

# Perceptions of Control

## Study Backgrounder

### Aim

Clinical definitions of diabetes control are well-established, but there is limited understanding of how patients perceive control. The purpose of this study<sup>1</sup> was to investigate how physicians and people with type 2 diabetes (T2D) uncontrolled on basal insulin perceive control.

### Objectives

- Explore how physicians and people with T2D define diabetes control
- Identify obstacles to achieving diabetes control
- Understand how people with T2D uncontrolled on basal insulin perceive the impact of uncontrolled diabetes on daily life
- Investigate reasons patients and physicians are reluctant to intensify treatment of uncontrolled T2D treated with basal insulin

### Methodology

#### Survey development

Six focus groups in Sweden, Denmark and the UK and four individual interviews in Switzerland were conducted with a total of 49 people with T2D, treated with basal insulin only with or without oral antidiabetes drugs (OADs), in addition to nine interviews with healthcare professionals (HCPs) from all four countries. With the incorporation of the validated locus of control questionnaire,<sup>2</sup> all interviews were conducted in local languages, then transcribed, coded and quantitatively analysed to identify and investigate emergent themes to inform survey development.<sup>3</sup> Due to the method of data collection resulting in the participants being unidentifiable and being exposed to minimal risk, the Western Institutional Review Board (WIRB) found the focus group and interview stage of survey development to be exempt from ethical approval.

The surveys were developed in conjunction with a steering committee which included Principal Investigator Dr Meryl Brod, USA\*; Professor Anthony Barnett of the Diabetes Centre, UK; Dr Kerstin Berntorp of Lund University, Sweden; Professor Tina Vilsbøll of the Center for Diabetes Research, Denmark; and Dr Benno Weissenberger of FMH Endokrinologie und Diabetologie in Switzerland.

#### Online surveys

Online surveys of HCPs and people with T2D took place in Sweden, Switzerland and the UK between 5 September to 10 October 2014 and between 9 September to 24 October 2014 respectively. Both surveys were granted ethical approval from the New England Institutional Review Board (NEIRB). Participants were surveyed in local languages using quantitative research methods, with the physician survey taking approximately 15 minutes to complete and the patient survey taking approximately 30 minutes to complete.

The physician sample was drawn from targeted random samples of a global HCP database. Patient samples were drawn using a randomised algorithm from online social media sub-communities related to diabetes, with a number of patients also directly recruited through HCP panels.

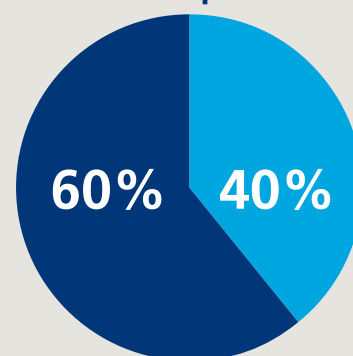
## Physician sample

Sample requirements:

- Had to see a minimum of 10% of T2D patients treated with basal insulin only (with or without OADs)
- Primary decision maker for changing insulin therapy for their T2D patients
- 2-35 years practising in current speciality
- Minimum of 50% of time caring for patients in a clinical setting

	Sweden	Switzerland	UK	TOTAL
Sample size	100	100	100	300

## Healthcare profession



- Diabetologist/Endocrinologist
- General/Family Practitioner

## Patient sample

Sample requirements:

- T2D diagnosis, treated with basal insulin only (with or without OADs)
- Aged 35-70
- Uses vial/syringe or insulin pen for insulin injection

In order to complete the survey, patients were required to contact their physician to obtain their most recent HbA<sub>1c</sub> value recorded and the date it was taken.

Patients with uncontrolled diabetes (HbA<sub>1c</sub> > 8.0%)

	Sweden	Switzerland	UK	TOTAL
Sample size	240	152	620	1012

Patients with well-controlled diabetes (HbA<sub>1c</sub> < 7.5%)

	UK
Sample size	295

## Data analysis

Survey results were analysed using measures of central tendency such as means, standard deviations, and frequencies and percentages, with measures of association including cross tabulations and comparisons of means. Tests of statistical significance were also conducted: T-tests, for comparisons of means between two groups; ANOVA (analysis of variance) tests, for comparison of means among three groups; and Chi-square tests, for associations between nominal/ordinal variables.

While the main patient analyses and comparisons between physicians and patients focused on people with uncontrolled T2D in Sweden, Switzerland and the UK, separate analyses compared those with well-controlled versus uncontrolled T2D in the UK.

*The Perceptions of Control survey was sponsored by Novo Nordisk, with survey development and data analysis conducted by the Brod Group and physician and patient recruitment for focus groups and surveys conducted by Instar Research using their databases.*

### References

1. Brod M, Pfeiffer KM, Barnett AH, et al. Perceptions of diabetes control among physicians and patients with uncontrolled type 2 diabetes using basal insulin. Poster presentation (#890) at the 51st European Association for the Study of Diabetes (EASD) Annual Meeting, 16 September 2015.
2. Wallston, KA. The validity of the multidimensional health locus of control scales. *Journal of Health Psychology*. 2005; 10: 623-631.
3. Brod M, Fisher C, Barnett AH, et al. Defining uncontrolled diabetes from the patient perspective: a four-country study in people with type-2 diabetes on basal insulin. Poster presentation (PDB77) at the 20th International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Annual Meeting, 18 May 2015.

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