Real world experiences of patients using oral semaglutide for T2D

C. Swift[1]; J. J. Stephenson[2] ; J. Noone[1]; C.C. Teng[2]; R. Conto[2]; L. Xie[1]; M. Guevarra[1]; I. Tonnu-Mihara[2]

https://sciencehub.novonordisk.com/adces2023/Guevarra.html?cid=qr-mhr03osadu

Aim

- To assess patient experiences after initiating oral semaglutide for type 2 diabetes (T2D) in a cross-sectional patient survey.

Introduction

- Oral semaglutide (oral sema) is a human glucagon-like peptide 1 (GLP-1) analog approved for once-daily oral administration indicated as an adjunct to diet and exercise to improve glycemic control in adults with T2D.[1]
- Label dosing instructions for oral sema include taking with up to 4oz of water on an empty stomach 30 minutes prior to first meal of the day.
- However, patient acceptability of these dosing instructions and satisfaction associated with the use of oral sema is not well understood.
- This poster presents the results of a cross-sectional survey, in which a cohort of patients with T2D, who were newly initiated on oral sema, were surveyed about their experiences with using oral sema.

Methods

Study design: Cross-sectional patient survey

Data source: The Healthcare Integrated Research Database (HIRD®), a large administrative claims database maintained by Carelon Research for research purposes, was used as a sampling frame to identify survey-eligible patients from claims submitted by their healthcare providers.

Study population and claims inclusion criteria: Currently-active, survey-eligible adult T2D patients with Commercial or Medicare Advantage health insurance during the patient identification period (PIP), February 2022 to September 2022, who were newly initiated on oral sema using a rolling-cohort sampling strategy; 5 cohorts were included in the study (PIPs for each cohort did not overlap)

- Cohort 1 PIP = 3 months duration
- Cohort 2 PIP = 2 months duration
- Cohorts 3-5 PIPs = 1 month duration for each cohort

Survey: Collected information on patients' demographic and clinical characteristics, T2D disease history and characteristics, and self-reported experiences with oral sema. Patients also completed the following patient-reported outcome measures (PROMs):

- **The Treatment Satisfaction Questionnaire for Medication (TSQM-9):**[2] 9-items assessing treatment satisfaction. The three TSQM subscales are: Effectiveness, Convenience, and Global Satisfaction. Scores that ranged from 0 – 100 were calculated for each subscale with higher scores indicating higher satisfaction on that subscale. The TSQM was administered online and via telephone; however, the equivalence of the telephone mode of administration has not been established psychometrically.
- **The Motivation and Attitudes towards Changing Health (MATCH) Scale:**[3] 9-items measuring patient motivation to initiate or maintain behavior changes (in health). The three behavioral change subscales are: 1) Willingness (for making a change), 2) perceived Ability (for making or maintaining a change), and 3) (belief regarding whether a change is truly) Worthwhile. A total score, and 3 subscale scores were calculated; all scores ranged from 1-5, with higher scores indicating more motivation and better attitudes towards changing health.

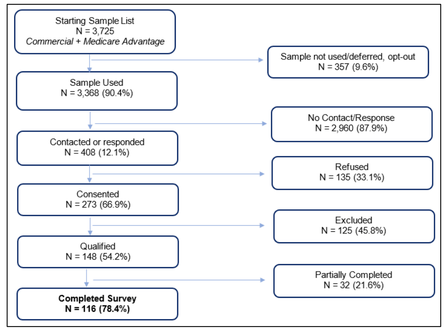
Methods (cont.)

Survey inclusion criteria: Responded to recruitment materials; consented to participate in the survey; met Carelon Research screening criteria (verified name, date of birth, and health plan membership). Met study screening criteria (verified T2D diagnosis, oral sema current use or use in past 3 months); completed survey.

Data analysis: Descriptive analysis was performed; all survey variables were described with univariate statistics using mean, standard deviation, median and relative frequencies and percentages, respectively; TSQM-9 and MATCH PROMs were scored according to instructions from measure developers and reported with appropriate descriptive statistics.

IRB approval: The study protocol, survey, and all other patient-facing survey materials were approved by the WCG IRB prior to the start of survey fielding.

