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Characterizing obesity: A qualitative study

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ABSTRACT

Background: The prevalence of obesity among US adults has risen over the past several decades. In addition to bariatric surgery and behavioral weight management, several effective anti-obesity medications have emerged in the last ten years and become increasingly available. The goal of this qualitative study is to explore the perspectives of people with obesity (PwO), health professionals (HPs), and payors on obesity management and treatments.

Methods: This was a 3-group interview study using a qualitative description approach with a target sample size of 40 PwO, 30 HPs who provide care to PwO (10 primary care providers; 10 providers specializing in obesity medicine; and 10 nurse practitioners, physician assistants, or dieticians/nutritionists), and 10 payors. PwO were eligible if they had a Body Mass Index (BMI) $\geq$30 kg/m^2 using self-reported height and weight and the National Institutes of Health (NIH) BMI calculator and were recruited via an online research registry. Health professionals and payors were recruited via direct contact from the research team and sponsor's professional networks in the United States.

Results: A total of 38 PwO, 30 HPs, and 6 payors were interviewed, with PwO interviews occurring from October 2023 to March 2024 and HP/payor interviews occurring from November 2023 to May 2024. The majority of participants in each group accepted the idea of obesity as a chronic disease and that discussing obesity and weight management was important in medical contexts; however, they also acknowledged that stigma around obesity negatively impacted PwO health and health care. All participants described a treatment landscape beginning with lifestyle interventions followed by pharmaceutical or surgical treatment options.

Conclusion: This qualitative study of people with obesity, health professionals, and payors demonstrated current views of addressing and treating obesity in clinical settings. These findings could spur person-centered, less stigmatizing methods to craft plans for weight management.

1. Introduction

The prevalence of obesity has risen dramatically in the United States [1] and worldwide [2] in the past three decades, contributing to an estimated 4 million deaths and 120 million disability-adjusted life years in 2015 alone [2]. The pathogenesis of obesity has been tied to sociodemographic, medical, behavioral, and genetic factors [3] and is increasingly viewed as a chronic disease entity unto itself by health professionals (HP) and people with obesity (PwO) [4–8]. With studies demonstrating reduced risk of complications including cardiovascular events, osteoarthritis and musculoskeletal pain, and metabolic syndrome with intentional weight loss [9–12], there has been considerable

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debate among PwO, HP, and payors about the best ways to address and treat obesity in a variety of care settings.

Multi-dimensional obesity treatment is increasingly available in primary and specialty health care settings and may be contributing to recent data showing decreases in obesity prevalence [13]. Guideline-based approaches for obesity include lifestyle modifications, medications, and metabolic and bariatric surgeries [14–17]. Although there may be considerable practice differences between primary care providers and specialists in recommending newer treatment alternatives like medications, more PwO are being recognized with an obesity diagnosis and are discussing body weight management with their HPs [18,19]. While medication options for obesity treatment have increased over the past decade [20,21], data suggests that weight management medications are underdiscussed [22], under-prescribed [23], and only used for short periods of time [24], which affects their efficacy for sustained long-term weight loss and maintenance [20]. While there is mixed data on whether the prevalence of bariatric surgical interventions is increasing or decreasing [25,26], these procedures have been shown to be effective and safe [27]. The uptake of procedures is limited by patient factors including insurance coverage, socioeconomic status, primary language spoken, as well as perceptions and knowledge [28–30].

PwO, HPs, and payors have differing and nuanced perspectives on how obesity is discussed and treated. PwO experience societal stigma that extends to health care settings [31–36] and is driven by multiple factors including PwO-HP relationship dynamics [34,37,38]; differing cultural preferences and lived experiences with obesity [35,39,40]; lack of knowledge about treatments [22]; concerns about treatment costs and coverage [8,19]; treatment risks [22,30]; and HP anti-fat bias [41,42]. HPs also struggle with short appointment times, lack of knowledge about newer treatments, and poor integration of clinical and community resources [6,19]. PwO-HP discussions of obesity and its treatment have been shown to be infrequent, not solution-oriented, not person-centered, and associated with substantial PwO and HP discomfort [32,33,43]. PwO and HPs often leave weight management conversations with differing perceptions about the discussions including PwO motivations to address weight [6–8]. In some studies, PwO and HP disagreed whether weight-related issues were discussed at all in weight management conversations [35]. Fewer studies have captured payor perspectives about barriers or facilitators towards covering treatments for obesity [44–47].

The goal of this qualitative study was to explore the perspectives of PwO, HPs, and payors on obesity management and treatments.

2. Methods

2.1. Study design and oversight

This was a 3-group interview study using a qualitative description approach, which seeks to represent participants' thoughts and feelings on interview topics without abstracting to the level of social theory. Qualitative description is a commonly used method in qualitative studies in medical and health sciences contexts [48,49]. This study was conducted under the direction of a qualitative methodologist, who worked with the larger study team and representatives from the study sponsor to develop unique interview scripts for PwO, HP, and payor participant groups. The protocol was approved by the University of Pittsburgh Institutional Review Board.

2.2. Sample size

Sample sizes were selected based on the concept of thematic saturation (i.e., the point at which collecting additional interviews does not yield additional insights), which can vary based on homogeneity or heterogeneity of the study population. Since thematic saturation often occurred within the first 6–12 interviews based on other observational studies [50,51], the study team sought a minimum of 10 interviews from each participant group.

2.3. Study population

The study team recruited a sample of 40 PwO, 30 HPs who provide medical care to PwO, and 10 payors to elicit diverse perspectives on obesity treatments. Although eligibility criteria varied by participant type as discussed below, all participants were required to be 18 years or older. Participants across all groups were excluded if they did not speak English or could not provide informed consent.

