Evaluating Patients' Preferences for Dulaglutide versus Insulin Glargine Medication Profiles in T2D Patient Subgroups

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OBJECTIVE

To determine patient preferences for the treatment features, efficacy, and side effects of once weekly GLP-1 receptor agonist dulaglutide 1.5 mg (ready-to-use pen) versus daily insulin glargine (SoloSTAR® pen) stratified by age (<60 versus ≥60 years) and duration of diabetes (≤5 versus >5 years)

STUDY DESIGN[1]

- This cross-sectional study involved in-person completion of surveys with people with type 2 diabetes (T2D), naïve to injectable treatments for diabetes, and compared participants aged <60 years and ≥60 years, and participants with a duration of diabetes ≤5 years and >5 years

- As part of the survey, a discrete choice experiment (DCE) examined the following 7 attributes of dulaglutide and insulin glargine treatment:
  - Frequency of gastrointestinal side effects, frequency of hypoglycemia, frequency of pancreatitis, dosing frequency, HbA$_{1c}$ change, weight change, and type of delivery system (ready-to-use pen for dulaglutide vs SoloSTAR® device)

- Attribute selection was informed by qualitative in-person interviews and levels of attributes were based on instructions for use documentation and the results from AWARD-2

- Participants were presented with 12 sets of two hypothetical medication choices and asked to select their preferred medication profile
  - One of the 12 choice pairs presented the actual medication profile for dulaglutide against the profile for insulin glargine to determine participants' direct preference between the two profiles

- Sample size was estimated using number of choice pairs, number of alternatives per choice pair and maximum number of levels for any one attribute

Statistical Analysis

- Part-worth utilities were estimated using random effects logit regression model[2] and used to calculate relative importance (RI) values for each attribute separately for each subgroup

KEY RESULT

The majority of patients preferred the dulaglutide medication profile to the insulin glargine (SoloSTAR® device) medication profile irrespective of age or duration of diabetes

Note: Differences across age groups and duration of diabetes not statistically significant at p<0.05
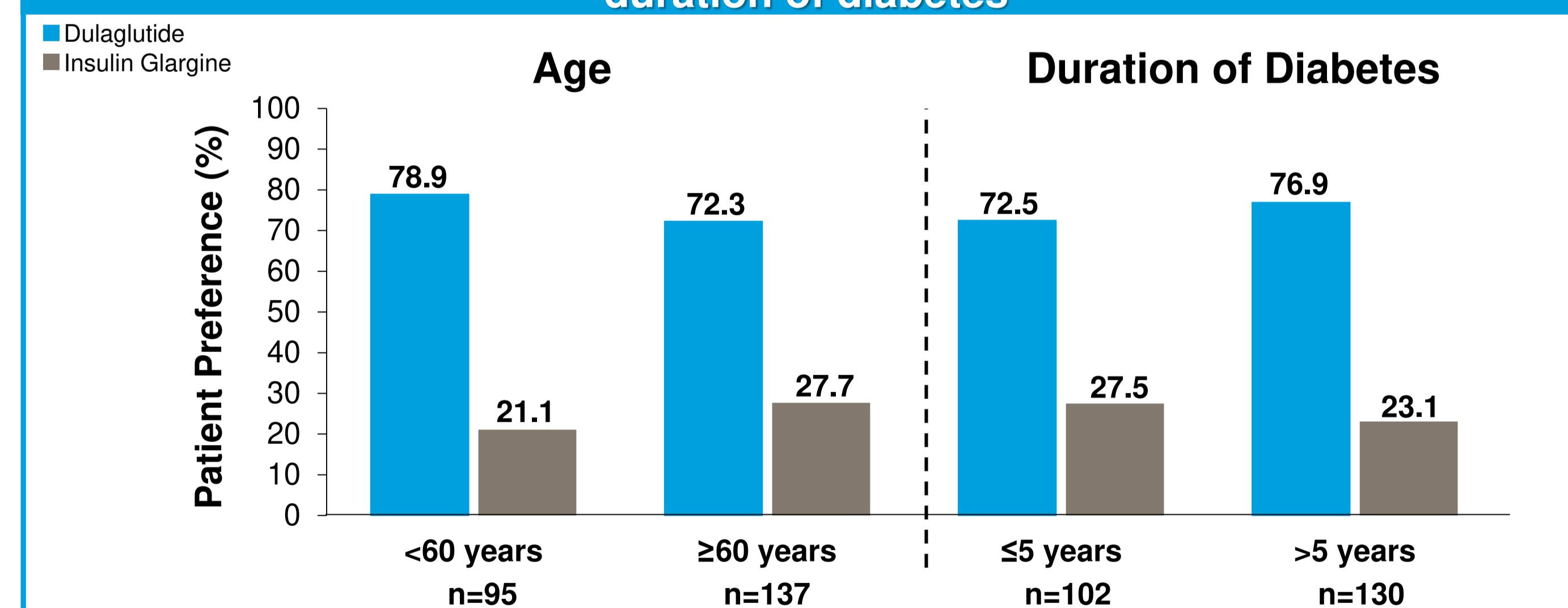
CONCLUSION

