Preference for type 2 diabetes therapies in the United States: a discrete choice experiment

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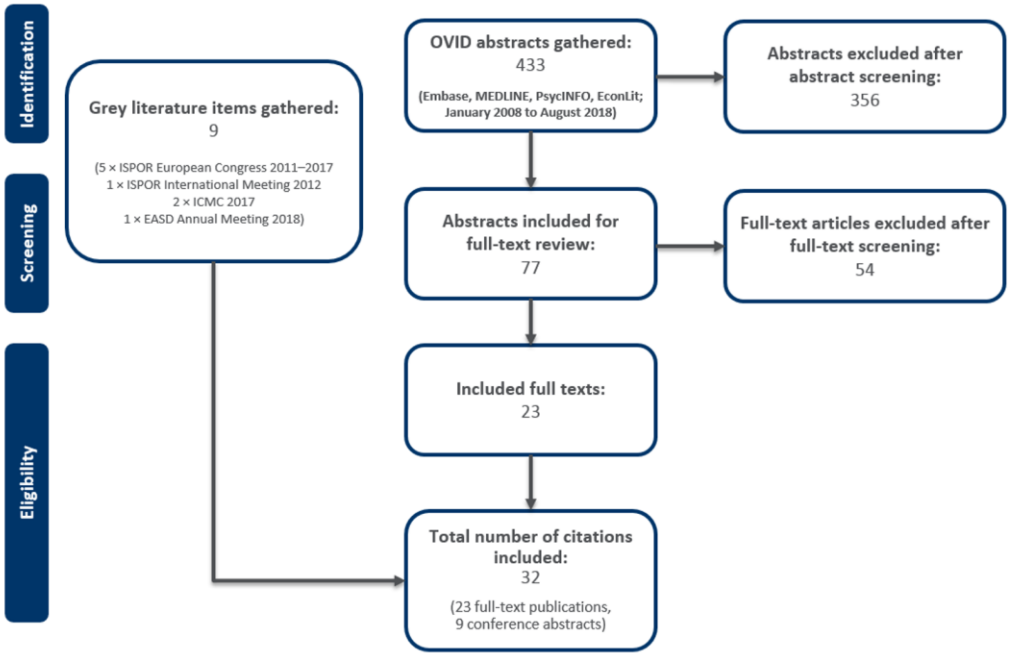
Supplementary material

Literature review and qualitative interview methodology

The TLR (conducted August 2018) identified 32 publications (23 full-text publications and nine conference abstracts), as shown in the PRISMA diagram (Figure S1). The results of this review supported the use of a DCE study design, provided examples of best practice for such studies and indicated the most reported treatment attributes in published T2DM DCE studies. The treatment attributes most used in previous DCE studies formed the initial list of proposed attributes for use in the current DCE survey.

Figure S1. PRISMA diagram for TLR.



EASD = European Association for the Study of Diabetes; ICMC = International Choice Modelling Conference; ISPOR = International Society for Pharmacoeconomics and Outcomes Research; TLR = targeted literature review.

Following the attainment of ethics approval, qualitative interviews were conducted to confirm the validity of the proposed treatment attributes, and to identify the most appropriate method of presenting these to the target patient population: individual interviews with healthcare professionals (HCPs) with at least 6 months experience treating patients with T2DM and contact with patients with T2DM at least once a week (n=10) and focus groups with patients with T2DM (n=75, in 23 groups). Patients were identified for these interviews by a random sampling of individuals who had expressed an interest in participating in research, by email or telephone call. Patients were then screened for age, residency, T2DM diagnosis and T2DM treatment. Proposed attributes and example presentation methods were presented to these experienced persons, who commented whether these were appropriate and understandable. Participants were also able to offer additional appropriate attributes and presentation methods if these were missing.