2.4. PwO

PwO were eligible if they had a Body Mass Index (BMI) $\geq$30 kg/m^2 calculated using self-reported height and weight and the National Institutes of Health (NIH) BMI calculator. Individuals were excluded if they did not meet BMI requirements for the study or were currently pregnant. All PwO were recruited through the University of Pittsburgh Clinical and Translational Science Institute Pitt + Me® research registry, which allows potential research participants to partner with enrolling research studies and clinical trials based on the topics in which participants indicate interest [52]. Pitt + Me® predominantly, but not exclusively, draws from southwestern Pennsylvania. Once participants were matched with this study, a study team member contacted interested PwO to complete the screening and consent process. Recruitment on the Pitt + Me® registry opened in October 2023 and was incrementally closed as arms filled until the study ended. The study period was conducted from 2023 to 2024.

The target for PwO enrollment was 40 participants, including 20 interview slots (10 for women and 10 for men) reserved for Black or African American participants since obesity disproportionately affects that population [53]. The remaining 20 interview slots (10 reserved for men and 10 reserved for women) were open to all other racial/ethnic groups.

2.5. HPs

HPs were eligible for the study if they treated people *with* obesity, regardless of whether they treated those individuals *for* obesity. Those HPs who did not self-report providing routine treatment for PwO were excluded. HPs were recruited via a snowball approach within the research team's professional network, including email listservs within the University of Pittsburgh Medical Center (UPMC) Health System. A study team member contacted interested HPs to complete the screening and consent process for the study. The target enrollment for the 30 HP sample included 10 primary care providers; 10 providers specializing in obesity medicine (the study team did not collect information on whether they were boarded in obesity medicine); and 10 nurse practitioners, physician assistants, or dieticians/nutritionists.

2.6. Payors

Payors must have worked in health insurance administration with formulary decision and utilization expertise to be eligible for the study. Payors were recruited via direct contact from the study team and sponsor's professional networks throughout the United States, with the principal investigator reaching out after the initial direct contact to gauge interest in participating. Demographic information was not collected because they were speaking about their plans, regulations, and coverage rather than their personal opinions. Given that payors work with proprietary and potentially sensitive information within their organizations, the study team recognized the potential difficulty of recruiting this group into studies and set target enrollment at 10 payors.

2.7. Analytical plan and qualitative approach

Consented participants completed 30- to 60-min interviews via Health Insurance Portability and Accountability Act (HIPAA) complaint teleconferencing software. Following interviews, audio files were transcribed verbatim with identifying information redacted to produce de-identified interview data. The study team used open coding of transcripts and input from content experts on the study team to identify topics and themes from interviews, resulting in simultaneous inductive and deductive codebook development. Codes were thoroughly checked to determine that definitions are sufficiently distinct to reduce ambiguity in the coding process. Two independent trained qualitative coders initially coded 25 % of the transcripts using MAXQDA 2022 (VERBI Software, 2021) software to ensure quality and consistency in coding.

Coding was then compared to calculate Cohen's Kappa Inter-Coder Reliability scores for the PwO and HP groups but not for the payor sample, which had insufficient size for Kappa calculations. During this comparison, the coders identified coding discrepancies that were adjudicated by the qualitative methodologist until full agreement was achieved. A primary coder completed coding of the remaining transcripts according to the standards identified in the codebook and adjudication process. The qualitative methodologist and primary coder then compiled a quote report organized by codes to conduct conventional content and thematic analyses to determine the most salient points of discussion [54–56]. Since the small and varied payor data set made comparable coding across all transcripts more difficult, a single coder (the qualitative methodologist) completed coding while another study team analyst read transcripts to confirm results.

3. Results

A total of 38 PwO (10 African American women, 8 African American men, 10 women of all other races/ethnicities, and 10 men of all other races/ethnicities), 30 HPs, and 6 payors were interviewed. Demographic data for PwO, HP, and payor participants are included in Tables 1–3. PwO interviews took place from October 2023 to March 2024, while HP and payor interviews occurred from November 2023 to May 2024. Payors were geographically spread throughout the country, while all HPs were based in Pittsburgh, PA. Three major themes emerged across all three data sets, which are discussed below. Exemplar quotes supporting these themes can be found in Tables 4–6.

Theme 1. A majority of HPs, PwO, and payors accepted the idea of obesity as a chronic disease and agreed that discussing obesity and supporting weight loss in medical contexts was important since excess weight can affect health.

Across all three data sets, a majority of participants agreed that it is important for obesity to be addressed and treated, particularly if it contributes to comorbid cardiovascular or metabolic conditions (**see** Table 4, **Quotes 4–1 to 4–7**). Interviewed participants were asked "There is a growing school of thought that regards obesity as a disease, thinking that it occurs because something's going wrong in the body. Have you ever heard of this idea and what do you think about it?" While some PwO clearly answered "yes" or "no," others asked clarifying questions and then agreed with the idea or noted that they heard "it (obesity) could have a genetic basis." All payor participants supported coverage for medications that assist in weight loss when PwO have cardiovascular or metabolic comorbidities in addition to a BMI that meets the criteria for obesity (**see Quotes 4–6 and 4–7**). Payors and HPs were in alignment that obesity should be regarded as a disease (**see Quotes 4–3, 4–4, 4–5, 4–6**), while PwO were less familiar with this concept but amenable to the idea.

Although most interviewed PWO were not familiar with the concept of obesity as a disease but accepted it once introduced, a majority (34/38; 89 %) of PwO participants felt that it is important for HPs to discuss weight with patients since weight impacts overall health (**see Quotes 4–1, 4–3, 4–4, 4–5, 4–6**). All PwO participants felt that weight (both excess weight and being underweight) contributed to cardiovascular and metabolic illnesses and could cause ambulatory complications (**see Quote 4–1**). Particularly if a PwO was seeing their HP for a condition or complaint that could be caused or exacerbated by excess body weight, they wanted to discuss that issue in a factual manner as they would with any other condition (**see Quote 4–2**).

