multiple comorbidities and evidence for positive health outcomes associated with these interventions, such as sustained weight loss, reduced rates of or improvement in comorbidities and/or decreased mortality.²⁷⁻²⁹ The findings are consistent with the limited access to and/or coverage of these interventions in Canada.²² Neither of the two prescription anti-obesity medications approved for use in Canada at the time of the survey (orlistat 120 mg and liraglutide 3 mg) are reimbursed under any provincial or federal public drug benefit program and coverage under private drug plans is not universal. Bariatric surgery is conducted in 9 of the 10 provinces in Canada, albeit with significant interprovincial variance in terms of access. There are no centres conducting bariatric surgery in the three Canadian territories. The simplistic viewpoint on the management of obesity clearly needs to be challenged, as few PwO reported long-term success in maintaining weight loss.

Most PwO considered weight loss their own responsibility and many reported they knew how to lose weight. Such beliefs may lead to a substantial delay in PwO seeking help from HCPs and have been

associated with less weight-management success.³⁰⁻³² Many HCPs, meanwhile, incorrectly believed that such delay results from a lack of interest and motivation from PwO. Some of these misconceptions may be driven by cultural weight bias and stigma and could be barriers to effective obesity management.³³ This may result in HCPs engaging less frequently in patient-centred discussions,^{32,34} which could help improve the understanding of obesity as a chronic disease that requires long-term management.

The results of the study, which demonstrated substantial between- and within-group differences for PwO, HCPs and employers, provide further evidence that there are substantial gaps in evidence-based and professional approaches to obesity management. The need for multidisciplinary practice resources for obesity management—such as access to a nutritionist, dietitian, psychologist or social worker, as recognized by the majority of HCPs surveyed—aligns with the reported limited availability of interdisciplinary teams in Canada.²² Some HCPs identified a need for educational programs that equip them to better help PwO with weight management and maintenance of weight loss, as well as to better understand the pathophysiology of obesity. The adherence to current obesity management guidelines was reported to be low and most HCPs believed this guidance was ineffective; this is in agreement with findings of inconsistent adherence to evidence-based guidelines across Canada.³⁵ The reasons³⁶ may include: limited awareness of (or familiarity with) applicable guidelines, lack of agreement with guideline content or value; lack of self-efficacy; poor outcome expectancy; inability to overcome the inertia of previous practices; guidelines that are outdated³⁷ or perceived as non-pragmatic or ineffectual³⁸⁻⁴⁰; and weight-bias attitudes and beliefs, which can affect the quality of obesity management.³²

Many of our findings align with those of the ACTION study in United States,¹³ highlighting the importance of collaborative, international efforts to address barriers to effective obesity management. The perception in both studies that “eat-less-move-more” is an

effective strategy, despite a lack of successful weight management for most PwO and the feeling among PwO that weight loss is their own responsibility, reflect the gaps in the understanding and care of obesity in both countries. Differences in U.S. and Canadian healthcare reimbursement systems that affect insurance coverage^{22,41} may influence the type of interventions discussed during PwO and HCP interactions. However, HCPs in both studies reported there was insufficient time for weight-management discussions and placed a greater emphasis on healthy eating and physical activity than on medical management, which may be attributed to both a lack of understanding of obesity as a chronic disease as well as to the low rates of insurance coverage for anti-obesity medications and access to bariatric surgery in both systems.^{22,41} Employers in the ACTION Study Canada and United States reported greater efficacy of their companies' wellness programs than did PwO; however, the wellness programs were not necessarily specific to obesity management. Understanding the attitudes of Canadian HCPs, PwO and employers towards obesity management is critical for overcoming barriers that prevent PwO from seeking and receiving support and medical treatment; fostering a workplace culture that recognizes and treats obesity as a chronic disease³³; and generating strategies and new delivery systems to improve collaborative, evidence-based and patient-centred care.^{9,42}

Limitations of the ACTION Study Canada include its cross-sectional design,⁴³ and the reliance on self-reporting of weight change over time, which could have introduced a recall bias.⁴⁴ Among employers, the inclusion criterion that the respondent believes there is a weight issue (attitudinal agreement) in their organization resulted in the exclusion of 40% of those surveyed. This may have introduced bias in this dataset, potentially in favour of those who believe obesity is a chronic medical condition and employers have some responsibility to help employees with obesity to lose weight. While the use of a web-based survey may result in sampling bias—by selecting for a computer-literate, online population (eg, an over-representation of younger, university- or college-educated and male vs female respondents)⁴⁵—it enables data gathering from a large population in a standardized and efficient fashion and data collection with a reduced risk of observer bias (ie, the panel is constructed without a pre-existing hypothesis).⁴³ Careful measures were taken to optimize participation rates, to improve generalizability to the national population and reduce sampling bias. Furthermore, only minor proportional adjustments were required in RIM-weighting of the sample, which suggested the survey population similar, in terms of age, gender and geographical representation to the referent national distribution (Appendix S1).

5 | CONCLUSIONS

Among Canadian PwO, HCP and employers, obesity is viewed as a "chronic medical condition" and a significant health problem. While improved diet and more exercise was perceived by PwO and HCPs as the most effective management approach tried or recommended and

although many PwO stated that they knew how to lose weight and most perceived it as their own responsibility, few PwO reported successful maintenance of weight loss over the long term. There was a marked disconnect between perceptions of clinical obesity interactions, including the incorrect belief among HCPs that PwO are neither interested nor motivated to lose weight. Findings from the ACTION study in Canada highlight the communication gaps and misunderstanding between PwO and their HCPs and employers. This underscores the need for a collaborative approach and understanding of the complex nature of obesity and for evidence-based management of this chronic disease.

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CONFLICTS OF INTEREST

A.M.S. reports personal fees from Novo Nordisk, during the conduct of the study; personal fees from Valeant, outside the submitted work. A.B. reports personal fees from Amgen, AstraZeneca, Janssen, Merck Frosst, Novo Nordisk, Purdue, Pfizer, during the conduct of the study; personal fees from Amgen, Novo Nordisk, Paladin, Purdue, Pfizer, outside the submitted work. A.L., A.P. and V.C. report being employed by Novo Nordisk Canada Inc. J.K. and D.L. report personal fees from Novo Nordisk, during the conduct of the study. M.-F.L. reports personal fees from Novo Nordisk during the conduct of the study; personal fees from Novo Nordisk Canada and Valeant Canada and grants from Merck Canada, outside the submitted work. S.L. reports personal fees from Novo Nordisk Canada, during the conduct of the study; employment income from Weight Watchers, outside the submitted work. D.A.M. reports personal fees from Novo Nordisk, during the conduct of the study; personal fees from Novo Nordisk, personal fees from Valeant, outside the submitted work. N.M. reports personal fees from Novo Nordisk, during the conduct of the study. S.D.P. reports personal fees and non-financial support from Novo Nordisk, during the conduct of the study; personal fees and non-financial support from Novo Nordisk, grants, personal fees and non-financial support from Eli Lilly, personal fees and non-financial support from Merck, personal fees and non-financial support from Valeant, grants, personal fees and non-financial support from AstraZeneca, grants, personal fees and non-financial support from Sanofi, outside the submitted work. X.R.S. has nothing to disclose. M.V. reports personal fees from

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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