

Characteristics and Weight Loss Practices from a Large Cohort Using Direct-to-Consumer Telehealth

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INTRODUCTION

Direct-to-consumer (DTC) telehealth is an increasingly popular source of healthcare uniquely suited to facilitate access to treatment for stigmatized conditions such as obesity. Plenity® is a non-systemic, oral superabsorbent hydrogel (OSH) for the treatment of adults with excess weight or obesity (BMI 25-40kg/m²) in conjunction with diet and exercise and is available by prescription via DTC telehealth (Ro). This analysis describes the OSH telehealth population and differences in weight loss (WL) practices between patients with pre-obesity (PwPO) and patients with obesity (PwO) in a large real-world cohort.

METHODS

We conducted a cross-sectional assessment of a random sample of 20,000 patients who provided baseline health information in a structured, online telehealth visit. Patient height, weight, and other demographic and health data were collected. Inclusion criteria for this cohort were adults, not pregnant, no history of eating disorders, had a self-reported minimum BMI of 25kg/m², and had received at least one prescription of OSH. Pre-obesity was defined as a BMI of 25-29.9kg/m² (n=6,426); obesity was defined as a BMI of 30-40kg/m² (n=13,574). Baseline characteristics were assessed using descriptive statistical analysis and tests of difference (χ^2 , t-tests). Statistical significance was set at p<0.05. Bonferroni correction was applied when testing for number and types of weight loss methods tried and number of days of exercise per week.

Table 1. Demographics: PwPO vs PwO

	All (n=20,000)	PwPO (n=6,426)	PwO (n=13,574)	P-value PwPO v PwO
Mean BMI, kg/m ² (SE)	32.4 (0.03)	27.8 (0.02)	34.6 (0.03)	<.0001
Median age, years (SD)	43 (10.7)	43 (10.8)	43 (10.6)	0.6
Age range, years	19 – 86	19 – 81	19 – 86	--
% Female	77.9	83	75.5	<.0001
% ≥1 co- morbidity**	40.2	30.5	44.8	<.0001
**osteoarthritis, high cholesterol, diabetes, high triglycerides, hypertension, obstructive sleep apnea, gallstones, gallbladder disease, NAFLD/NASH, heart disease, stroke, peripheral vascular disease				

*Plenity is contraindicated in patients who are pregnant or are allergic to cellulose, citric acid, sodium stearyl fumarate, gelatin, or titanium dioxide. The most common side effects were diarrhea, distended abdomen, infrequent bowel movements, and flatulence.