Theme 2. Significant stigma around obesity was described as negatively impacting PwO health as well as their ability to seek and receive quality health care.

All participating PwO, HPs, and payors acknowledged the heavy burden of stigma related to obesity and described this stigma as having complex and multivalenced negative effects on health. Beyond direct effects on PwO health, these negative effects included poor self-image and mental health conditions resulting from stigma, avoidance of health care due to shame and a desire to avoid judgement, avoidance of participation in behavioral interventions such as exercise programs due to shame, and undertreatment or delayed treatment of medical conditions assumed to be the result of excess weight (**see** Table 5, **Quotes 5–6, 5–7, 5–8, 5–9, 5–10, 5–11, 5–12**).

PwO reported varied health care experiences. Some felt judged by their HPs and that their health concerns were inappropriately reduced to their weight without considering other causes (**see Quotes 5–1, 5–2**). Others were frustrated when health professionals offered "vague and very generalized" guidance for weight loss rather than specific recommendations (**see** Table 6, **Quotes 6–1, 6–2, 5–3**). In a similar vein, PwO with medical comorbidities that are known to result in weight gain (like hormonal disorders or pregnancy) often felt that their HPs counseled them on weight without acknowledging that their condition was contributing (**see Quotes 5–3, 5–5**). PwO recovering from eating disorders like anorexia nervosa felt that judgmental conversations about weight loss were wholly inappropriate and triggering (**see Quote 5–4**). Some PwOs reported positive weight management discussions with HPs who were empathic, non-judgmental, and focused on actionable treatment plans (**see Quote 5–3**).

Both PwO and HPs described that being labelled as "obese" made PwO feel uncomfortable and contributed to poor self-image (**see Quotes 5–6, 5–11**). Prevalent societal weight-related stigma leading to constant focus on having obesity as negative, which was more pronounced for women in our sample, especially given the role of childbearing in women's lives and weight gain (**see Quote 5–5**). While negative feelings resulted from conversations about weight, and from being labelled "obese," those negative feelings were not in any way motivational – i.e., stigma did not make PwO want to lose weight.

Health professionals frequently described weight-based stigma itself as having multiple negative impacts on PwO mental health, self-esteem, and reluctance to engage in health care (**see Quotes 5–8, 5–9**). They noted that PwO would avoid care or avoid talking about obesity or weight due to perceived feelings of shame, embarrassment or self-blame,

Table 1
PwO demographic data.

	People with Obesity (PwO) (n = 38)
Age Range (years)	23-67 (median 41.2)
BMI Range (kg/m^2)	30.3–52.1 (mean 36.4)
Race or Ethnicity	10 African American Females 8 African American Males 10 Females/10 Males (all other races/ethnicities)
Education/ Degrees	7 with High School or GED equivalent 9 with Post-High School Training (trade school, certificate, associate's degree, or "some college") 12 with Undergraduate degrees 10 with Graduate degrees

Table 2
Health professionals (HPs) demographic data.

Type of Provider	Health Professionals (n = 30)			
	Physicians (n = 14)	Physician Assistants (n = 12)	Nurse Practitioners (n = 3)	Nurse Health Educator (n = 1)
Age Range (years)	31–59	26–43	33–51	50
Sex	3 Male 11 Female	1 Male 11 Female	3 Female	1 Female
Self-Identified Race	9 Caucasian 3 Asian 1 Indian or Asian 1 South Asian	11 Caucasian 1 Prefer Not to Say	2 Caucasian 1 Caucasian or Jewish	1 Caucasian
Area of Practice	8 Internal Medicine 3 Endocrinology 2 Primary Care 1 Family Medicine	6 Endocrinology 2 General & Bariatric Surgery 2 Nephrology 1 Palliative Care 1 Family Medicine	2 Internal Medicine 1 Endocrinology	1 Endocrinology
% of Patients with Obesity (range)	30–80 %	40–95 %	30–80 %	50 %
Years in Practice (range)	1-25+	2–13	3–24	15

Table 3
Demographic data of payor health plans.

Health Plans Represented	4 payors – health plans from whom individuals or employers could purchase plans 1 payor – self-funded employer group for a regional corporation 1 payor - data analyst for a company advising payors on formulary decisions
Covered Lives Represented (range)	1.2–100 million
Insurance Options Offered	3 Plans - Commercial, Medicaid, and Medicare 1 Plan - Commercial, military, Medicaid, and Medicare 1 Plan – covered only employees and retired former employees

Note: Demographic information (i.e., age, sex, race) were not collected as the focus of the interviews was on the health plan/payor rather than the individual being interviewed.

fatalistic beliefs about inability to lose weight, and a desire to avoid being scolded by HPs or avoid discrimination (**see Quotes 5–9, 5–10**). They felt that colleagues who only understood obesity to be a lifestyle disease or a problem of volition often failed to identify other factors influencing a person's weight. In their view, clinicians who focus on obesity as the only factor influencing health could lead to suboptimal care, including missed opportunities for specialty referral or evidence-based treatments (**see Quote 5–13**).

Theme 3. All participant types described a treatment landscape that starts with lifestyle interventions and subsequently might expand to include pharmaceutical or surgical treatment options complementary to lifestyle changes.

All participant types were asked about treatment and described a preference for starting with behavioral interventions and then including pharmaceutical and possibly surgical options if needed (**see** Table 6**, Quotes 6–7, 6–8, 6–9**).