Table S1. Clinical and demographic characteristics of eligible patients (n=500)

Gender	
Male	287 (57.4%)
Female	213 (42.6%)
Age	
Mean age:	65.5 years
Median age:	67.0 years
Duration since diagnosis of T2DM	
Mean duration since diagnosis of T2DM	11.4 years
Median duration since diagnosis of T2DM	10.0 years
Experience with injectable (non-insulin) therapies to control blood glucose level	
Injectable-experienced	139 (27.8%)
Injectable-naïve	361 (72.2%)
Current treatment to control blood glucose level	
Oral medication	398 (79.6%)
Injectable medication (non-insulin)	12 (2.4%)
Oral and injectable medication	90 (18.0%)
Duration receiving current treatment	
Mean duration receiving current treatment	8.9 years
Median duration receiving current treatment	6.3 years
HbA_{1c} as measured within the last year	
Mean HbA_{1c}	7.4%
Median HbA_{1c}	7.2%
BMI	
Mean BMI	32.0 kg/m^2
Median BMI	30.9 kg/m^2
Complications of T2DM	
Yes, respondent has experienced complications as a result of T2DM[†]	94 (18.8%)
-- Peripheral neuropathy	70 (14.0%)
-- Eye problems (for example cataracts or glaucoma requiring laser treatment)	37 (7.4%)
-- Kidney disease	15 (3.0%)
-- Cardiovascular disease (for example heart attack, stroke, or heart failure)	11 (2.2%)
-- Other complications*	15 (3.0%)

BMI = body mass index; HbA_{1c} = Hemoglobin A_{1c}; T2DM = type 2 diabetes mellitus.

[†]32 patients selected two of the specified complications, 8 patients selected three of the specified complications and 2 patients ticked four of the specified complications.

*Patients were able to select 'other complications' but did not provide further information.

Table S2. Unique hypothetical choice sets of therapy profiles, assigned to blocks.

Block A ↓		Block B ↓	
pill_regular	pill_nofood	pill_nofood	inject_day
-1.3pp	-1.0pp	-1.0pp	-0.7pp
-5½_lbs	0_lbs	+5½_lbs	-10½_lbs
-17%_heart	-9%_heart	-26%_heart	-17%_heart
3_of_100	4_of_100	3_of_100	4_of_100
inject_day	inject_week	inject_week	pill_regular
-1.7pp	-1.3pp	-0.7pp	-1.7pp
0_lbs	+5½_lbs	-10½_lbs	-5½_lbs
0%_heart	-26%_heart	-9%_heart	0%_heart
3_of_100	4_of_100	3_of_100	4_of_100
inject_day	inject_week	inject_week	pill_regular
-1.3pp	-1.0pp	-1.3pp	-1.0pp
+5½_lbs	-10½_lbs	0_lbs	+5½_lbs
-9%_heart	0%_heart	-26%_heart	-17%_heart
2_of_100	3_of_100	5_of_100	2_of_100
pill_nofood	inject_day	inject_week	pill_regular
-0.7pp	-1.7pp	-1.7pp	-1.3pp
0_lbs	+5½_lbs	+5½_lbs	-10½_lbs
-17%_heart	-9%_heart	-17%_heart	-9%_heart
2_of_100	3_of_100	4_of_100	5_of_100
pill_regular	pill_nofood	pill_nofood	inject_day
-1.0pp	-0.7pp	-1.7pp	-1.3pp
0_lbs	+5½_lbs	-5½_lbs	0_lbs
-9%_heart	0%_heart	-9%_heart	0%_heart
4_of_100	5_of_100	5_of_100	2_of_100
pill_nofood	inject_day	inject_day	inject_week
-1.3pp	-1.0pp	-0.7pp	-1.7pp
-10½_lbs	-5½_lbs	-5½_lbs	0_lbs
0%_heart	-26%_heart	-26%_heart	-17%_heart
4_of_100	5_of_100	4_of_100	5_of_100
inject_week	pill_regular	inject_day	inject_week
-1.0pp	-0.7pp	-1.0pp	-0.7pp
-5½_lbs	0_lbs	-10½_lbs	-5½_lbs
0%_heart	-26%_heart	-17%_heart	-9%_heart
2_of_100	3_of_100	5_of_100	2_of_100
pill_regular	pill_nofood	pill_regular	pill_nofood
-0.7pp	-1.7pp	-1.7pp	-1.3pp
+5½_lbs	-10½_lbs	-10½_lbs	-5½_lbs
0%_heart	-26%_heart	-26%_heart	-17%_heart
5_of_100	2_of_100	2_of_100	3_of_100