



**OBJECTIVE:** To quantify the relative importance of frequency of administration in basal insulin treatment preferences of people living with type 2 diabetes (T2D).



**KEY FINDINGS:** Frequency of administration emerged as a key preference driver for basal insulin treatment among people living with T2D, with a preference towards once weekly (OW) administration.



**INTERPRETATION:** OW basal insulin treatments have the potential to provide more patient-centric treatment options for individuals living in Canada, Spain, France and Japan.



## Background

- Basal insulin treatments have historically been administered via once daily (OD), or twice daily (BD) injections. OW basal insulin treatments have recently been developed.<sup>1,2</sup>
- There is a need to understand insulin treatment preferences of people living with T2D to ensure patient-centric value assessment and decision making.<sup>3,4</sup>
- This study aimed to quantify the relative importance of frequency of administration in basal insulin treatment preferences of people living with T2D in Canada, Spain, France and Japan.



## Methods

- This study applied best practice guidelines<sup>3,4</sup> for patient preference studies in a three-phase study design, with an advisory panel of clinical experts and representatives of patient advocacy groups engaged at key points throughout the study (Figure 1).
- Phases 1 and 2 contributed to the development of an attributes and levels (A&L) grid for input into a discrete choice experiment (DCE) (results presented in a separate poster - PCR274).

### Phase 3: DCE

- An online DCE survey was administered to adults living with T2D across Canada, France, Spain and Japan between 23<sup>rd</sup> October 2023 and 29<sup>th</sup> April 2024.
  - The DCE included 13 choice tasks, presented as two hypothetical treatment profiles, based on the A&L grid.

### Statistical analyses

- Analysis of DCE data utilized Hierarchical Bayesian estimation to determine the relative value each participant put on each attribute level, called part-worth utilities.<sup>7</sup>
  - The part-worth utilities ranges were taken for each attribute and repositioned to obtain the relative importance of each attribute.

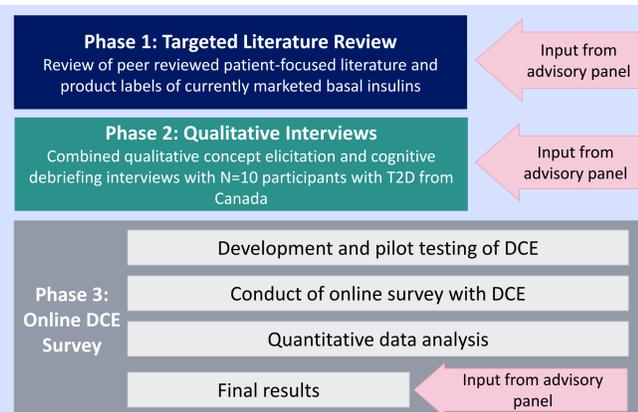


Figure 1. Study design  
DCE=Discrete choice experiment



## Results: DCE

### Study sample

- N=513 participants with T2D (aged 20-90; 54% male; mean time since diagnosis: 11.6 years) completed the DCE and passed data validation checks.
- A range of demographic and clinical characteristics were represented, available by scanning the QR code.

### Relative importance of the total sample

- Frequency of administration emerged as the most influential driver of treatment preferences within the total sample.**
  - This was at least twice as important as any other treatment attribute tested in this study (Figure 2).
- The risk of experiencing a severe hypoglycemic event emerged as the second most influential preference driver when considering insulin experienced rates for risk of experiencing a hypoglycemic event.

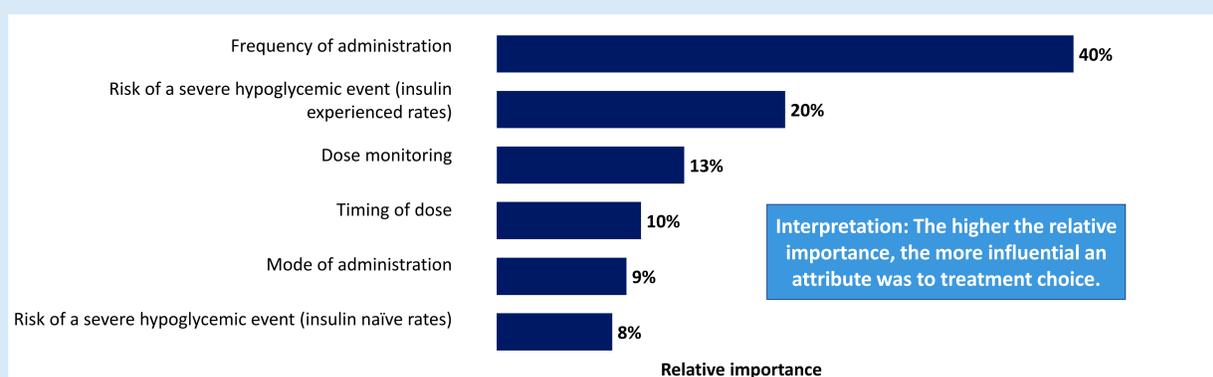


Figure 2. Relative importance of attributes in the DCE by total sample (N=513)

### Relative importance by sub-groups

- Frequency of administration consistently emerged as the most influential preference driver of treatment choice across treatment experience sub-groups (Figure 3) and countries.