PwO reported being offered behavioral modifications (i.e., diet, exercise, or structured weight loss programs), physical therapy, surgery, "diet pills," and newer medications such as GLP-1 receptor agonists to treat obesity. Generally, participants responded favorably to the possibilities of treatment and assistance with weight loss as they were provided options as a recommendation. In some cases, participants reported changes in their bodies from following recommended treatments that were positive for their mental and physical health (**see Quote 6–5**). PwO reported that the majority of treatments suggested to them focused on behavioral modification rather than medications despite growing public awareness of these options. Even fewer PwO took weight-loss medications, citing reluctance to use injectable agents or lack of insurance coverage as barriers (**see Quote 6–6**). Other PwO expressed interest in new weight-loss medications but wanted to speak with their HPs before deciding to try this option. Participants also mentioned bariatric surgery as a possibly effective tool for weight-loss but were generally reluctant to pursue this option due to the demands of surgery, outcomes, and post-operative care (**see Quote 6–4**).

Health professionals held similar views on obesity treatments to PwO. Most HPs suggested some sort of behavioral intervention for weight loss to PwO. These were primarily lifestyle changes such as increased physical activity or exercise, changes in their diet, mindful eating, intermittent fasting, or a combination. Most HPs started conversations with PwO talking about these lifestyle change-interventions and then continued to talk about other treatments (**see Quotes 6–7, 6–8, 6–9**). Others used these interventions as the first line of treatment before suggesting pharmaceutical or surgical treatments. Notably, while HPs provided, suggested, or referred people to multiple forms of treatment, few participants suggested or preferred behavioral, pharmaceutical, or surgical monotherapy (**see Quotes 6–7, 6–8, 6–9, 6–10**).

Similarly, payors reported coverage for treatment that included lifestyle modification and "wellness" programs that were covered for all individuals whose BMI meets the criterion for overweight or obesity (**see Quote 6–10**). Payors reported that coverage for GLP-1 receptor agonists frequently required a comorbid condition but that non-GLP-1 weight loss medications were usually covered (**see** Table 4**, Quote 4–7**). Payors had concerns that insured people without comorbidities would likely "use the product, lose the weight, and then fall off therapy" leading to a "continuing cycle" of weight loss and gain that did not justify coverage in the face of medication costs. HPs and payors both described the importance of adherence to weight loss medications in the short and longer term (**see Quotes 6–7 and 6–12**), with payors in particular positing potential limitations on reauthorizations for newer agents like GLP-1 receptor agonists (**see Quote 6–12**). They hoped to see "durability over one year, a couple of years, (or) five years" to support ongoing medication authorization in the absence of comorbidities (**see Quotes 6–12, 6–13**). Bariatric surgery was generally covered for all PwO with a BMI of 35 kg/m^2 or above who met specific criteria (**see Quote 6–11**).

4. Discussion

This qualitative study of PwO, HPs, and payors revealed common themes regarding discussing, managing, and treating obesity. A majority of participants from each group agreed that obesity is a disease state, that weight does impact health, and that treatment access was important. Payors cited that the current state of evidence suggested a lack of long-term efficacy that needed to be balanced against the high costs of medications. All noted that stigma and barriers to treatment impact how obesity is discussed and managed and acknowledged the growing number and types of treatment options.

Table 4
Quotes for Theme 1 – A majority of health professionals, people with obesity, and payors accepted the idea of obesity as a chronic disease and agreed that discussing obesity and supporting weight loss in medical contexts was important since excess weight can affect health.