Figure 1: Survey Sample Disposition Diagram



Summary Survey Metrics

Survey Completion Method, n (%)

- Internet: 77 (66.4%)
- Telephone: 39 (33.6%)

Rates, %

- Response Rate: 12.1%
  - Consent Rate: 8.1%
  - Refusal Rate: 4.0%
- Cooperation Rate (COOP)[1]: 41.0%
- List Completion Rate (LCR)[2]: 3.4%

[1]COOP = Completed surveys / (Contacted – Excluded)
[2]LCR = Completed surveys / Sample used

Results

- **Figure 1** presents a diagram of the disposition of the survey sample; of 3,368 patients sent recruitment materials, 408 responded, 273 consented to the survey, 148 qualified, and 116 completed the survey.
- Of 116 respondents, 76.5% were white, non-Hispanic, 62.9% were female, with a mean age of 59.8 years (**Table 1**).
- Almost two-thirds of respondents had Medicare Advantage health insurance (n=74, 63.8%), while the remaining one-third had commercial employer-provided health insurance (n=42, 36.2%), (data not shown).
- Over half of respondents described their current employment status as disabled or retired (n=65, 56.0%) (**Table 1**); among these, 97.0% were respondents with Medicare Advantage insurance and 3% with commercial insurance, (data not shown**).**
- Calculated BMI from self-reported height and weight showed that 94.8% of all respondents were either overweight or obese (**Table 1).**

Table 1: Patient-reported demographic and clinical characteristics

	All Completed Surveys (n=116)
Female gender, n (%)	73 (62.9)
Age (years), mean (SD)	59.8 (10.7)
Race/Ethnicity, n (%)	
Asian	1 (0.9)
Black or African American	19 (16.5)
Hispanic	4 (3.5)
White	88 (76.5)
Other or Refused	4 (3.5)
Education, n (%)	
High school or less	39 (33.6)
Some college or associate degree	47 (40.6)
Bachelor's degree or higher	30 (25.9)
Marital status, n (%)	
Married or domestic partner	55 (47.4)
Single, separated, divorced, widowed	61 (52.6)
Employment, n (%)	
Full or part-time employment	46 (39.6)
Disabled or Retired	65 (56.0)
Unemployed	5 (4.3)
Income, n (%)	
Less than $50,000	68 (58.6)
More than $50,000	38 (32.8)
Not Sure/Don't know	10 (8.6)
BMI, n (%)	(n = 115)
Underweight/normal (BMI < 25)	6 (5.2)
Overweight (BMI 25 to <30)	21 (18.3)
Class 1 obese (BMI 30 to <35)	26 (22.6)
Class 2 obese (BMI 35 to <40)	28 (24.3)
Class 3 obese (BMI ≥ 40)	34 (29.6)
Smoking status, n (%)	(n = 115)
Current or former smoker	49 (42.6)
Never smoked but live with smoker	10 (8.7)
Never smoked	56 (48.7)

Table 2: Treatment history and T2D management

	All Completed Surveys (n=116)
Use of oral sema, n (%)	
Current user	97 (83.6)
Used in past 3 months	19 (16.4)
Used oral sema at least 3 months, n (%)	89 (76.7)
Current or last oral sema dose, n (%)	(n = 111)
3 mg	17 (14.7)
7 mg	63 (54.3)
14 mg	31 (26.7)
Not sure	5 (4.3)
Calculated duration of T2D (years)	(n=87)
Mean (SD)	9.9 (9.98)
See healthcare provider for diabetes at least twice a year, n (%)	113 (97.4)
Have HbA1c checked at least twice a year, n (%)	111 (95.7)

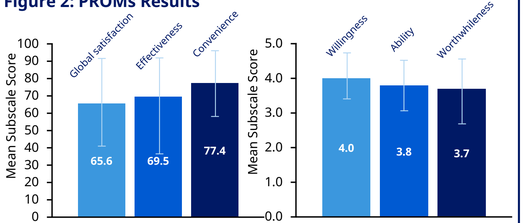
- Over 75% of patients reported using oral sema at least 3 months (**Table 2)**
- Most patients, 81%, reported most recently taking either 7 or 14mg of oral sema (**Table 2**).