Subgroup analyses demonstrated

- The majority of people preferred the dulaglutide profile to the insulin glargine (SoloSTAR® device) profile irrespective of age or duration of diabetes

- These results will help HCPs and patients understand the clinical and non-clinical factors influencing preferences of people with T2D, naïve to injectable diabetes medications, when considering next treatment options

METHODS

Main Study Participants

- Participants from London, Edinburgh, Birmingham, and Cardiff were recruited via newspaper and magazine advertisements

- Key inclusion criteria: Male or female ≥18 years of age; diagnosed with T2D; currently treated for T2D with oral medications only

- Key exclusion criteria: Current type 1 or gestational diabetes; T2D that is currently treated only with diet and exercise; previously received regular treatment with injectable medication for T2D

- T2D diagnosis was self-reported, proof of prescription of an oral medication for diabetes was provided prior to participation

BASELINE CHARACTERISTICS

Demographic and Clinical Characteristics

	Overall Sample N=232
Gender	
Male	172 (74.1)
Female	60 (25.9)
Age (years), Mean ± SD, [Range]	61.8 ± 10.8 [27-87]
BMI (kg/m^2), Mean ± SD, [Range]	29.8 ± 6.1 [20-67]
Duration of T2D	
Less than 1 year	17 (7.3)
More than 1 year and up to 5 years	85 (36.6)
More than 5 years and up to 10 years	67 (28.9)
More than 10 years	63 (27.2)
Current T2D treatment	
One oral diabetes medication only	111 (47.8)
Two oral diabetes medication only	68 (29.3)
Three or more oral diabetes medication	53 (22.8)

Data presented as n (%) unless otherwise noted

ADDITIONAL RESULTS

Part-Worth Utilities of Attributes and Levels Among UK T2D Patients (N=232) by Age Group (<60 years vs ≥60 years)
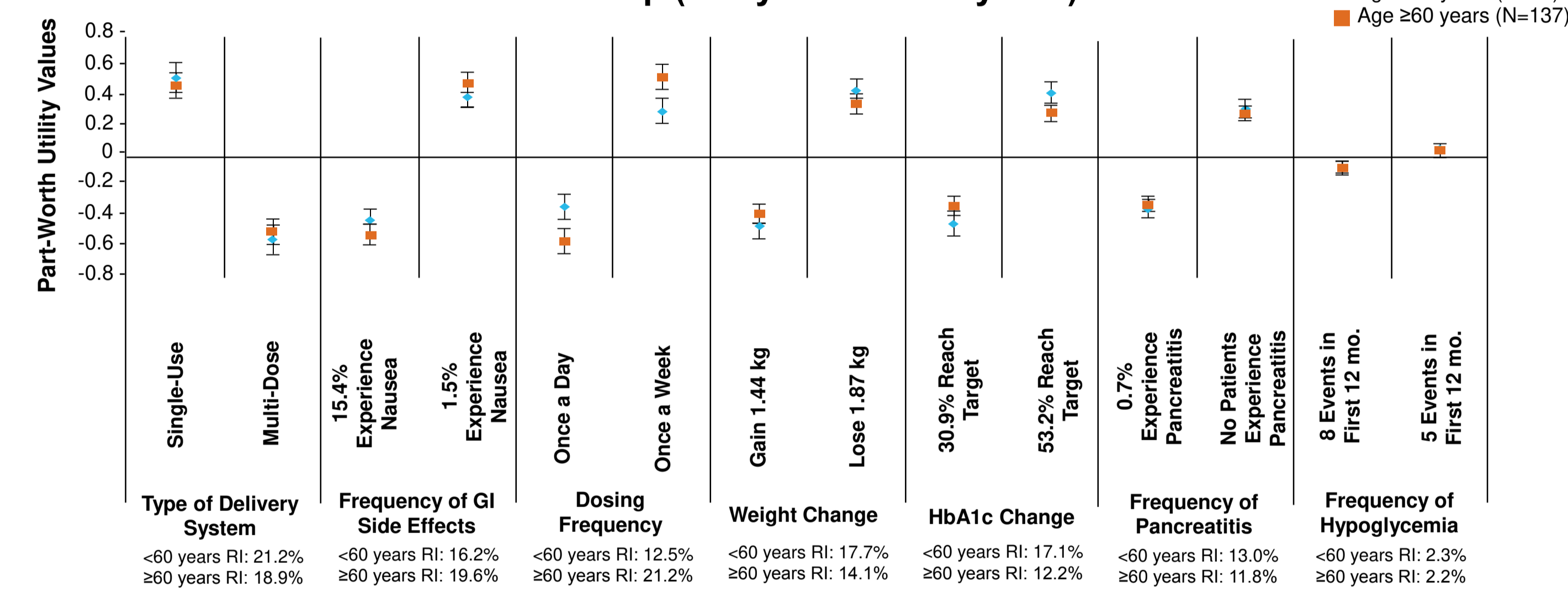
Part=worth utility estimates and standard errors are presented