People with Obesity (PwO) Quotes
4-1 I think it [health] depends on weight; I think that, um, I do believe that certain bodies are comfortable at certain sizes, and you can be healthy cardiovascularly and strength-wise and things, and have a higher BMI, you know, and so I don't think today that they are as correlated as maybe I thought twenty years ago, like, the fatter you are the, the less healthy you are. I think we know now that there are thin people who are unhealthy and could have healthier counterparts in terms of, you know, how their heart and other organs are working and things like that, that may weigh a lot more. But I also do think that being heavier can cause more wear and tear on things like joints, and, you know, might lead to, to other challenges. So, I don't think they're directly correlated, not like a-hundred percent, but I do think there is some relationship there.
4-2 I think they should just approach it just strictly factual information. Just like if you broke your bone—if you broke your arm, you know, they would tell you that you broke your arm and they would say, well, that's just what happened. You know, you're overweight? Well, it would be better [if you lost weight]—I mean, that person can choose not to get their arm fixed, if they don't want, like, break their arm even more if they want if they want to do damage to their body, but you know, the medical professional has the right—has the duty to tell them what their ailment is, what's going on with them, what disease they have, you know, and it doesn't mean that the person having that broken arm is a bad person or anything, it just means that they have a broken arm.
Health Professional (HP) Quotes
4-3 Well, I think it's hard on the entire body. It's hard on your heart, it's hard on, it causes high blood pressure, it causes diabetes. Um, or, like, it affects — I won't say a cause [of] — it affects diabetes, it affects high blood pressure. I would go back to those because those are two that I always think of, which then are hard on your kidneys, such a heart on your heart. It's just you're carrying all around extra weight. So, I mean, your skin as well, too, it's hard on your joints because you're carrying all the extra weight on your joints, that you're in pain, it's difficult to move around; it's just, it affects the whole body. And then, then you start to feel sluggish, which then also too can affect your emotions, that can affect your mood, then you start to have then that kind of thing come into play. So, I think it just affects you as a whole person.   *Physician Assistant*
4-4 I have heard of this [school of thought], and it's probably true, because obesity is not just one parameter. There are so—there is a genetic component to it, there is an environmental component to it, and then there is a social component to it. So, the genetics definitely play a role, I have seen that in my practice. It's definitely a disease, and it is not always that the patient is at fault, or that the patient is doing something wrong. I have patients who, when they tell me what they are eating, what they do, it sounds like they're doing everything right, but still they have trouble getting rid of the excess weight, which could be because of some underlying genetic problem, or it could be like they have hormonal issues like thyroid or PCOS. So yeah, it is—I agree that it is a disease.   *Internal Medicine Physician*
Payor Quotes
4-5 So, it's their quality of life where, if unmanaged, we, we know other conditions can occur. So, we, with the diabetes, with cardiovascular, and others, you know; of course, with pediatrics, you know, if it's, if it starts with kids, you know, of course, the type two diabetes is one of the first things. So that's where early intervention is key for, for those patients and members who are, first, overweight, and then, of course, if it gets worse, then it leads to obesity. So, there is that, the stages, of course; we talk so much about obesity, but of course, when we have overweight, that specific definition, those, it's like a red flag similar to pre-diabetes versus diabetes. So, you know, with that being said, it's not just the patient, but we also want to look at culturally, where it could be the family, it could be the social aspect of those around them, the caregivers, all of those comes into play, uh, with the, the holistic approach to obesity management.
4-6 So, so here's the conundrum in which we find ourselves right now. I think obesity is a complex chronic disease…I ran a bariatric program for over a decade. So, I believe that it is a complex biopsychosocial chronic state in which people find themselves and it is absolutely the driver for diabetes, hypertension, high cholesterol, coronary disease, sleep apnea, endometrial, colon cancer, all these other issues that come up with it. And so, I believe that it is absolutely vital. Like, unequivocally, without question vital for corporations to be leaning into and providing tools and solutions for their employees to manage their obesity-related, their obesity, and obesity-related conditions.
4-7 If they have, you know, a BMI over 27, and they have one comorbid, disease, state hypertension, diabetes, I can't remember if high cholesterol is the other one, they would be able to, and plus they have tried an exercise program. I think that piece of it, we're still trying to define a little bit more of what, to what extent that exercise program needs to, what that needs to look like… But we're looking at potentially tying it into our health plan and case management team which we have not done up to this point. Also BMI over 30 with no additional comorbid condition, they can get any medication and we do not have really a formulary in that sense, like really any medication they can try on the state Medicaid side, they are kind of continuing to contemplate the concept of the GLP is like being for higher obesity, which they have tried to do and hasn't really been successful, their policy ends up looking a little bit more like the commercial one. But they tried to go down the path of like a BMI of 35 or 40 to get a GLP which they did not get approval for the concept is, is floating around again. And in that case, they would like require a trial of a non GLP for like lower BMI.

Legend: PwO: people with obesity; HP: health professional; BMI: body mass index; PCOS: polycystic ovary syndrome; GLP: glucagon-like peptide.

The idea of obesity as a chronic disease is increasingly accepted among a majority of participants. More HPs were familiar with this idea than PwO, which aligns with several prior survey studies and has been linked to better PwO-HP relationships and less internalized weight bias [5–8]. Some HPs drew parallels between the changing views of addiction medicine, which regards substance use issues as a treatable disease, and the evolving understanding of obesity as more than just a matter of willpower. HPs viewed treating obesity treatment like any other medical issue. HPs and payors favored amore holistic approach to evaluating weight beyond "numbers" alone that would consider a person's comorbidities and treatment goals, which aligns with the emerging concept of risk stratifying "metabolically healthy" PwO [57]. PwO acknowledged that weight impacts health and should be discussed with HPs; however, these interactions should be modified to be factual, judgment-free, and treatment-oriented [40].

Anti-fat stigma and bias is widely prevalent and influences many aspects of discussing and managing obesity. There is existing evidence that anti-fat bias contributes to low self-esteem, lower activation for change, enhanced mental health concerns, increased disordered eating, and decreased health care engagement [31,32,36,42,58]. As seen in prior studies [42], being labelled as "obese" or "morbidly obese" did not make PwO feel motivated to lose weight. Even so, obesity diagnoses are required for insurance coverage for treatment and can increase the likelihood of being treated in certain cases [59]. It is possible that newer ICD-10 codes featuring Stage I, II, and III Obesity could be less stigmatizing than codes labelling someone as "morbidly obese" while still meeting insurance coverage requirements [60]. Strategies to reduce weight stigma [61] could assure that these important PwO-HP conversations still happen, but in a non-alienating manner that maximizes the impact of treatments and reduces inequities in care.

All participants envisioned a treatment landscape in which health concerns for PwO are not reduced to obesity alone and allows PwO and HPs to co-create actionable weight management plans. Both PwO and HPs felt uncomfortable focusing on weight when it was not clearly tied to a person's chief concern for the visit, suggesting that HPs could improve their approach for addressing how weight relates to other conditions (like arthritis or back pain). Building on prior evidence [37], PwO and HPs hoped to collaborate on personalized weight management plans with matched supports, but health professionals felt limited by time constraints, lack of knowledge, and systemic barriers. Health systems could develop interactive workshops for HPs to learn and practice efficient behavioral change strategies with motivational interviewing and counseling. With some studies suggesting that PwO delay initiating weight management conversations for 3–6 years [6], these strategies could be employed to make weight management conversations more timely, equitable, and effective.

All participants felt that weight management should begin with lifestyle interventions, that access to other management options should be expanded, and that more long-term data was needed to understand newer medical treatments. Most HPs recommended some form of

Table 5
Quotes for Theme 2 - Significant stigma around obesity was described as negatively impacting PwO health as well as their ability to seek and receive quality health care.