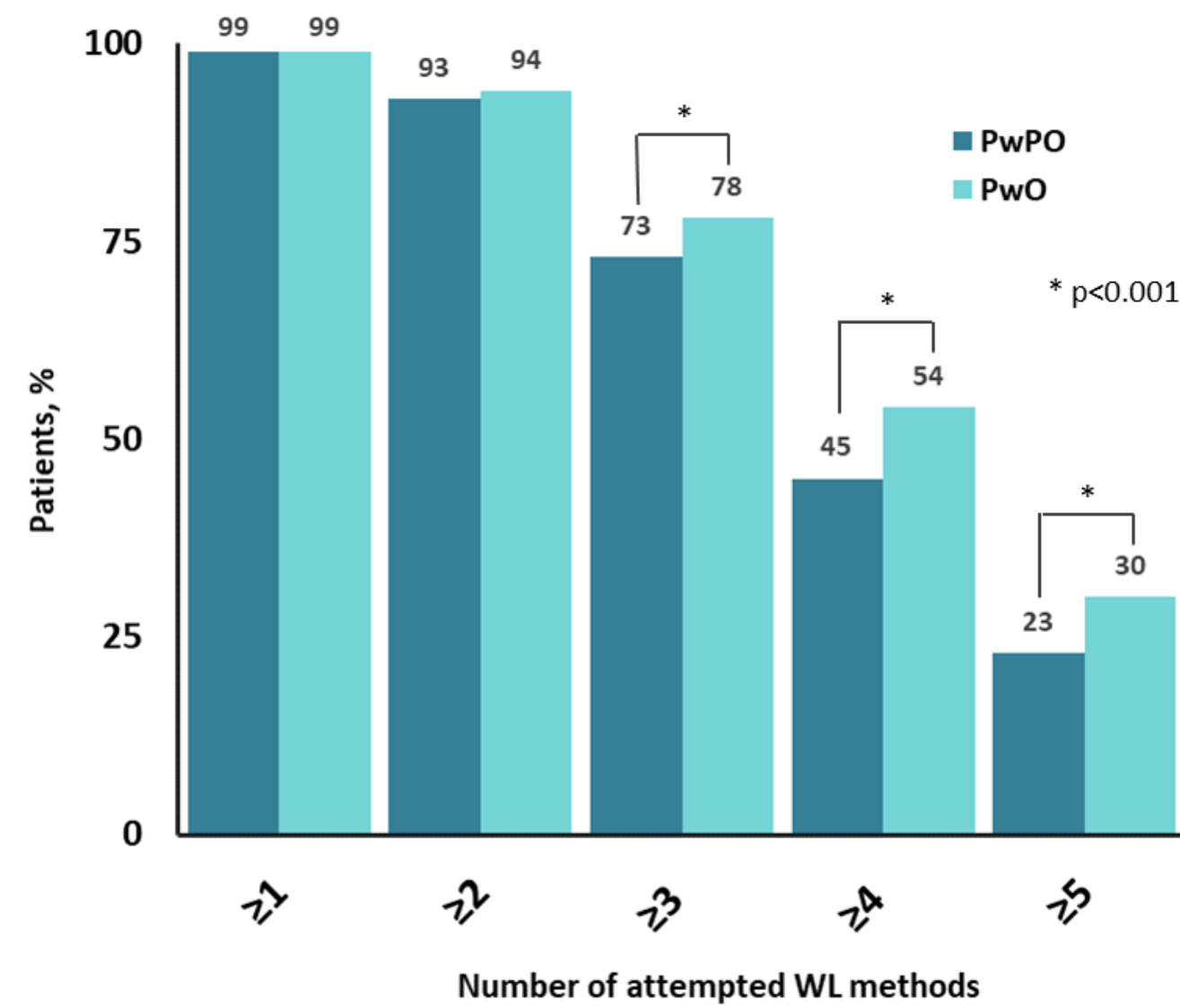
RESULTS

OSH prescription recipients had a mean BMI of 32.4kg/m², were middle aged, and mostly female (**Table 1**). One third of the cohort had pre-obesity, and of that group 69.5% (4,469) reported no weight-related comorbidities. About one fourth (27.0%) of the sample population were above 50 years old, and 7.9% of patients were ≥60 years old.

Self-reported Information on the Number of Prior Weight Loss Methods (Figure 1):

- Almost all patients (98.7%) had attempted at least one prior WL method before OSH.
- Half (50.3%) had tried four different WL methods.
- Significantly more PwO reported having tried multiple WL methods (more than 4) than PwPO (p<0.001).

Figure 1. Number of Attempted Weight Loss Methods Prior to Initiating OSH



Self-reported Information on the Types of Prior Weight Loss Attempts (Figure 2):

- Exercise and low-calorie diet were the most commonly attempted WL methods by both PwPO and PwO.
- Almost 30% of patients reported previous use of prescription WL medications, including over 20% of PwPO.
- 247 patients in the full cohort (1.2%) reported prior WL surgery. This group had a mean BMI of 33.2kg/m² at initiation of OSH.