- The preferences and RI of attributes were fairly consistent across the age groups with the exception of dosing frequency, which was significantly more important among older vs younger participants (RI=21.1%, Rank=1 vs. RI=12.5%, Rank=6; p<0.05). While both groups preferred less frequent once weekly dosing, this preference was significantly stronger among the older participants (p<0.05)

Part-Worth Utilities of Attributes and Levels Among UK T2D Patients (N=232) by Duration of Diabetes (≤5 years vs >5 years)
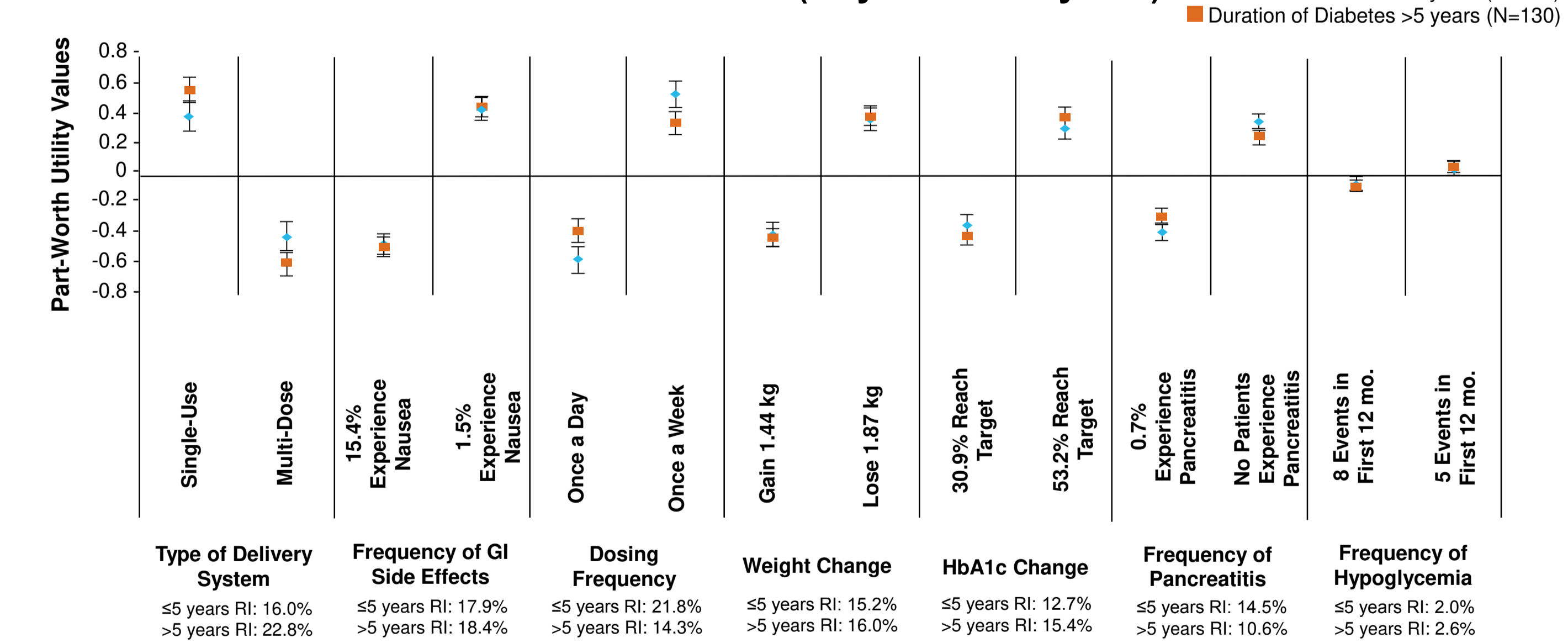
Part=worth utility estimates and standard errors are presented

- RI of attributes did not significantly differ between duration of diabetes groups; however, dosing frequency was the most important attribute to those diagnosed for ≤5 years, while it ranked as the 5th most important among patients diagnosed for >5 years

Limitations

- DCEs are commonly used to examine preferences for attributes of a wide-range of products and services; however, it is uncertain to which the reported preferences reflect the actual preferences of patients considering real-life medication decisions or how strongly these preferences might influence their medication-related behaviors or that of their prescribing physician

- The comparisons characterized only one medication and the corresponding device from each class of interest so it is unclear the extent to which the results may be generalizable across the full range of medications within each class and the full range of delivery devices

REFERENCES

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