People with Obesity (PwO) Quotes
5-1 I'm talking about, oh, I'm having, uh, maybe a pain in my knee, or maybe headaches, or something like that, and we'd be talking about that for a couple of seconds, minutes, and then it would somehow turn into my weight, like it would, like, shift to my weight; […] be like, maybe you could consider, like, increasing exercise or stuff like that, and I was like, thinking along the lines of, wait, what? it's I'm having headaches or, like, knee pain or stuff like that; what does that have to do with my weight?..It always felt like once I walked into the room the physician was just, like, oh, fixed onto my weight and was just like trying to steer every conversation that way.
5-2 She (the provider), focused on one area rather than the whole, my whole self. And it wasn't just, it wasn't just the weight aspect; it was, uh, mental health and things like that. Um, but, you know, it just, it was kind of, I, I tried to explain to her, you know, my weight was in line with, you know, I'm eating more because I feel this way. And she didn't really, um, she was just like, well, stop eating more. That was really frustrating because, you know, [since] I knew there was more to it. I knew, like food brought me comfort, and I knew that wasn't right, so I wanted to do something about it. So, that was definitely frustrating…it was more that doctor not listening to me as far as, not just my one issue; I had multiple issues I wanted to discuss.
5-3 I have an underactive thyroid condition as well called Hashimoto's disease, and, essentially, that's an underactive thyroid. Every time I would go in for, like, PCP appointments or my endocrinologist appointments, it always was very to the point of why do you weigh as much as you do? Um, and in my life outside, when I'm not going to the doctor, you know, I still eat very healthy…So, it's been kind of discouraging, like, growing up as an adolescent and young adult, um, with doctors, you know, essentially fat-shaming you, um, especially when you're, you know, trying all these different things… And it wasn't till recently with this one doctor that I have, um, who has a vast knowledge of, like, Hashimoto's disorder — um, and it's not, he is not an endocrinologist, um, but more so on the nutrition side of things, and he was very empathetic, straight to the point, um, you know, really checked in with me, um, you know, how everything is going. And I was just shocked the first time, just previously having nurses, doctors, you know, I mean, everything under the sun saying that you're overweight, you know, your weight's too high, you're obese. Um, and being a woman, as well.
5-4 [I'm] recovering from eating disorder, [and] I've been told not to talk about weight with providers, and not to look at my weight on the scale.
5-5 That particular conversation [at a post-partum visit where weight loss was brought up], I was very, very upset, mainly because I was six weeks postpartum. I mean, I just had a baby, I'm clearly not going to be in the best shape. I'm not even physically able to be in the best shape at that point. So, that one was really, really a negative effect on my self-esteem.
5-6 Um, I guess, just maybe a little uncomfortable, because it's just the words, um, you know, overweight and obese, just, I don't know, they just have such negative factors to them. So, to be put in that category, because my height and my weight and that kind of stuff, it just, it, it kind of does sting, but it doesn't sting enough for me to, like, oh, yeah, I'm gonna go work out; like definitely didn't do that, to me. It just made me be like, oh, I guess this is how society sees me; every time I see a medical provider, they are going to take this into account, […] So yeah, it does sting a little.
5-7 Psychologically, I think it [the anti-fat stigma] has a lot to do with — it can, you know, make somebody depressed or sad or shy. It can make them, you know, not want to go do things…I think some providers might think that people are lazy or sloppy, or they're just don't want to get better, and so they kind of can be dismissive whenever it comes to overweight people or obese people.
Health Professional (HP) Quotes
5-8 I think a lot of [PwO] internalize it [the stigma] and it goes into their like, self-image and therefore, like, they kind of know that people view them as unhealthy, and then like, that will kind of lead them into, like, some shame behind it. And then, you know, less motivating to actually like, make some changes. *Physician Assistant in Endocrinology*
5-9 Unfortunately, I think there is a stigma towards being overweight or obese, and I think that's why sometimes people come in tearful. I've had patients who say, "I didn't—I was scheduled for my physical last year, but I didn't come in because I didn't lose weight." So, you hear that sometimes, too, and it makes me really sad. I did hear that recently. *Internal Medicine Physician*
5-10 So, I think that it's just like the way that you are treated in society is different. I've experienced this personally, like a lot, where people will say hello to me now that I am a little bit smaller; um, people are a little bit nicer to me. If I'm like, exercising outdoors, like I don't, I don't necessarily get as many looks, like judgmental looks; It's more just so, like, saying hello. Um, but when I was, like, in a bigger body, I would find that, um, you know, if I was trying to exercise or really, you know, getting out of breath, I would get a little bit more looks, and it's like, well, what do you want me to do? I'm, uh, I'm trying to do what you want me to do. *Physician Assistant in Endocrinology*
5-11 I think that probably [stigma] is the single biggest barriers to having these conversations, to initiating treatment. I think it's a lot — and even just the words, you know: I had one of my extended family members tell me, you know, even just seeing the words morbid obesity on her on her paperwork from her after-visit paperwork from a recent PCP visit was just incredibly hurtful. And it's just, you know, it's the diagnosis code… but nonetheless, even just that diagnosis code was an incredibly hurtful thing for this person. *Internal Medicine Physician*
5-12 I'm sure that that bias in medicine with patients who struggle with obesity or who are overweight happens. And I'm sure that there's conscious bias of providers thinking that, you know, because there are certain lifestyle actions that a patient is making, that they're in some ways responsible for their weight gain. But I'm sure there's also unconscious bias of assuming why someone is overweight and then that even indirectly affecting our decisions…I think trying to be conscious of those types of things is really important to be able to build a relationship with the patient and ultimately help them kind of get to where they want to go, if weight loss is something that's important to them. *Internal Medicine Physician*
5-13 I think [stigma] affects health a lot. I mean, I hear from my patients that often they're told, "oh, you just have to lose weight. You just have to lose weight"—that that's the solution for you know, everything. If patients are complaining of, you know, joint issues or aches and pains and they're obese, often they go to a specialist for that, and they'll tell them "Oh, you just have to lose weight." So yeah, I think there is a lot of stigma. *Nurse Practitioner in Endocrinology*
Payor Quotes
5-14 I can see both sides of the coin, on one side of the coin, it's like, every person who's obese has tried to lose weight. You know, as a person who had a BMI of 34.4, my most of my adult life, you know, I was constantly trying to figure out how to get my weight down. And after a period of time, you'd become so jaded and cynical, and depressed and sad, and you feel hopeless. So, if someone walks up and says, I've got a new program for you, behavioral program, it's going to often be reset, met with a fair amount of resistance. But the medication gives new hope, because it's different, it's got is a possibility that it's going to take them a place they've never been before, a lot of the marketplace is using it and being very successful. So, you know, having somebody be compliant and actually take the medicine, the way they're supposed to is really important. Realizing that they're heartbroken and upset and frustrated and skeptical, cynical. And keeping them from having access to that is a bit of a challenge.