Table 3: Patient-reported experiences with oral sema

	All Completed Surveys (n=116)
Who decided oral sema was the right drug, n (%)	
Doctor	79 (68.1)
Shared decision	36 (31.0)
Received instruction on how to take oral sema (Yes), n (%)	101 (87.1)
Aware of the specific instructions on how to take oral sema (Yes), n (%)	108 (93.1)
Frequency of following instructions for oral sema, n (%)	(n = 108)
Always	95 (88.0)
Most of the time	12 (11.1)
Some of the time	1 (0.9)
How easy to fit dosing schedule into daily life, on 0-10 numeric rating scale, where 0 = No problem, easy to fit into daily life, 10 = Very difficult, almost impossible to fit into daily life)	
Mean (SD)	1.4 (2.36)
Median (IQR)	0 (0 - 2)
Ever taken a medication with similar instructions (Yes), n (%)	31 (26.7)
Self-manage medication vs. help, n (%)	
Manage medication by yourself	107 (92.2)
Receive some help	4 (3.4)
Somebody does it all for you	5 (4.3)

- Almost 90% of patients reported receiving instructions on how to take oral sema, followed instructions always, and found it easy to follow instructions (**Table 3).** For context, almost 85% of patients reported taking at least 4 different prescriptions daily (data not shown).
- Convenience of oral sema was the highest TSQM-9 subscale score (77.4) (**Figure 2).** Willingness to make a health behavior change was the highest MATCH subscale score (4.0) (**Figure 2**).

Figure 2: PROMs Results



Limitations

- The study population was limited to US patients with Medicare Advantage and Commercial health insurance, which could impact the generalizability of the results to other populations such as traditional Medicare, Medicaid and the uninsured population as well as non-US patients.
- Identification of the initial population used administrative claims data that are subject to coding errors. However, patients who reported not having T2D were screened out during the survey screening process.
- Survey respondents may be subject to self-selection bias and their responses to recall bias.
- The rolling cohort approach allowed us to reach patients soon after they initiated oral sema. This helped shorten the time-to-survey and may limit recall bias.

Conclusion

- At the time of the survey, less than 20% of patients were on oral sema low dose (3mg); over 50% were on oral sema 7mg and 25% were on oral sema 14mg.
- Patients on oral sema taking this survey had a T2D duration of approximately 10 years. Over 95% of patients reported they visited their providers and had their HbA1c checked at least twice a year.
- Patients' providers decided on oral sema initiation for approximately two-thirds of patients while it was a shared decision between providers and patients for the remaining one-third of patients.
- Almost 90% of patients reported receiving instructions on how to take oral sema, followed instructions always, and found it easy to follow instructions.

[1]Novo Nordisk, Inc., Plainsboro, NJ, USA; [2]Carelon Research, Wilmington, DE

This survey and analysis was sponsored by Novo Nordisk.
Presented at the ADCES23 conference, August 4-7, 2023, Houston, TX.

References:

1. Canon A, Handelsman Y, Heile M, Shannon M. Burden of illness in type 2 diabetes mellitus. *J Manag Care Spec Pharm* 2018;24(9-a Suppl):S5-S13. doi:10.18553/jmcp.2018.24.9-a.s5
2. Murtuza Bharmal, Krista Payne, Mark J Atkinson, Marie-Pierre Desrosiers, Donald E Morisky and Eric Gemmen. Validation of an abbreviated Treatment Satisfaction Questionnaire for Medications (TSQM-9) among patients on antihypertensive medication. *Health Qual Life Outcomes.* 2009;7: 36. Those seeking information regarding or permission to use the TSQM are directed to IQVIA at www.iqvia.com/TSQM or TSQM@iqvia.com.
3. Hessler DM, Fisher L, Polonsky WH, Bowyer V and Potter M. Motivation and attitudes toward changing health (MATCH): A new patient-reported measure to inform clinical conversations. *Journal of diabetes and its complications* 2018; 32:665-669.