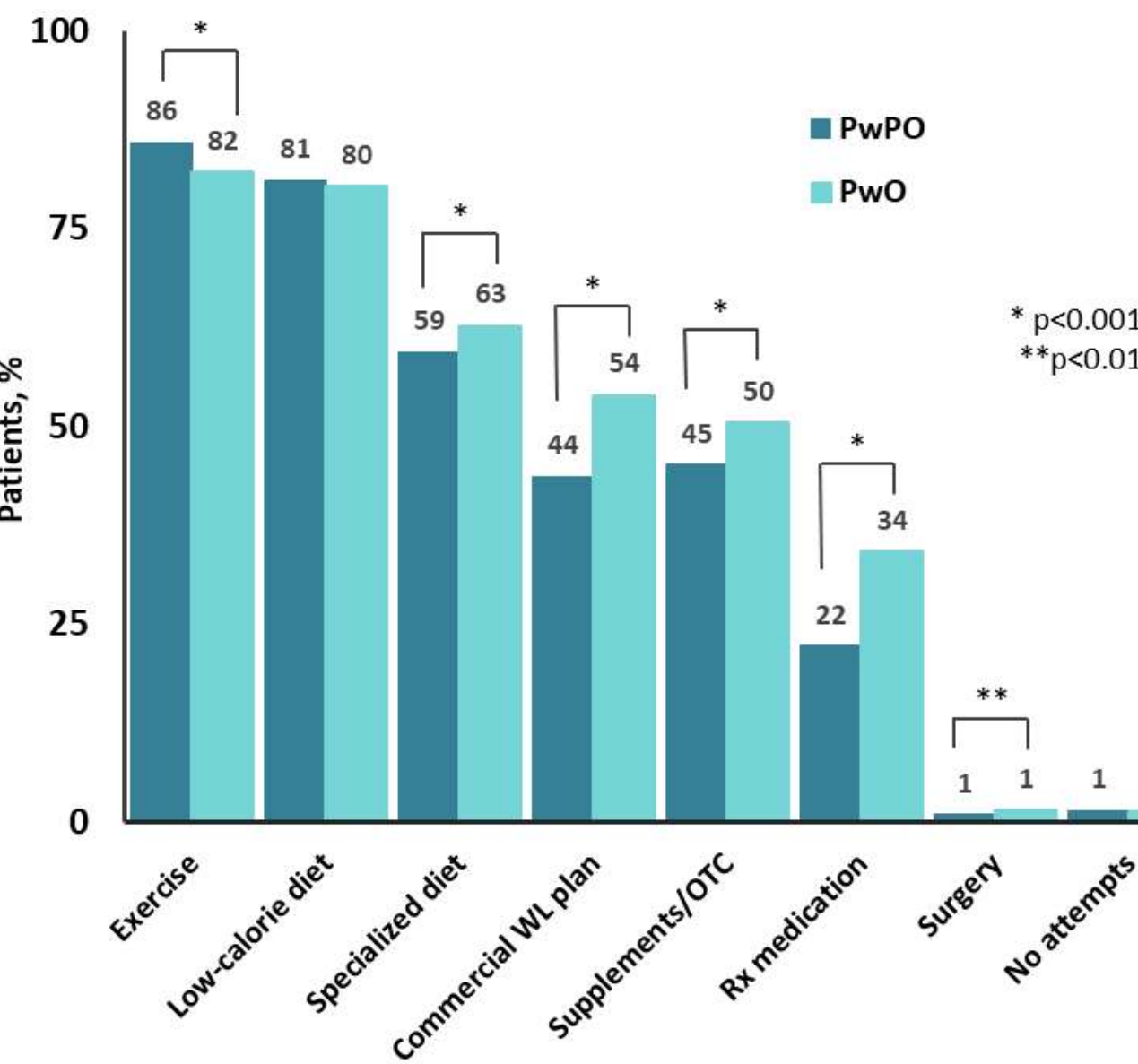
Self-reported Current Diet & Exercise Practices at OSH Initiation:

- The majority (62.2%) reported not following any diet.
- About one third (35.1%) of PwO reported engaging in aerobic exercise 3 or more days per week; 20% reported strength training 3 or more days per week.
- PwPO were more likely to engage in aerobic and strength training 3 or more times/week (p<0.001).

Significant Differences Between PwPO & PwO

- More PwO than PwPO reported previous use of commercial WL plans, specialized diets (omission of a category of food), over the counter (OTC) supplements, and prescription WL medications (p<0.001).
- 20.9% of PwPO previously tried prescription WL medications (vs. 32.5% of PwO; p<0.001).
- PwPO were more likely to engage in aerobic and strength training 3-4 times/week (p<0.001).

Figure 2. Types of Weight Loss Methods Attempted Prior to Initiating OSH



Significant Differences by Biological Sex

- Females were more likely to seek treatment for pre-obesity (34.2% female vs 24.7% male; p<0.001).
- Females reported fewer comorbidities (38.5% vs 46.2% male; p<0.001).
- Over 90% of both groups reported belief that excess weight negatively affected their health.

DISCUSSION

To our knowledge, this is the largest published cohort of DTC telehealth users seeking prescriptive weight management, one third of whom were PwPO. This study demonstrated in a large cohort that women initiate WL treatment more frequently and earlier than men. Almost all patients in the cohort made at least one attempt to follow the national guidelines of diet and exercise for WL.

New Insights from 20,000 Patients Initiating OSH via Telehealth:

- Telehealth is a new mode of weight management therapy delivery and appears acceptable on a large scale.
- Age is a well-established barrier to technology adoption¹, however, a notable proportion of patients in this telehealth cohort were ≥50 years old.
- OSH is the only prescription weight management option indicated for the subset of PwPO and no comorbidities, which represented ~25% of these 20,000 patients.
- This cohort reported previous use of prescription medication and WL surgery which may suggest that these patients were seeking additional weight management options despite previous medical/surgical interventions.

CONCLUSIONS

This data supports the potential for telehealth to provide prescriptive weight management treatment to a population seeking care.

Patients with pre-obesity (PwPO) are an undertreated population and are actively seeking new weight management options.

Future studies are needed to determine whether this trend continues once OSH is more broadly available.

References:

- Berkowsky et al. Innovation in Aging 2017;1:igy002.

Disclosures: DBH has consulted with Bausch Health, Gelesis, Inc, Novo Nordisk, and Medtronic and received research funding from Novo Nordisk. **EP, DB, and EC** are employees of Gelesis. **MZ, LB, and TD** are employees of Ro.