Legend: PwO: people with obesity; HP: health professional; BMI: body mass index.

treatment in their practice including behavioral, pharmaceutical, and surgical options. HPs saw medications as complementary to behavioral changes. All participants were interested in more long-term safety and efficacy data for newer medications like GLP-1 receptor agonists – especially for payors noting that the high costs of long-term coverage [62,63] may not be justifiable without durable maintenance of weight loss. Moreover, some payors were interested in understanding the heterogeneity of responses to high cost treatment alternatives like GLP-1 receptor agonists, including potentially limiting the number of prior authorizations for these agents. This could be conceived as obesity bias (i.e., a different reauthorization standard for obesity versus other medications for other diagnoses), especially with the multifaceted physiological changes and metabolic adaptations after weight loss can predispose to weight gain [64–66] beyond mere adherence to treatments or lifestyle changes. Emerging multidisciplinary weight treatment strategies like prescribing lower doses or tapering expensive medications, continuing less expensive agents, and integrating lifestyle support could improve treatment outcomes [67,68].

These findings have multiple implications for clinical practice and next steps for research on obesity management. Several HPs noted the importance of biopsychosocial elements like the home environment, cultural practices, access to healthy foods, and mental health, suggesting more concordance between PwO and HPs than either group verbalized [6–8]. Moreover, the perspectives of PwO that their HPs were not able to counsel them effectively on ways to treat obesity could be incorporated into new, PwO-centered medical education initiatives for HPs at all stages of training to center empathy, intersectional contexts, and personalized plans when discussing and treating obesity. Payors

Table 6
Quotes for Theme 3 - All participant types described a treatment landscape that starts with lifestyle interventions and subsequently might expand to include pharmaceutical or surgical treatment options complementary to lifestyle changes.

People with Obesity (PwO) Quotes

6-1 A lot of them [health professionals] will say that you need to lose weight and but give no help or ideas on how to do that on anything. They all just say, oh, well, if you — like for my arthritis — so, if you lose weight, it will help. Well, yeah, but to exercise or do anything, my knees hurt, so, you know, can you help me? And they, none of them really seem to want to help; they just want to tell you to do it. And some of them do it in a way that kind of makes you feel ashamed. And that's, that's like, ugh. I don't really…like it, enjoy, like going to them for that. And then you have the others who don't really say anything to you, but you get their paperwork afterwards and there's, and they're handing you these things about, you know, that you're obese or overweight, you need to lose weight, this is what should be and that. And it's like, tch, you know, why couldn't you have a discussion with me, and then offer some assistance to that?

6-2 [Health professionals don't recommend], like, actual treatments. Um, just like, getting out more, uh, exercising more. She, at the time I was also going to her which I think is not the best idea, uh, for, like, an antidepressant as well. And so, um, seeing was attributing, you know, maybe, uh, the depression being linked to the weight gain and or the gai-uh, weight gain being link to depression and, um, yeah.

6-3 I mean, nothing, nothing medically, like with regards to, like, any medicines or things like that. Um, you know, we just talked about cutting calories and carbs and, you know, getting into, you know, a healthy, um, you know, healthy workout, you know, regimen. Um, or just getting out and being active, walking, um, you know, and, you know, just keeping the blood pumping I guess, but, um, as the easiest sometimes it is to say that I'll do it, I end up not.

6-4 The surgery doesn't have a good long-term track record. As far as, yes, you know, your, your human body is always, you know, coming and going, so you can stretch your stomach, you know, you can, you know, they drop it to an […] you get, you know, you get a faster weight loss, but then, you know, long-term …. But I figured, at my age, I mean, I want to be positive, I want to get the, you know, the results and the, you know, all the medicine, all the medications, you know — so what are you just doing; fine, it's ten percent of your weight. I said, well, I got more than ten percent to go, and that's what, you know, as far as the, you know, the long-term or, or the rapid weight loss.

6-5 I know there's, you know, diet and exercise, the usual. I know there's a lot of medicines now that you can go on, uh, like [GLP-1 receptor agonists], I know there's gastric bypass sleeve surgery… So, there's multiple things out there. But it comes down to just kind of eating healthy and figuring out what works for your body. I've actually seen it [results from GLP-1 receptor agonists] in my friend. She's lost — she started in July and it's October now — and she's lost thirty pounds. So, and I was like, have you changed your lifestyle? She goes, a little bit but not really. So, I know it's what I've seen, I've seen the results firsthand.

6-6 It was suggested I try one of the newer diabetes drugs that I guess is real popular right now that's helping what weight loss. [But] I'm not a fan of injections, I'm not a fan of meds period, but I don't know; I've been considering it.