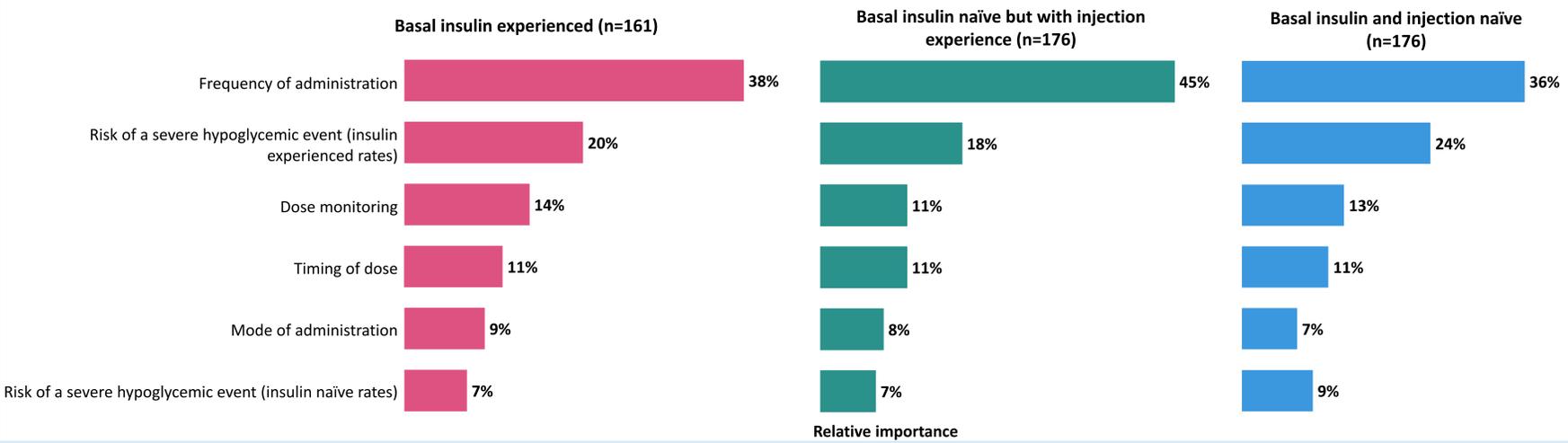
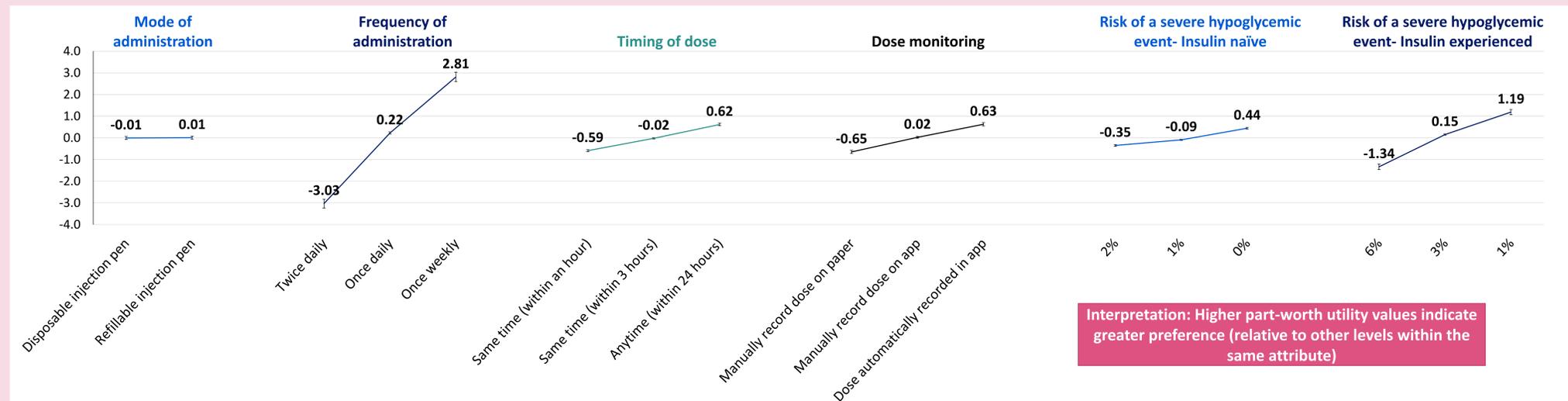


Figure 3. Relative importance of attributes in the DCE stratified by T2D treatment experience

### Part-worth utilities

- Frequency of administration showed the greatest range in part-worth utility values, with stronger preference towards OW administration vs OD or BD administration.



Interpretation: Higher part-worth utility values indicate greater preference (relative to other levels within the same attribute)

Figure 4. Mean part-worth utility values for attributes in the DCE



## References

- Phillis-Tsimikas A, Bajaj HS, Begtrup K, et al. Rationale and design of the phase 3a development programme (ONWARDS 1-6 trials) investigating once-weekly insulin icodec in diabetes. *Diabetes Obes Metab.* Feb 2023;25(2):331-341. doi:10.1111/dom.14871
- Lilly E. With Once-a-Week Dosing, Insulin Efsitora Alfa Delivers A1C Reduction and Safety Profile Consistent with Daily Insulin. Eli Lilly. Accessed 09/09/2024, 2024. <https://investor.lilly.com/news-releases/news-release-details/once-week-dosing-insulin-efsitora-alfa-delivers-a1c-reduction>
- US Food and Drug Administration. Patient-focused drug development: Collecting comprehensive and representative input - Guidance for industry, Food and Drug Administration staff, and other stakeholders. 2020;
- PREFER I. "PREFER Recommendations. Why, when and how to assess and use patient preferences in medical product decision-making. 2022.