Health Professional (HP) Quotes

6-7 I always go through lifestyle stuff first. But if I'm going to do a medication, I use [anorectic] a decent amount, I will only use it for a max of three months. You have to come in monthly for a weight check with any of the weight loss, loss medications, or at least do it virtually and have a home weight and talk about the things that they're doing their lifestyle to stay healthy.
Physician Assistant in Family Medicine and Lifestyle Medicine

6-8 Yeah, so I typically suggest people, like, work on, um, their diet and exercise first. So, like, I guess, like, yeah, seeing where people are at to begin with. 'cause certain people will come to me and, like, say, you know, I have, like, a very good diet, and then they have, like, very good exercise already, and you, like, can't really, like, I can't see, like, a way for them to necessarily improve on that. So then, like, then I would maybe start talking about the different medications to help, um, because they've already, like, done a lot with, in terms of diet and exercise. Or the other resource I often offer to people is seeing, like, a nutritionist, um, 'cause they might think that they have a good diet, but, like, it could be optimized.
Internal Medicine Physician

6-9 The vast majority of patients, their obesity is such that we would start off—I mean, you know, nominally everyone starts off first with lifestyle change, and then the decision between medications or surgery kind of takes place based on how much your goal weight loss is going to be and what are the patient's tolerance for side effects. You kind of get a read on what they would be willing to do… and kind of let that guide your conversation. So there's no 100 % pattern you always go 1-2-3, I think you always encourage lifestyle change first, and then you kind of take the more advanced options based on your read of what they would be most interested in, would they'd be willing to accept, and then you can give them the least desirable options kind of later on.
Endocrinologist

Payor Quotes

6-10 Yeah, let me, in terms of other nonpharmacologic, so obviously, we have health coaching, and registered dietician resources that we really, and those are no cost to members, both registered dietitian and, and our care management services that includes RD and health coaching. So those are, are offered to everyone pretty much with no cost. So those are certainly things that we hope folks will lean in. We also have some diabetes prevention programs, diabetes reversal programs is something we're working on, we've had that offered in the past. And so those are also things that we expect, [to] have some weight loss associated with it as well.

6-11 So, we do cover bariatric surgery, and it has a criteria that is more, stringent than… I think it's a BMI over 35…it's more of like an industry standard policy around what would be covered.

6-12 It would, to potentially looking at the adherence over the past twelve months [and] other considerations as far as the overall benefit...As we know, with these therapies [don't] really have that durability over one year, a couple of years, five years…I think it's future-thinking, that may be a consideration where there would only, there would be a limited amount of reauthorizations versus the typical pharmacologic therapy, which may have an unlimited amount of reauthorizations.

6-13 What we're seeing is, or what we're potentially going to see is people will, you know, use the product, lose the weight, and then fall off therapy, and then hopefully keep that off so there won't be a continuing cycle. We're trying to take into account too how much actual utilization we're going to see, or is it going to be, like you had just mentioned, like, they're doing it for a year, fall off therapy, or, you know, discontinue therapy because they lost the weight, but there's always going to be a reoccurring influx of, say patients every year doing that. So, it's just a matter of how many, you know, patients within our population will be doing that.

Legend: PwO: people with obesity; HP: health professional; BMI: body mass index; GLP: glucagon-like peptide.

signaled an openness to covering medications for weight loss alone and a desire for method to predict populations with the highest likelihood of adherence, which could spur new health services research. Finally, the shared interest in long-term outcomes for popular obesity medications among all participant groups reaffirms the need for ongoing research and advocacy for access.

5. Strengths and limitations

This study has both strengths and limitations. We were able to recruit a diverse cohort of PwO, which is especially important since obesity disproportionately impacts those from marginalized communities [1]. Another strength included the array of primary and specialty care experience, range of years in practice, and varying prevalence of obesity in their patient populations that was presented the health professional sample. Regarding limitations, selection bias and a smaller sample size (especially among payors) among those who volunteered to participate in this study could have impacted the variety of viewpoints expressed. Second, the study did not meet the payor interview goal of 10 participants, but reached thematic saturation in this group, nonetheless. Third, while all payor participants played a role in formulary decisions, there are a wide range of roles and responsibilities within payor groups that could impact the viewpoints expressed. Most of our PwO and HP sample lived and worked in southwestern Pennsylvania, which could influence the generalizability of these results. Finally, our team did adhere to patient-centered language throughout our manuscript but there were instances where interviewees used non-patient-first language.

6. Conclusion

This qualitative study of people with obesity, health professionals, and payors demonstrated current views of obesity, how body weight is addressed in clinical settings, and perceptions of available treatment options for obesity. These findings could spur a redesign of patient-centered mechanisms to discuss weight management in diverse health care settings and adopt standardized approaches to obesity treatment.

6.1. Key takeaway clinical messages

- People with obesity, health professionals, and payors accept obesity as a disease and feel that it is important to be discussed in health care settings; however, stigma around obesity significantly affects how people with obesity receive care. Improved education around the nature of obesity as a disease, the impact of stigma around obesity, and personalizing multidisciplinary treatment approaches could improve the accessibility and efficacy of multimodal treatments in a variety of care settings.
- People with obesity, health professionals, and payors agree that managing obesity should begin with lifestyle changes followed by pharmaceutical or surgical treatment options.
- Health professionals and people with obesity envision a treatment environment where they can collaborate on individualized, person-centered treatment plans.

Ethical adherence and ethical review

This study was approved by the University of Pittsburgh Institutional Review Board. Since this was not a clinical trial, there is no NCT number to report.

Declaration of artificial intelligence (AI) and AI-assisted technologies

The authors did not use artificial intelligence during the conceptualization, preparation, or writing of this work.

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Abbreviations

PwO	People with Obesity
HP	Health Professionals
NIH	National Institutes of Health
BMI	Body Mass Index
GLP-1	Glucagon-like Peptide
HIPPA	Health Insurance Portability and Accountability Act
UPMC	University of Pittsburgh Medical Center

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